Social Investment

A New Zealand Policy Experiment

Edited by
Jonathan Boston
And Derek Gill

BWB e-Book

Contents

Preface

The social investment approach burst onto New Zealand's policy scene after 2010, championed by the then Minister of Finance, Bill English. It was more a practitioner-led 'movement' than a coherent, rigorously researched or well-developed policy framework. Yet it was precisely the ill-defined and evolving nature of the new approach that triggered the collaborative research project that has culminated in this edited volume. Our aim in launching the project in September 2016 – involving the School of Government at Victoria University of Wellington and the New Zealand Institute for Economic Research (NZIER) – was to develop a deeper understanding of social investment: what exactly is it, what is it not, what are its merits, and how might it evolve in the future? The chapters in this volume endeavour to answer these questions.

This book would not have been possible without the generous assistance and support of a wide range of people. We are particularly grateful to our colleagues in the School of Government and NZIER for their many and varied contributions – as authors, commentators and peer reviewers. We were also greatly assisted, especially during the early stages of the project, by a steering group comprising senior officials from the Ministry of Social Development, Treasury and the Social Investment Unit. Many other researchers and public servants, as well as consultants and representatives of voluntary agencies, contributed in various ways, providing constructive feedback and advice on draft chapters and highlighting additional issues in need of analysis.

Most of the chapters were originally presented as papers at a series of three workshops held in Wellington in late 2016 and early 2017. These workshops were attended by a wide range of policy-makers, academics and practitioners from across the social sector. The ensuing discussions undoubtedly contributed to a better understanding of the social investment approach and the quality of the final versions of the papers.

We are particularly grateful to the Directors of the Institute for Governance and Policy Studies – Michael Macaulay and Simon Chapple – for their advice and encouragement, and the administrative staff of the School of Government, especially Lynn Barlow, Maggy Hope and Lyne Todd, for their assistance with various organisational matters. Likewise, we much appreciate the support of NZIER through its public good fund.

Finally, we would like to thank all those involved in the latter stages of the book's production. Denis Welch showed great skill, perseverance and dedication in copy-editing the many and varied contributions. Similarly, we are most grateful to our publisher, Bridget Williams, and her highly capable and efficient team, especially Tom Rennie, Tina Delceg, Neil Pardington, Nancy Swarbrick and Julia Wells.

Jonathan Boston and Derek Gill
September 2017

Part 1

The Nature, Origins and Evolution of Social Investment

Chapter 1
Overview – key issues and themes

Jonathan Boston and Derek Gill

During 2011–12, the New Zealand government led by the National Party embarked upon what it called a 'social investment approach'.[1] Investment, put simply, is about employing resources today to generate future returns, somehow defined. Essentially, social investment involves applying an investment logic to a government's social interventions.

Treating public policies as investments is not, of course, unusual; nor is a focus on early intervention, prevention or precaution: they have a very long history in multiple policy domains. Nevertheless, New Zealand's social investment approach has provoked many questions – philosophical, conceptual, methodological, evidential, organisational and administrative. It has also generated markedly different responses and assessments. First, there is debate about whether the approach involves a genuinely new and distinctive effort to address long-standing social challenges. Second, regardless of its novelty, views differ on its overall merits and likely social and economic impacts. We begin by briefly summarising the rival positions.

WHAT'S NEW?

For some, New Zealand's social investment approach constitutes a 'big idea' – a radical new departure with significant lessons for other countries. For others, it represents no more than a little idea 'masquerading as a big one' – to quote Sir Michael Cullen in his contribution to this volume. Yet others endorse a middle path: while much of the rhetoric is simply 'new wine in old bottles', the approach incorporates some genuinely innovative elements.

Indicative of the first view, Michael Mintrom, in his contribution, regards the new approach as a 'paradigm shift' marking the welcome birth of a more rigorous, more evidence-informed governmental attempt to improve social outcomes, especially for New Zealand's most vulnerable and needy citizens. From this perspective, then, the approach – with its greater reliance on integrated data, information sharing, risk profiling, actuarial analyses, outcomes-based contracting and joined-up services, together with new institutional arrangements, a stronger focus on prevention rather than cure, and a drive for enhanced accountability – heralds a distinctive – and superior – way to tackle deeply entrenched social problems and deliver more cost-effective and better-targeted social services. It is perhaps no accident, from this standpoint, that governments and researchers in other jurisdictions, such as Australia, have taken a keen interest in this experiment.[2]

But what exactly is new? Killian Destremau and Peter Wilson in their contribution point to at least three innovative features. The first is *client segmentation*: identifying groups and individuals with very specific needs. This is an example of using data, including administrative data, more effectively.

The second is *intervention innovation*: tailoring interventions to better address the specific needs identified through market segmentation, setting very clear expectations about the returns sought from the intervention and measuring those returns. There is a clear shift in focus away from broad programmes covering large groups of people (e.g., the unemployed, sole parents, teenage mothers, the injured, the disabled etc.) to designing interventions focused on specific clients with specific characteristics.

The final, and perhaps the most novel, feature is a *new mode of governance*. The social investment approach involves improved cross-agency working – or better horizontal governance – and harnessing the capacity of non-government providers of social programmes for hard-to-reach clients. This requires new ways of commissioning and working with providers, including more collaboratively. Exactly how that will work is still being developed.

WHAT'S GOOD … AND NOT SO GOOD?

Few people doubt the logic of investing for a better future. The only question is what constitutes a sound investment. Conceptually, therefore, the idea of *social* investment has obvious intuitive appeal. But is the new approach robust? Is it built on sound philosophical principles and robust analytical foundations? Will it deliver better outcomes? The former National-led government certainly thought the answers to such questions were all affirmative. Indeed, it regarded the new approach as one of its flagship policies and believed that it had great potential.

Some informed commentators, however, have been much less confident. Critiques have taken various forms. One particular concern was the former government's initial emphasis on minimising the long-term fiscal liability of the welfare system (based on actuarial analyses of the long-term costs of different categories of welfare beneficiaries). Economists Simon Chapple and Bill Rosenberg,[3] drawing on the tools of mainstream public economics, argue that this approach is neither efficient nor equitable. They question the idea that a single monetary metric, namely the Crown's long-term fiscal liability, constitutes a valid or reliable performance measure. They also dispute the related assumptions, first, that such a metric is a useful proxy for improved welfare outcomes, and second, that exits from the benefit system equate to employment gains. Graham Scott in his contribution, while emphasising the need for solid fiscal analyses of all investments, also voices caution about an improper reliance on narrow fiscal measures of performance.[4]

From a different angle, other social scientists – including Amanda Wolf in this volume – have expressed deep scepticism about the extent to which more and improved data can be used to 'prescribe' interventions, given the complexity of social problems. Others have questioned the value of specific analytical tools, such as predictive risk assessment.[5] Many not-for-profit social service providers have also recorded significant reservations, not least about the risk to their clients' confidentiality and privacy,[6] the higher compliance and transaction costs, and the greater contractual complexity and funding uncertainty. For most critics, the likely benefits of the strategy appear to be limited, if not negligible, while the drawbacks and limitations loom large. Impartial observers therefore need to look beyond the former government's confident and beguiling rhetoric and focus instead on the many obstacles and constraints – evidential, technical, administrative and, in some cases, constitutional.

Can these conflicting assessments be reconciled? To what extent, for instance, do the differing views reflect a lack of clarity about the precise nature of the social investment approach? After all, the approach has evolved since 2011–12 – and continued to do so during the preparation of this volume. In addition, there have been difficulties distinguishing the model (however broadly or narrowly conceived) and its various components from other significant and cotemporaneous changes to New Zealand's welfare state under the National-led government. Alternatively, perhaps the conflicting assessments are less about the definition and delineation of the new approach and more about the use of divergent evaluative frameworks – philosophical, analytical and ethical. If so, is it possible to reach any common ground on whether the approach is mostly a 'good idea', a 'good idea' (at least in principle) that has yet to be appropriately implemented, or mostly a 'bad idea'? And to the extent that it has merit, in what policy domains and with respect to what types of issues might it add most value?

A key goal of this edited collection is to address these and related questions. But first let us clear the decks, so to speak, and clarify the nature and scope of the matters under discussion.

This introductory essay outlines the contours of the research project on which this volume is based, discusses the policy context in New Zealand in which the social investment approach emerged and evolved, summarises the core elements of the new approach, reviews the major issues generated by it, explores briefly the changing policy landscape, and considers possible future policy directions. We close by summarising the book's structure and contents.

OUR RESEARCH PROJECT – A BRIEF OUTLINE

In mid-2016, the Institute for Governance and Policy Studies (IGPS) in the School of Government at Victoria University of Wellington and the New Zealand Institute for Economic Research (NZIER) agreed to launch a project to explore New Zealand's social investment approach. The project was designed in consultation with senior staff from several government departments and agencies, including the Ministry of Social Development (MSD), Treasury and the Social Investment Unit (which at the time was an autonomous unit linked to MSD). To oversee the project, a small steering group was formed comprising researchers and senior officials. The primary aim of the project was to answer three specific questions:

1. What exactly is the social investment approach and what is it not?
2. How has it been applied and how should it be applied?
3. Where is such an approach most likely to be productively applied (i.e., in which specific policy domains)?

In order to investigate these and related matters, a series of papers was commissioned from academics in the School of Government at Victoria University of Wellington and other universities, NZIER staff and associates, departmental and agency officials, staff employed by non-governmental agencies, and several consultants. In some cases, academics and officials collaborated in the preparation of papers. The draft papers were then presented at a series of three roundtables held in Wellington between late November 2016 and early May 2017. A wide range of participants from both the public and private sectors was invited to each roundtable, with the aim of securing a diversity of views and insights. Following the roundtables, the papers were revised and peer-reviewed. Several additional papers were sought from a number of participants for inclusion in this volume.

Altogether, this edited collection contains 21 separate contributions from 28 authors. As will be evident to readers, the perspectives of these authors differ, sometimes markedly. Our aim during the project was not to reach a consensus on the many issues under discussion. Rather, it was to facilitate a respectful and informed exchange of views, enhance understanding of 'what', 'how' and 'where', and enable a diversity of thoughtful voices to be heard. The contributions to this edited volume reflect that goal.

THE BACKGROUND TO THE SOCIAL

INVESTMENT APPROACH AND THE WIDER POLICY CONTEXT

New policy initiatives are always influenced by their economic, social, political and technological contexts. The social investment approach is no exception. Various chapters in this volume outline and discuss aspects of the contextual environment, including the former National-led government's wider social reform agenda.7 These commentaries will not be duplicated here, but in order to understand the development of the approach, several matters require emphasis. In particular, the emergence, and subsequent evolution, of the new approach was the product of at least five cotemporaneous trends: heightened fiscal pressures, driven partly by the global financial crisis (GFC) and damaging natural disasters; an ongoing quest for more efficient and effective social services and better outcomes; a particular concern about the economic and social costs of long-term welfare dependency; a related concern about the country's large number of vulnerable children; and significant improvements in technology, not least the greater availability of, and the capacity to analyse, large quantities of policy-relevant data. Let us explore each of these factors briefly.

1. *The fiscal context*: New Zealand's economy was already in a mild recession when the GFC struck during 2008–9 and the National-led government took office in November 2008. While the GFC affected New Zealand less than many other developed countries, there was nonetheless a moderate upswing in the level of unemployment and a deterioration in the government's accounts. Matters were exacerbated by a series of very damaging earthquakes in Canterbury during 2010–11. These events put additional pressure on the government to find cost savings and enhance the efficiency and effectiveness of its policy interventions, not least in the broad – and fiscally expensive – area of social policy. In response, it tightened the degree to which some forms of social assistance (especially tax credits) are targeted. It also made changes to the eligibility criteria for welfare benefits, and introduced more demanding work expectations for beneficiaries with children and more exacting penalties for those failing to meet their obligations.
2. *The public management system and the drive for better social services*: While New Zealand's public service is generally viewed as competent, honest and effective, there has been a long-standing concern about the often disjointed, fragmented and siloed nature of service delivery. As a result, citizens with multiple and complex needs may end up interacting with numerous service providers, whether public or private. The former National-led government made concerted efforts to encourage a more client-focused, coordinated and whole-of-government approach. To this end, it commissioned a series of reports (e.g., the Productivity Commission's *More Effective Social*

Services published in August 2015) and implemented measures to incentivise cross-agency collaboration (e.g., the Better Public Service programme, with its emphasis on whole-of-government performance targets and the creation of functional leadership roles in areas like ICT, procurement and property management). It also raised the idea of moving towards more outcome-based purchasing, and supported efforts to develop new kinds of contracting, including experiments with social impact bonds (e.g., in mental health).8 Additionally, it undertook initiatives to enhance innovation and experimentation in the design and delivery of social services. These included Whānau Ora (a government-sponsored programme designed to provide more flexible and client-focused services to struggling families), multi-agency social sector trials in 16 communities during 2011–16, cross-agency Children's Teams to help at-risk children and their families, and new partnership arrangements with iwi. Aside from this, there have been on-going efforts to improve the contracting for services from non-governmental providers.

3. *Long-term welfare dependency*: The National-led government was particularly concerned by the gradual increase over several decades in the number of people of working age on long-term welfare benefits and growing evidence of intergenerational welfare dependency, especially among the Māori and Pasifika communities. To this end, it established a Welfare Working Group (WWG) in April 2010, chaired by Dame Paula Rebstock, to investigate ways of tackling long-term welfare dependency. The group's final report in early 2011 was instrumental in the development of the social investment approach. Among other important recommendations, the report proposed (drawing partly on recent developments in the area of accident compensation) that the performance of the welfare system should be assessed and managed via a regular estimation of the Crown's long-term fiscal liability based on an 'actuarial assessment of the future costs of benefit receipt'.9 It also recommended a stronger focus on prevention, with greater public investment in measures to avoid welfare dependency. To this end, it proposed that active labour market policies (e.g., assistance for education and training) should be targeted towards 'those most at risk of avoidable long-term welfare dependence, in order to minimise the long-term costs of welfare'.10 From the perspective of the WWG, therefore, a core aim of social policy should be the early identification of people who are likely to experience extended, yet avoidable, periods on welfare benefits, and the deployment of cost-effective early intervention programmes. These ideas formed the basis of the social investment approach, at least in its early stages (2011–15).
4. *Vulnerable children*: Related to the issue of welfare dependency, the National-led government was also concerned by the high incidence of child abuse and neglect. Since 2009 this concern has prompted a variety of policy initiatives, culminating in early 2015 in the establishment of an Expert Advi-

sory Panel to review the system of care and protection for children, including youth justice. The panel's final report released in December 2015 – *Investing in New Zealand's Children and Their Families* – recommended substantial legislative and institutional changes, as well as significant new investment in publicly funded services for vulnerable children and young people. The former government implemented many of the recommended reforms, including the establishment of a new Ministry for Vulnerable Children/Oranga Tamariki, a modified service and practice model, and a new connection and advocacy service.

5. *Big data and more advanced data analytics*: Technological innovation has long been a powerful driver of policy reform. Of particular relevance to the introduction of the social investment approach in New Zealand has been the emergence over the past few decades of 'big data'. This includes the development and refinement of large and often complex data sets (e.g., administrative data), together with a much improved capacity to share, match and analyse such data (e.g., the use of predictive analytics to develop risk profiles).11 These developments have given government agencies and researchers a greater ability to explore the patterns underlying social problems and evaluate the impact of current policy settings and potential future options. Statistics New Zealand, for instance, has developed an Integrated Data Infrastructure (IDI). This is a large research database containing microdata from a wide range of sources (both governmental and non-governmental) about people and households. Recognising the value of big data for improving social outcomes, the National-led government established a Social Investment Unit (SIU) in early 2016 with the aim of upgrading administrative data and increasing the use of data analytics by social sector agencies. The SIU was replaced with a new and expanded Social Investment Agency (SIA) on 1 July 2017. The agency's overall aim is to improve the lives of New Zealanders, and especially vulnerable people, through the application of rigorous, evidence-informed investment strategies. To quote the then Minister Responsible for Social Investment, Amy Adams: 'Greater use of data and evidence, and a focus on measuring outcomes, means we can create a system that looks for more opportunities to intervene sooner and more effectively.'12

DELINEATING THE BOUNDARIES

The defining features of New Zealand's social investment approach – including its precise definition, purpose and scope – remain the subject of debate. As will be clear from the preceding account, one reason for the controversy is that the approach has evolved in a number of ways since its original conception. This is evident from any careful and dispassionate analysis of official documents since 2011, including ministerial speeches and statements, Cabinet papers, departmental reports and material produced by the SIU and SIA. In what follows, we briefly distinguish between what can be called 'Model 1' and 'Model 2', and reflect on how the social investment approach might evolve further.

But before turning to such matters, several points require emphasis. First, in any democratic governmental system with a plethora of ministers and agencies there will always be numerous voices and competing perspectives on complex policy matters. Absolute consistency, uniformity of purpose and conceptual rigour are rare. Instead, differences of emphasis and interpretation are the norm. This was undoubtedly the case with respect to the National-led government's social investment approach. Second, governments invariably have multiple objectives and often prefer, in the interests of managing political risks, for some of these to remain vague. Again, the social investment approach exhibits such tendencies: some objectives have been stated in clear and measurable ways; others have been left more opaque or open-ended. Third, while various relevant distinctions can be made between Models 1 and 2, there is no suggestion that either has been fully formed, let alone rigorously implemented. Indeed, Model 2 remains emergent and somewhat ill-defined. Further modifications are highly likely in response to changing political priorities, governmental reshuffles, new evidence, continuing debate, institutional pressures and disruptive events. Finally, the distinction between policy intentions and subsequent delivery must never be ignored. Large implementation gaps are commonplace. The domain of social investment is unlikely to be an exception.

MODELS 1 AND 2

As indicated earlier, the original social investment approach – Model 1 – emerged from the WWG in early 2011 and was the dominant (but not the only) conception for several years. Table 1.1 captures the main features of this initial approach, drawing on a wide range of evaluative criteria. It then compares Model 1 with a modified version – Model 2 – which gradually emerged during 2015–16. At the time of writing (August 2017), the latter model constituted the official approach.

The core elements of Model 1 included:

1. A primary focus, in policy terms, on the welfare system, and especially working-age beneficiaries;
2. A strong focus on reducing the long-term fiscal liability of the benefit system, with such a reduction viewed as a useful proxy for an overall improvement in societal outcomes;
3. The use of actuarial analyses to calculate the long-term fiscal liability of different categories of welfare beneficiaries (e.g., unemployed people, sole

parents, those with significant health and disability issues etc.);
4. The use of active labour market policies and better service delivery to assist working-age beneficiaries off benefits, with a prioritisation of assistance to long-term beneficiaries;
5. An assumption that benefit exits equate, at least broadly, to employment gains; and
6. A commitment to a performance management system for Work and Income13 in which the target of reducing the Crown's long-term fiscal liability is prioritised.

It would, of course, be wrong to suggest that the former government and its policy advisers all came to the view during 2010–11 and in the years immediately following that the Crown's long-term fiscal liability constitutes the only relevant measure of the performance of the welfare system. But nor can there be any doubt about the extent to which this particular metric rapidly acquired political salience and bureaucratic significance. As a result, considerable effort was expended on actuarial analyses – indeed, analyses of a kind that had previously never been undertaken with respect to the benefit system, whether in New Zealand or it seems elsewhere.14 At the same time, the government also set a target in July 2012, as one of its ten Better Public Service targets, of reducing the number of people continuously receiving Jobseeker Support (in effect, the new name for what was previously the unemployment benefit) for more than a year by 30 per cent by June 2017 (i.e., from around 78,000 to 55,000).

As highlighted in Table 1.1, the gradual emergence of Model 2 during 2015–16 involved a series of modifications to Model 1. There is room for legitimate debate about the extent and significance of these changes. Nevertheless, the main modifications include:

1. A broadening of the target population for the social investment approach beyond working-age beneficiaries to include other vulnerable or at-risk populations (e.g., children within, or at risk of being placed within, the care and protection system);
2. A broadening of the goals beyond reducing the Crown's long-term fiscal liability and the number of long-term welfare beneficiaries to include: (a) a reduction in the total number of people receiving a main benefit (by 25 per cent between June 2014 and June 2018); and (b) improved outcomes for other vulnerable groups;
3. A broadening in the range of analytical tools from a primary focus on actuarial analyses to a greater concentration on the use of big data and data analytics, together with the more consistent application of cost-benefit analysis during annual budget rounds to better inform policy decisions on the funding, design and delivery of a wide range of social services; and
4. The creation of a new ministerial portfolio for social investment in December

2016, new agencies (initially the SIU in early 2016 and later the SIA in mid-2017) and a new Social Investment Board in mid-2017 (replacing the previous Social Sector Board) to bring stronger political and administrative leadership to, and oversight of, the social investment approach.

Model 2 is still emergent. It remains undeveloped. For instance, while it ostensibly involves a broader range of objectives and targets, the required specificity is largely lacking. Significantly, too, although it theoretically extends the social investment approach to all social services, the focus has thus far remained on services to *vulnerable* citizens. Moreover, the application of an investment lens in other areas of public policy (e.g. the transfer system (including tax credits), the provision of education, health care or social housing, and the design and operation of the criminal justice system), has been variable. Some government agencies, such as ACC, Pharmac (see Chapter 11) and the Tertiary Education Commission, have well-developed investment models, but many others do not.

Perhaps the best description of the social investment approach in its most recent iteration is contained in a Cabinet paper – *Implementing Social Investment* – in December 2015:

> Social investment is about improving the lives of New Zealanders by applying rigorous and evidence-based investment practices to social services. It means using information and technology to identify those people for whom additional early investment will improve long term outcomes, better understanding their needs and what works for them, and then adjusting services accordingly. What is learnt through this process informs the next set of investment decisions.

The then minister, Amy Adams, offered a similar description in April 2017:

> The social investment focus is fundamentally about changing the lives of the most vulnerable New Zealanders by focusing on individuals and families, understanding their needs better and doing more of what we know is most likely to give the best results … We're pivoting the system around to help social sector agencies shift away from just focusing on their specific areas into better understanding and being able to assess the impact of their interventions across an individual's life course. Greater use of data and evidence, and a focus on measuring outcomes, means we can create a system that looks for more opportunities to intervene sooner and more effectively.

According to the Cabinet paper in December 2015, the approach has five levels:

1. *Enablers or foundation tools and infrastructure* – including a data infrastructure, investment tools and methods, evaluation tools and

standard-setting;

2. *Direction-setting* – to enable the social sector to contribute to consistent outcomes for vulnerable populations – including performance indicators, the use of risk profiling to identify at-risk groups, and the prioritisation of spending;
3. *Service delivery* – that is informed by the available evidence and is appropriately client-focused, thereby enabling the better design and targeting of services, and more innovative, adaptive and flexible delivery;
4. *Accountability and incentives* – to ensure the systematic tracking of outcomes, to encourage joined-up services, and to ensure the proper monitoring and reporting of progress; and
5. *Feedback loops* – to ensure that policy-makers use the available data to reprioritise expenditure.

Significantly, New Zealand's approach, whether in terms of Model 1 or Model 2, differs from overseas approaches with the same name.15 This is highlighted by several contributors to this volume (see Chapters 2 and 3). In Scandinavia, and more recently across the European Union, social investment is fundamentally about investment in human capital – it is about targeted spending on education and training with the aim of boosting skills and reducing unemployment. In New Zealand, thus far, enhancing human capital has not been the *primary* objective – although, of course, it was one of the former government's social and economic objectives and a major concern of various government agencies, such as the Tertiary Education Commission. In some ways, as Gary Hawke's contribution indicates (Chapter 15), the limited application of the social investment approach to education is surprising, especially given the extensive literature in the economics of education on rates of return.

How the New Zealand approach develops over the coming years remains uncertain. In one scenario it could stay confined to particular social services, especially those for vulnerable people. But there are other options. Potentially, Model 2 could embrace a wider range of policy domains and types of expenditure (and also, perhaps, various important regulatory instruments). Some of the possibilities are explored by the contributors to Part 3 of this volume.

Evaluative criteria	Model 1 2011–14	Model 2 Emergent from 2015	Possible future directions
	Philosophy and purpose		
Philosophical underpinnings	Fiscal accountancy; centre-right preference for a smaller,	A mixture of fiscal accountancy and public economics; centre-right preference for smaller, but	Public economics; preference for better returns on social policy inter-

	but more effective, state; 'social' defined narrowly – primarily welfare transfers	more effective, state; 'social' defined primarily to mean 'social services'	ventions and improved collective intergenerational well-being; broad conception of 'social'
Overall purpose	Reduce long-term welfare dependency among working-age beneficiaries, with a strong focus on reducing the long-term fiscal liability of the benefit payment system – which is seen as a useful proxy for an overall improvement in societal outcomes	A sustained improvement in economic and social outcomes, especially for vulnerable people, with a particular focus on reducing the long-term fiscal liability of the overall system; and more cost-effective social services	Better overall societal outcomes, with sustained improvement in the cost-effectiveness of public resources and regulatory measures across the broad sweep of social policy interventions, including cash and non-cash provision
Policy focus and target groups			
Primary policy focus	Working-age welfare benefits	Extending from working-age welfare benefits to publicly funded social services	A wide range of social policies (e.g., education, housing, health care etc.), as well as different forms of intervention
Population target group	Working-age welfare beneficiaries, especially those receiving benefits for more than a year	Individuals and families with multiple and complex needs, including vulnerable and at-risk children; use of risk profiling to identify populations of interest	All current and potential recipients of governmental assistance and/or those subject to regulatory measures
Analytical features Analytical tools			
Analytical	Actuarial analy-	Multiple analytical tools,	Multiple analytical

tools	ses of the long-term fiscal costs of different categories of working-age welfare beneficiaries	including actuarial analyses, risk profiling, cost-benefit analysis, CBAx etc. Overall, a heavier reliance on big data, data matching and data analytics	tools, but with an emphasis on social cost-benefit analysis drawing on a wide range of quantitative data and qualitative assessments
Types of costs assessed	Fiscal costs	Both fiscal costs and wider social costs	Opportunity costs, including tax deadweight
Types of benefits assessed	Fiscal benefits	Fiscal benefits, but some attention to wider social benefits	Intertemporal discounting to a present value of all relevant benefits
Policy instruments	Active case management of long-term working-age welfare beneficiaries, with the objective of encouraging benefit exits and ideally better employment outcomes	Active case management of working-age welfare beneficiaries; outcomes-based contracting and pay-for-performance contracts (e.g., social impact bonds); adaptive contracting; building a strong data infrastructure	Multiple instruments depending on policy domain and 'what works'
Policy targets	Reducing the long-term fiscal liability of the benefit system; reducing the number of people continuously receiving Jobseeker Support for more than a year by 30% by June 2017 (i.e., from around 78,000	Multiple targets, including reducing the long-term fiscal liability of the benefit system (by $13 billion by June 2018); reducing the total number of people receiving a main benefit by 25% from 295,000 in June 2014 to 220,000 by June 2018; improving outcomes for vulnerable people, including children. A commitment to much greater specificity and a greater reliance on perfor-	Better economic and social outcomes, including educational, employment, health outcomes and other measures of objective and subjective well-being

	in mid-2012 to 55,000)	mance indicators at all levels of the system	
Distributional implications	Intertemporal redistribution of income from net beneficiaries to net taxpayers	Multiple distributional shifts	Multiple distributional shifts
Leadership, institutional and fiscal mechanisms			
Political leadership	Provided by Deputy PM and Minister of Finance, Bill English	Provided by Bill English (PM December 2016–October 2017), and a new Minister Responsible for Social Investment, Amy Adams, December 2016–October 2017	Cross-party support; development of a 'partnership state' model
Institutional arrangements and fiscal mechanisms	New inter-agency collaborative arrangements for policy design and implementation	Establishment of the Social Investment Unit (early 2016), transmuted into the Social Investment Agency with a new Social Investment Board (July 2017); creation of a new uncapped channel of government funding (known as Track One) earmarked for high-quality social investment proposals	Functional leadership commissioning to enable new ways of working with private service providers; an uncapped fiscal allocation as part of each Budget round for high-quality social investments, with bidding open to both governmental and non-governmental agencies
Monitoring, evaluation and critiques			
Monitoring, evaluation and learning	Limited need and modest emphasis, except regarding actuarial analyses	Strong emphasis on using big data to identify patterns where groups and individuals have very specific needs	Strong emphasis extending to a systematic tracking of outcomes and reporting of progress; willingness to redirect resources from

			low-return to high-return programmes
What would constitute 'success'?	A large and sustained reduction (e.g., 30%) in the Crown's long-term fiscal liability	A large and sustained reduction in: a) the Crown's long-term fiscal liability; b) the number of welfare beneficiaries; and c) the number of vulnerable and at-risk children. Development work completed to extend the approach to other policy domains. Extending the analysis to capture spillover effects between portfolios	Sustained focus on individuals' life-courses leading to improvements in economic and social outcomes in a number of policy domains across a range of relevant measures; sustained cross-party support; ongoing backing from civil society organisations; a widespread 'social licence' to operate
Main criticisms	• overall, inefficient and inequitable • lack of attention to wider fiscal and non-fiscal costs and benefits • the Crown's direct long-term fiscal liability is a poor measure of long-term welfare dependency, a poor proxy for welfare outcomes, and an inappropriate	• inadequately specified policy goals • undue focus on (direct long-term) fiscal aggregates • limitations of, and risks associated with, big data, predictive risk modelling etc. • increased compliance costs and less certainty for service providers • data privacy issues arising from the integration and reuse of client-level data	• the inherent challenges (methodological and ethical) of assessing the costs and benefits of social programmes (including regulatory measures) and determining reliable and meaningful rates of return

way to monitor and evaluate the performance of the welfare system

- exits from the benefit system equate poorly to employment gains
- data privacy issues arising from the integration and reuse of client-level data

Table 1.1: The social investment approach in New Zealand – an evolving concept. Source: The authors.

KEY THEMES AND ISSUES

As indicated earlier, New Zealand's social investment approach has brought to the fore numerous governance, administrative, conceptual, methodological, analytical and ethical issues. The roundtables conducted during late 2016 and 2017 provided an opportunity for many of these to be canvassed and debated. Much of the relevant discussion is captured by the contributors to this volume. While not repeating their analyses here, it is useful to summarise the main themes and concerns.

Definitional issues

We outlined earlier how the social investment approach might be best described and delineated, and how it has evolved. Nevertheless, the roundtable series highlighted continuing disagreements about such matters, with different perspectives on the nature, scope and objectives of the approach, as well as the extent to which it has been modified. Philosophical disagreements were also in evidence, especially about how social investment *should* be designed and implemented. These debates reflect, among other things, various underlying ethical and ideological differences. But they also beg basic questions of terminology. What is meant, for instance, by 'social', 'investment', 'return' and 'outcome'? When is it meaningful and valid to use the language of 'investment' in relation to social expenditures? How does an investment 'framing' of policy issues and options affect mindsets, priorities and decision-making? Does an investment lens, for example, alter time horizons and intertemporal preferences, and does it affect the political acceptability of what is proposed or implemented? These and related questions are taken up by several contributors to this volume. But they are not easy to resolve.

Moreover, it must be readily acknowledged that language can be slippery. Some words have multiple meanings. Their connotations also matter. Words like 'investment' generally evoke positive connotations while others, like 'spending', may not. Hence, 'investment' can readily be invoked to provide an apparently plausible justification for government expenditure, even though there may be little evidence that the spending in question will generate a net gain. Alternatively, the expected gains may be hard to specify or quantify, let alone monetise. Sir Michael Cullen makes the following observation in his chapter:

> … the investment approach should be seen as no more than a useful way to organise thinking about government spending. It is not, or at least cannot be, a fundamental change in the whole Budget process … simply substituting the word 'spending' for the word 'investment' in much of what has been written does not change the meaning in any significant way. Rather, the use of the term investment simply serves to emphasise that the spending is being undertaken in the expectation of actually achieving some desirable ends …

Ideally, all government spending should be designed to produce benefits. But to invoke the language of *investment* surely implies an expectation of net gains over time.

Conceptual and analytical issues

The merits of both Models 1 and 2 remain strongly contested. Table 1.1 summarises some of the main criticisms of each model. At the heart of these concerns is the failure, at least thus far, of ministers and their advisers to incorporate an appropriately broad range of costs and benefits into their evaluation of specific policy interventions. While fiscal objectives are unquestionably important, they are not a sufficient measure of overall performance.[16] And while the former government talked repeatedly about the importance of social, as well as economic, objectives, it made little effort to clarify precisely what these social objectives are, how they should be measured and how success will be monitored and reported. Understandably, therefore, some critics of its policies regard the social investment approach as yet another instrument for fiscal restraint and cost-cutting. Likewise, as Simon Chapple argues in his chapter, the approach (especially Model 1) runs the risk of exhibiting a 'bean-counting' mentality: in his view, it is best characterised as a 'fiscal redistribution model' rather than a genuine investment model. In the absence of more comprehensive performance measures and a rigorous assessment of rates of return (i.e., drawing on the full range of costs and benefits), such criticisms cannot be lightly dismissed.

Reallocating existing expenditure versus new and additional expenditure

A related issue, in this context, is whether any government is willing to increase public expenditure or is primarily seeking an authoritative mechanism for reallocating expenditure within existing baselines. A proper ongoing investment approach would require an openness to spending *more in aggregate* (as well as redirecting existing investments), albeit on condition that the additional (or redirected) spending is justified on the basis of the best available evidence. Publicly, various parties have indicated their willingness to increase overall expenditure on social services, and there was some evidence of this in the 2017 Budget round and with regard to the recent reforms of the country's care and protection system for children – referred to as the 'Investing in Children Programme'.17 Nevertheless, concerns remain – especially among social service providers – about whether most of the changes in spending patterns arising from the social investment approach will be reallocations rather than new spending. This, in turn, raises questions about where the cutbacks are likely to fall, who will lose, who will win, and what the overall social consequences might be.

Methodological issues, uncertainty and complexity

While Model 2 rightly moves away from a primary focus on the long-term fiscal liability of the welfare system, it also raises many new and pressing methodological issues – especially regarding the extent to which the social scientists equipped with big data and new analytical techniques can provide reliable guidance as to 'what works'. Various chapters in this volume discuss the limits to policy analysis and the constraints on effective social engineering. Among other things, they highlight that:

1. Even the most comprehensive databases contain only partial and fragmentary information about the characteristics of the individuals and households who use social services;
2. Much of the historical information available about specific individuals is im-

precise and error-prone and tells us little about their immediate families or wider social contexts;
3. There is often only limited information available about how and to what extent particular social service interventions actually work;
4. Our understanding of some things (e.g., risk factors and 'deficits' in people's lives) is often greater than our knowledge of other things that matter (e.g., resilience factors);
5. Our understanding of causality in the social sciences (i.e., the relationship between specific inputs, outputs and outcomes) is at best modest and incomplete;
6. Our capacity to predict future states, events and behaviours is similarly limited;
7. Many of the costs and benefits of particular policy interventions are hard to quantify, let alone monetise;
8. Robust evaluations are often costly and require considerable time and analytical capacity, both of which are typically in short supply; and hence
9. Our capacity to assess accurately and reliably the relative cost-effectiveness of different policy interventions is severely constrained.

Implications for service providers and their clients

As noted earlier, the social investment approach has been part of a wider set of social policy reforms since 2009–10, including changes to the benefit system (tighter eligibility criteria and more extensive sanctions), changes in commissioning and contracting, changes to spending priorities, changes to institutional arrangements and public management systems, and a massive overhaul of the care and protection system for children. It has also occurred during a period of relative fiscal stringency and significant (and often complex) social needs, with increasing demand for many social and health-related services.

Collectively, these policy changes and demand pressures have generated multiple challenges for non-governmental providers. Particular concerns have included: a) the government's desire to increase the use of outcomes-based contracting, and the added risks and uncertainty associated with such developments; b) the requirement for providers to supply additional information to the Ministry of Social Development, including individual client-level data, and the implications of this for client confidentiality and trust; c) the expectation that providers will undertake more systematic data collection, monitoring, reporting and evaluation of their services, and the additional costs associated with these activities; and d) the recognition that a social investment approach which seeks to redirect funding to areas of greater net returns will inevitably impact negatively on some providers.

Bear in mind that governments in democracies ultimately require the consent of the governed – or what is often called a 'social licence' to operate. Without adequate support from the public and relevant civil society organisations, they will struggle to gather the data they need or the wherewithal to intervene effectively. As Jo Cribb and Sir Michael Cullen argue in their respective contributions, to undertake social investment well requires cross-agency and cross-sectoral co-operation and collaboration – or a 'partnership state'. Building the necessary foundations will take time. It may well require a concerted strategy of community engagement by ministers and government agencies. Thus far, any such engagement has been modest.

Management changes

New Zealand's decentralised public management system already has most of the flexibility and tools required to enable the social investment approach to be rolled out. To date, a number of small, important changes have been made, such as establishing the Social Investment Agency and the Social Investment Board. What is needed is the sustained commitment to use these tools to full effect.

Fundamentally, embedding the social investment approach is a change management challenge to break established patterns and enable new ways of working and governing to emerge. Using the framework developed by the Institute for Government in London,18 the approach is still at the 'rising salience' phase with 'putting in place the building blocks' under way while 'embedding the change' has yet to occur.

Political constraints

Embedding the social investment approach, like any long-term policy change, is a long march. Still in its early phases, the approach is evolving as it is gradually applied in different domains. The basic building blocks are still being constructed and the approach is not yet embedded in administrative practices. As such, it remains at risk from political shifts, such as the recent change of government, ministerial turnover leading to a loss of political leadership, and shifting goals in response to competing priorities.

It is particularly vulnerable because of the potential disconnect between the different ways the political and technocratic worlds handle risk, as John Yeabsley highlights in his contribution. The public accountability process favours low risk and an aversion to experimentation and acknowledgment of failure. The technocratic process is based on data-driven experimentation in order to search for what works. From a technocratic perspective, failures are often the most insightful experiments. But in the political world 'failure is not an option'.

In some sectors the disconnect is marked. Warren Young in his contribution documents how in the justice sector independent decision-makers (judges, parole boards and police) make decisions on individual cases which drive allocation across the sector without facing the resource consequences. Until there is an alignment between decision-making and resource allocation, the social investment approach is doomed to be restricted to influencing peripheral matters in that sector.

IMPLICATIONS

In short, a social investment approach faces formidable challenges and constraints. These apply irrespective of the model's conceptual logic, methodological rigour, governance arrangements, administrative elegance or level of political commitment. For instance, while prevention may often be better than cure, decision-makers frequently lack reliable evidence about which particular early interventions deliver net benefits (somehow defined), let alone about which are the most cost-effective. Take the issue of criminal offending: successful prevention, as Warren Young notes, can avoid large fiscal and social costs. But predictive tools are far less than 100 per cent accurate in identifying future offenders and non-offenders. To be effective, therefore, early interventions must cast their net wide. Yet this inevitably increases their costs, thereby reducing their efficiency. Meanwhile, later interventions to reduce the likelihood of reoffending may be less effective than preventative measures; but they may also be cheaper. Aside from issues of efficiency and effectiveness, some early interventions may not be acceptable, perhaps because they infringe fundamental rights and are unduly coercive.

Such conclusions are not a counsel for despair. Nor must they be allowed to foster policy paralysis – which is an undoubted risk. Nevertheless, they certainly point to the need for caution and humility rather than ill-founded confidence. They also suggest the desirability, as Amanda Wolf argues in her chapter, of relying on a mix of analytical and non-analytical methods, together with a mix of data, insight and judgment.

Acknowledging the limits to our understanding and analytical capacity has other policy implications.[19] First, it points to the desirability of experimentation, flexibility and devolved decision-making. This, in turn, puts a premium on professionalism, trust and goodwill. It also suggests the need for long-term relational contracting between the funders and providers of social services rather than an undue emphasis on tightly specified classical contracts.

Second, assuming relative ignorance rather than omniscience casts doubt on the wisdom of a social investment strategy reliant almost exclusively on small-scale 'surgical' interventions involving limited numbers of vulnerable people – interventions which, in turn, depend for their selection and successful implementation on vast amounts of data and analysis, as well as copious supplies of high-calibre staff. While such interventions have a place, there will likely be merit in balancing them with ‘broad-spectrum treatments’ of larger population groups, whether in the form of cash transfers, vouchers or in-kind provision. Put differently, a prudent strategy for enhancing social outcomes in cost-effective ways will almost certainly require a mix of instruments, with both broad-spectrum and narrow-spectrum interventions and a combination of universality and targeting (e.g., some version of ‘targeted universalism’). A core part of the policy challenge, of course, is determining the appropriate mix.

WHAT REMAINS TO BE DONE?

As noted earlier, Destremau and Wilson identify three pillars of the social investment approach: client segmentation, intervention innovation and governance innovation. The first, using data to identify and segment the targets, is the most advanced: we know with some granularity that there is a group of people with particular characteristics in certain areas. With the third, the main barriers relate to ‘how’ the formal public management system is operated rather than ‘what’ the formal design requires. The challenge involves adding to a focus on efficient service delivery an extra focus on people-centred goals involving multiple, cross-cutting outcomes.

The middle pillar is the least developed. This requires interventions that will work at the individual level to overcome some pretty severe, often intergenerational, social pathologies. While the analytical tools are being developed, the system currently lacks the capability to address the ‘where to best invest’, ‘what to invest in (intervention selection)’ and ‘how to invest’ questions.

Embedding the social investment approach will ultimately require cross-party backing and continued political leadership, sustained high-level bureaucratic support and a willingness to innovate, and the resources for investing in new and enhanced technical capabilities. Equally, it will need buy-in and support from the private service providers and local communities necessary to co-produce the required changes. ‘Holy grail’ or ‘worthy quest’ – this volume leaves that to the reader to decide.

THE STRUCTURE AND CONTENTS OF THE BOOK

The following twenty-one chapters are grouped into five categories. Part 1 deals with the nature, origins and evolution of the social investment approach. There are five chapters (in addition to this overview). The first, by Killian Destremau and Peter Wilson, explores the concept of investment, discusses the idea of social investment historically and comparatively, and outlines the development of the social investment approach in New Zealand since 2010–11. Next, Michael Mintrom places recent policy developments in New Zealand within the wider international movement to view public policies as investments. Giving particular attention to approaches in the United States in various policy domains, he outlines a ‘policy investment checklist’ – a five-step guide to prudent decision-making.

Following this, Jonathan Boston considers social investment through a temporal lens. In so doing, he explores the claim that democratic policy-making exhibits a presentist bias and discusses whether applying an investment framing to social policy will extend the temporal horizons of policy-makers and encourage a greater focus on long-term goals and intertemporal fairness. Next, Sarah Hogan explores the case for early intervention and the exacting conditions under which prevention is likely to be more effective than cure. Derek Gill then reviews the recent changes in the public management system and the significant challenges which remain, above all that of change management. He argues that the barriers to progress relate less to what the system requires and more to ‘how’ the formal public management system is operated.

Part 2 focuses on the design and application of the social investment approach. There are seven chapters. Tim Hughes highlights the potential of improved predictive accuracy to increase the consistency of decision-making, but also the ethical problems raised if only limited predictive accuracy can be achieved. Gail Kelly and Isabelle Collins discuss how the social investment approach requires knowing as much as we can about what works, for whom and under what circumstances. This calls for better evidence about effectiveness at the individual intervention level as well as developing a system-wide collective infrastructure. Following this, Amanda Wolf examines why the necessary information for effective social investment decisions will always be partial and incomplete. For one thing, individuals’ life-courses are unique and the information available to policy-makers about them is historical, often imprecise, and subject to errors. For another, the future is uncertain and there can be no guarantee that information – including about ‘what works’ – drawn from previous social interventions will be equally relevant for future interventions.

Next, Simon Wakeman and Diane Garrett explore what is needed to implement an investment approach, including the capabilities for managing more complex data architectures and infrastructure, analytics and insights, investment advice, evaluation and learning. Following this, Peter Alsop and Steffan Crausaz offer some lessons for the design and implementation of social investment based on the approach developed over several decades by New Zealand’s Pharmaceutical Management Agency (better known as Pharmac). The mandate of this agency is to decide, on behalf of district health boards, which medicines and pharmaceutical devices ought to be subsidised. Pharmac’s experience underscores the exacting conditions which must be satisfied to ensure wise investment decision-making.

Jo Cribb, in her contribution, explores the challenges posed by the social investment approach for the relationship between the funding agencies and those charged with service delivery, be they public or private organisations. Effective social investment, she argues, will require more sophisticated commissioning and greater expertise on the part of service providers. Greater investment in human capability will thus be essential. John Yeabsley builds on Tim Hughes's chapter to explore the technical and political risks posed by social investment. In so doing, he draws attention to the political asymmetries that operate in modern democracies: policy mistakes, however minor, often count far more than policy successes.

Part 3 assesses how the social investment approach could and should develop in various policy arenas. Warren Young considers the opportunities and challenges of applying it in the justice sector; Gary Hawke explores the implications for education; and Verna Smith and her colleagues, drawing on an Australian case study, examine the relevance of social investment to the allocation of research funding. In each case the authors underscore the potential strengths and limitations of using an investment lens or framework to decide important matters of public policy.

Each of the four chapters in Part 4 offers a critical, yet very different, perspective. Sir Michael Cullen challenges the social investment approach from a social democratic standpoint, drawing attention to its questionable assumptions and practical limitations. He suggests the need for an alternative model, one based on good evidence and sound values which seeks to develop a genuine partnership between citizens and the state. Simon Chapple's critique takes a different tack. In his view, a fundamental problem with the social investment approach is the failure to anchor it firmly in mainstream economic models of rational resource allocation. For him, it is better viewed as an instrument for redistributing long-term income from net working-age beneficiaries to net taxpayers, conditional on the existing level of benefit payments. Moreover, he argues that, based on an analysis of the available data, the new approach has not achieved its intended results, at least in relation to welfare beneficiaries.

A rather different critique is offered by Elizabeth Eppel and Girol Karacaoglu. Drawing on two recent case studies – one dealing with family violence prevention and the other with improving school effectiveness in south Auckland – they argue that to address policy problems effectively in a context of substantive complexity and radical uncertainty government agencies must engage in depth with the relevant communities and affected people. Without such engagement, any understanding of the problems will be deficient. Equally, there will be inadequate scope for learning and experimentation. Yet, as it stands, community engagement is an unfunded and unrecognised part of social investment thinking.

David Hanna offers a critique from the perspective of a social service provider, namely, Wesley Community Action in Wellington. He starts by identifying and challenging the key assumptions underpinning the social investment approach. He then discusses the implementation and implications of the evolving approach and concludes that, unfortunately, it has reinforced and intensified some of the worst features of the existing public management system. In his view, the former government prescribed the same medicine but at a higher dosage. Instead, what is needed is a different kind of medicine.

Finally, Part 5 contains concluding reflections on the social investment approach from Graham Scott, who has contributed significantly in recent years to its evolution. He emphasises that the approach is still in its early stages and represents more of a movement than a tidy, discrete government initiative. It lacks, he argues, clearly defined edges and incorporates many separate but related concepts and work streams. Moreover, it has been layered over the top of existing public management structures, thus adding to administrative complexity. Like many other contributors, Scott emphasises the additional capabilities that will be required to make the best use of the new data-rich environment for policy analysis, programme evaluation and fiscal management. According to him, for the new approach to achieve its full potential, particularly in tackling the long tails of social disadvantage, it will need to adhere to enduring principles and practices of sound governance, policy-making and service delivery.

CONCLUSION

Plainly, this book contains many contrasting voices on the merits of New Zealand's evolving approach to social investment. We trust, however, that these voices adequately reflect both its strengths and weaknesses, as well as its risks and opportunities. In our view, the new approach constitutes an important experiment in social policy. It thus deserves ongoing, rigorous, independent scrutiny. This book is but a beginning – but, we hope, a constructive and informative one.

References

Adams, A., 'Changing Lives through Social Investment', press release, 21 April 2017

Better Public Services Advisory Group, *Better Public Services Advisory Group Report*, Wellington, 2011

Chapple, S., 'Forward Liability and Welfare Reform in New Zealand', *Policy Quarterly*, 9, 2 (2013)

Coles, B., C. Godfrey, A. Keung, S. Parrott and J. Bradshaw, 'Estimating the Life-time Cost of NEET: 16–18 Year Olds Not in Education, Employment or Training', research undertaken for the Audit Commission, Department of Social Policy and Social Work and Department of Health Sciences, The University of York, 2010

Cook, L., 'Improving the Effectiveness of Social Services: The Challenge for Public Ad-

ministration', unpublished paper, Wellington, 2017
Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016
Edwards, D., and E. Judd, 'Measuring Tomorrow's Outcomes Today: Adopting an Investment Approach within the Ministry of Social Development', paper presented at the New Zealand Society of Actuaries Biennial Conference, *Brave New World: Big Data, Longevity and ERM*, Dunedin, 2014
English, B., 'Annual John Howard Lecture to Menzies Research Centre', Canberra, 25 June 2015
English, B., 'Speech to the Treasury Guest Lecture Series on Social Investment', presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015
Expert Advisory Panel, *Investing in New Zealand's Children and their Families*, final report, Ministry of Social Development, Wellington, 2015
Gluckman, P., *Using Evidence to Inform Social Policy: The Role of Citizen-Based Analytics: A Discussion Paper*, Office of the Prime Minister's Chief Science Advisor, Wellington, 19 June 2017
Gluckman, P., 'Enhancing Evidence-Informed Policy-Making', Office of the Prime Minister's Chief Science Advisor, Wellington, July 2017
Greenfield, A., H. Miller, K. Wolanski and G. McGuire, *Ministry of Social Development: Valuation of the Benefit System for Working-Age Adults as at 30 June 2014*, Taylor Fry Pty Ltd, Sydney, 2015
Hall, D., 'Greening the Future: A Case for Environmental Impact Bonds', *Policy Quarterly*, 13, 2 (2017)
Hughes, T., 'Predictive Analytics for Policy and Practice: Reflections from the Criminal Justice System', *Policy Quarterly*, 11, 2 (2015)
Ilott, O., E. Norris, J. Randall and A. Bleasdale, *Making Policy Stick: Tackling Long-Term Challenges in Government*, Institute for Government, London, 2016
James, C., 'Social Investment: Chance for a Mentality Shift', 2016, www.colinjames.co.nz/2016/03/07/investment-chance-for-a-mentality-shift (accessed 5 September 2017)
Keddell, E., 'Substantiation Decision-Making and Risk Prediction in Child Protection Systems', *Policy Quarterly*, 12, 2 (2016)
Makhlouf, G., 'Growing Our Economic Capital: Investing in Sustainable Improvement in Our Wellbeing', speech at Victoria University of Wellington, 3 November 2016
New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015
Nolan, B., 'What Use is "Social Investment"?', *Journal of European Social Policy*, 23, 5 (2013)
Privacy Commissioner, *Inquiry into the Ministry of Social Development's Collection of Individual Client-Level Data from NGOs*, Wellington, 2017
Reference Group on Welfare Reform, *A New System for Better Employment and Social Outcomes*, Department of Social Services, Canberra, 2015
Raubal, H., and E. Judd, 2013 *Benefit System Performance Report for the Year Ended 30 June 2013*, Ministry of Social Development, Wellington, 2014
Raubal, H., and E. Judd, 2014 *Benefit System Performance Report for the Year Ended 30 June 2014*, Ministry of Social Development, Wellington, 2015
Rosenberg, B., 'The "Investment Approach" Is Not an Investment Approach', *Policy*

Quarterly, 11, 4 (2015)

Scott, G. et al., 'Governance and Accountability in Social Investment', report prepared by the Social Investment Working Group to respond and build on the proposals from Matt Burgess and Denise Cosgrove, November 2016

Taylor Fry, *Actuarial Advice of Feasibility: A Long-Term Investment Approach to Improving Employment, Social and Financial Outcomes from Welfare Benefits and Services*, report to the Ministry of Social Development and Treasury, 27 October 2011

Taylor Fry, *Actuarial Valuation of the Benefit System: Technical Briefing*, 2012

Treasury, *CBAx Tool User Guidance*, Wellington, 2016

Welfare Working Group, *Reducing Long-Term Benefit Dependency: Recommendations*, Wellington, February 2011

Notes

1 We would like to thank Simon Chapple, David Eng, Michael Mintrom and Ruth Wilkie for their helpful comments on an earlier version of this chapter.

2 See Reference Group on Welfare Reform, *A New System for Better Employment and Social Outcomes*, Department of Social Services, Canberra, 2015.

3 Simon Chapple, 'Forward Liability and Welfare Reform in New Zealand', *Policy Quarterly*, 9, 2 (2013), and in this volume; and B. Rosenberg, 'The "Investment Approach" Is Not an Investment Approach', *Policy Quarterly*, 11, 4 (2015), pp.34–41.

4 See also G. Scott et al., 'Governance and Accountability in Social Investment', report prepared by the Social Investment Working Group to respond and build on the proposals from Matt Burgess and Denise Cosgrove, November 2016.

5 T. Hughes, 'Predictive Analytics for Policy and Practice: Reflections from the Criminal Justice System', *Policy Quarterly*, 11, 2 (2015), pp.37–44, and in this volume; E. Keddell, 'Substantiation Decision-Making and Risk Prediction in Child Protection Systems', *Policy Quarterly*, 12, 2 (2016), pp.46–56.

6 Privacy Commissioner, *Inquiry into the Ministry of Social Development's Collection of Individual Client-Level Data from NGOs*, Wellington, 2017.

7 See especially Chapters 2 and 21; see also C. James, 'Social Investment: Chance for a Mentality Shift', 2016, www.colinjames.co.nz/2016/03/07/investment-chance-for-a-mentality-shift (accessed 5 September 2017).

8 See 'Social Bonds: New Zealand Pilot', Ministry of Health, www.health.govt.nz/our-work/preventative-health-wellness/social-bonds-new-zealand-pilot (accessed 5 September 2017); Steven Joyce and Amy Adams, 'First Social Bond to Focus on Mental Health', press release, 21 February 2017, www.beehive.govt.nz/release/first-social-bond-focus-mental-health (accessed 5 September 2017).

9 Welfare Working Group, *Reducing Long-Term Benefit Dependency: Rec-*

ommendations, Wellington, February 2011, p.32.

10 Ibid., p.20.

11 See P. Gluckman, *Using Evidence to Inform Social Policy: The Role of Citizen-Based Analytics: A Discussion Paper*, Office of the Prime Minister's Chief Science Advisor, Wellington, 19 June 2017; P. Gluckman, 'Enhancing Evidence-Informed Policy-Making', Office of the Prime Minister's Chief Science Advisor, Wellington, July 2017.

12 Amy Adams, 'Changing Lives through Social Investment', press release, 21 April 2017, www.beehive.govt.nz/release/changing-lives-through-social-investment (accessed 6 September 2017).

13 Work and Income is the main delivery arm of the Ministry of Social Development. It provides income support to those in need and helps people to secure paid employment.

14 See: D. Edwards and E. Judd, 'Measuring Tomorrow's Outcomes Today: Adopting an Investment Approach within the Ministry of Social Development', paper presented at the New Zealand Society of Actuaries Biennial Conference, *Brave New World: Big Data, Longevity and ERM*, Dunedin, 2014; A. Greenfield et al., *Ministry of Social Development: Valuation of the Benefit System for Working-Age Adults as at 30 June 2014*, Taylor Fry Pty Ltd, Sydney, 2015; Taylor Fry, *Actuarial Advice of Feasibility: A Long-Term Investment Approach to Improving Employment, Social and Financial Outcomes from Welfare Benefits and Services*, report to the Ministry of Social Development and Treasury, 27 October 2011; and Taylor Fry, *Actuarial Valuation of the Benefit System: Technical Briefing*, 2012. There have, however, been various efforts over many years to estimate the lifetime costs of particular categories of people, such as young people (e.g., 16–18 years) not in any form of education, employment or training. See, for instance: B. Coles et al., 'Estimating the Life-time Cost of NEET: 16–18 Year Olds Not in Education, Employment or Training', research undertaken for the Audit Commission, Department of Social Policy and Social Work and Department of Health Sciences, The University of York, 2010.

15 B. Nolan, 'What Use is "Social Investment"?', *Journal of European Social Policy*, 23, 5 (2013), pp.459–68.

16 See, for instance, G. Scott et al., 'Governance and Accountability in Social Investment', report prepared by the Social Investment Working Group to respond and build on the proposals from Matt Burgess and Denise Cosgrove, November 2016, and in this volume.

17 See 'Investing in Children Programme', Ministry of Social Development, www.msd.govt.nz/about-msd-and-our-work/work-programmes/investing-in-children (accessed 5 September 2017).

18 O. Ilott et al., *Making Policy Stick: Tackling Long-Term Challenges in Government*, Institute for Government, London, 2016.

19 L. Cook, 'Improving the Effectiveness of Social Services: The Challenge for Public Administration', unpublished paper, Wellington, 2017.

Chapter 2
Defining social investment, Kiwi-style

Killian Destremau and Peter Wilson

INTRODUCTION

The former National-led government named its approach to social policy 'social investment'.1 A name is a label that identifies something. When that thing is a social policy, what it does and how it affects peoples' lives, rather than what it is called, is what matters. However, especially at the early stage of a change in policy approach, being clear about what a proposal means is important, if we are to avoid confusion and, worse, not proceed with a worthwhile change because of a misunderstanding about the meaning of words. Knowing whether a new name has simply been attached to old policies will provide insights into the likelihood of success of that policy.

Theories, actions and rhetoric

Government is hard, and there are rarely clear-cut, simple solutions to easy-to-identify problems. The craft of public policy has evolved to help governments make good decisions, first by defining what 'good' means and then developing techniques to test alternatives.

Having a clear analytical framework – a way of thinking about the world – is part of good policy analysis. Theories built on a solid analytical base that seek to articulate an approach to thinking about and solving policy problems are but one part of the political process of policy- and law-making. While it is often possible to point to linkages between policies, laws and practices and ideas from the academic literature, in many cases those linkages can be tenuous and might be the result of *ex post* rationalisation.

While governments often have preferences for certain modes of thinking about issues and actions, claims that any government is always consistently applying a clear analytical framework that was carefully and systematically developed and rigorously applied across a wide range of activities are likely to be overblown. Even in small countries like New Zealand, with a single layer of sovereign government and a unicameral parliament traditionally dominated by the executive, policy consistency is never absolute.

Governments do, however, frequently apply broad labels to their approaches as a way of both communicating with voters and justifying what they are doing by appealing to objective science and rational analysis. While ideas like ‘protecting property rights’, ‘respecting the rule of law’, ‘a hand-up, not a hand-out’, ‘broad-base, low-rate tax systems’ and the ever popular ‘what works’ are very useful guides to narrowing the range of options to be considered, they are not a complete policy solution in their own right.

The National-led government’s social investment approach

In a series of speeches in 2015, the then Minister of Finance[2], Bill English, and his then Associate Minister, Paula Bennett, said that the government was applying a ‘social investment’ approach to welfare: ‘Our goal is to shift from social spending to social investment’.[3] In his first press conference on being elected leader of the National Party, English explicitly stated that the government he led would give priority to advancing the new approach, and Amy Adams was appointed Minister Responsible for Social Investment. The Social Investment Unit of the State Services Commission was subsequently converted into a stand-alone Social Investment Agency, a website launched[4] and staff appointed. Treasury’s website also has a section on social investment[5] and its latest Statement on the Long-term Fiscal Position[6] was accompanied by the release of a paper on social investment.[7] In her previous role as Minister of Social Development, Bennett launched an Investing in Services for Outcomes programme in June 2012, and that was carried on by her successor and renamed the Community Investment Strategy.[8]

In a speech delivered in September 2000, the then Minister of Social Services and Employment, Steve Maharey, also laid claim to using a social investment approach: ‘Ours is a social investment model. It involves community, strong institutions and a dynamic market economy. It is about extending economic opportunity. And it is built on security not fear.’[9]

Despite the former Cabinet specifically stating what it considered the approach to be,[10] there is no shared understanding within the New Zealand policy community about what the current version of social investment involves (as we note below, there is also a limited consensus in the literature about what precisely the term means[11]). After interviewing stakeholders from politics, the public service, social service delivery, academia and business, in 2016 NZIER and Deloitte observed: ‘Over the course of this research we found there was no consensus on the definition of a social investment approach’.[12]

In part, this lack of a clear understanding comes from the very diverse set of goals that ministers have said that they are seeking to achieve through a 'social investment' approach. For example, in a speech in Melbourne in 2015, English said that the government was seeking: greater 'social mobility', more 'resilience' for 'vulnerable people', 'fewer customers' and less 'demand for public services', 'fewer dysfunctional families', 'fewer people who commit crime' and 'reductions in recidivism', less welfare dependence, a greater ability for those on benefits 'to make choices', a broader 'range of organisations and providers', a more accountable welfare state and 'smaller government'.[13]

For some, an investment approach that genuinely involves applying resources now to achieve a return in the future is new and innovative and has much to recommend it:

> [Social investment involves] a shift in policy-makers' mentality. 'Spending' is palliative and in the moment. It eases the symptoms and both physician and patient get remission. 'Investment' is constructive and for the future. The investor gets a return and the person invested in gets the durable asset of a more nearly whole life.[14]

Others are less complimentary:

> The 'Investment Approach' being taken by the Ministry of Social Development (MSD) is a narrow and flawed one. It fails to take a balanced investment view. It is better viewed as a one-dimensional performance indicator rather than a systemic approach to policy and evaluation.[15]

Our motivation is to describe what the former National-led government proposed in New Zealand and then compare it with the sorts of policies usually called a 'social investment approach' in the literature and with the 'social investment' approaches other countries are following to see if there is anything new in what that government was proposing. If it isn't new, then it is unlikely to be any more effective than the status quo.

Outline

We begin by defining some terms, like 'investment', 'social' and 'return on investment', and discussing how the rate of return thus defined can be measured, using the lens of economics.

We then review the theory and concept of social investment contained in the literature and locate the New Zealand approach within this theory. New Zealand is not the only country to say that it is using such an approach to social welfare. We examine the approaches used in other countries and compare them to both the developing New Zealand approach and the traditional New Zealand welfare state.

Next, we briefly scan the development of social policy in New Zealand, to put the current discussion in context. We then outline what the former government said represents a 'social investment' approach and its core components. We conclude with an initial assessment of whether social investment, as proposed, really does represent a new approach.

DEFINING SOME TERMS

In this section, we discuss and define some terms that will appear frequently in the rest of this chapter.

Investment

'Investment is capital formation – acquisition or creation of resources to be used in production'.16

While capital was originally restricted to the idea of physical capital – machines – this label is now applied to a wide range of concepts: for example, intangible capital (ideas, knowledge, patents); human capital (the skills and attributes people possess); social capital (trust, reciprocity, information and cooperation associated with social networks); and natural capital (renewable resources like water and fish and ecosystem services – the ability of the environment to support life). These types of capital share the same core functions: they can be used (often in combination with labour, other intermediate inputs and each other) to produce goods and services of value.

Capital is enduring: it lasts more than a single period of time and its use does not lead to its disappearance.17 Here, the contradistinction is with a consumption good, something that provides benefits in a single period and is fully consumed during use. Using some goods involves a mixture of both consumption and investment. This is especially the case with many social policy interventions. Receiving counselling is an example: it can provide immediate benefits, as well as help people to live better after they have left the counsellor's office. Even food can be a mixed good: being well nourished can lead to other experiences, like education, providing more enduring benefits. Consumption can also be enduring from the point of view of gratification: fond memories can linger for years.

Capital can be formed through investment: putting resources that could be used today towards future benefits. Investment is costly – resources that could otherwise be consumed have to be directed into building capital.

Interventions as investments

As we will see in the section on the history of social policy in New Zealand, many early government social interventions were designed to address immediate needs and were in the nature of consumption goods, reflecting Colin James's observation, cited above, that 'spending is palliative and in the moment'. They were designed to give people the material wherewithal to carry out their daily lives by curing some defect in the market (insufficient employment, low wages, poor-quality housing, expensive education), rather than correcting a deficiency in human or social capital.[18] The focus was very much on now: addressing a pressing need for immediate assistance, often in the form of transfer payments (cash). Implicit in this is the belief that people could lead a life of value if only they had sufficient financial means.

The shift from seeing social policy interventions as solely addressing immediate needs to providing enduring benefits that would offset long-term costs was a progressive one, and it is beyond the scope of this essay to trace it fully, although we note some of the key developments in New Zealand below.

Social

The dictionary says that 'social' is an adjective meaning 'of or relating to society or its organisation'.[19]

Social investment

The 'social' in 'social investment' describes investments in people that are financed or implemented or coordinated by government agencies. It also expresses the idea that the investments, while beneficial to those being invested in, also benefit 'society as a whole'. As Weber noted in 1922, it is common, but in his view wrong, to talk about 'social collectives, such as states, associations, business corporations, foundations, as if they were individual persons'.[20] Thus, in this context, the collective – all of us – are said to benefit from social investments in an individual.

This is not, however, an approach that meets with widespread acceptance in economics. The focus of modern mainstream economics is on the consequences of outcomes for individuals, as opposed to groups.[21] 'Social' is often used in contradistinction to 'private', with distinctions made between private costs and benefits and social costs and benefits, especially in discussions about market failures like externalities. Here, 'social' means the sum of all private costs or benefits and does not connote the idea that there are some costs or benefits additional to those incurred or received or incurred by individuals. Thus, 'society as a whole' does not receive or spend anything additional to that received or spent by individuals. Rather, the idea is that not all of the costs or benefits of a transaction accrue fully to the parties to the transaction. Some fall to others.[22]

Social welfare, social security, social services and the welfare state

The above terms appear frequently in the literature and in popular discourse and are often used interchangeably, especially when describing government organisations.[23] Margaret McClure, in her history of income support in New Zealand, states that by focusing on cash-based income support, the domain of her history is 'social security rather than the wider field of social welfare or the welfare state'.[24] Article 22 of the Universal Declaration of Human Rights guarantees everyone 'the right to social security', which, while not defined, seems to reflect McClure's idea of cash transfers.[25] Social welfare and social services normally include the direct provision of goods and services, like health, education, counselling and child protection by state agencies. The Productivity Commission defines 'social services' as 'services dedicated to enhancing people's economic and social well-being by helping them lead more stable, healthy, self-sufficient and fulfilling lives'; notes that a mix of government and for-profit and not-for-profit providers delivers the services in New Zealand; and estimates government expenditure on them (excluding benefits and transfer payments) at $34 billion in 2014–15.[26] Benefits and transfer payments were an additional $18 billion.[27]

Corporate social responsibility and social impact investment

Concern about social outcomes is not just the province of government. Internationally, there is a large and active corporate social responsibility movement, where companies seek to focus on more than their profits. This use of 'social' is outside the scope of this essay.

Social impact investment, sometimes termed social investment, is 'the provision of finance to organisations with the explicit expectation of a social, as well as financial, return'.[28] This type of financing has been championed by the UK government (especially under the premiership of David Cameron)[29], the G7[30] and the OECD.[31] This variant of social investment is also outside the scope of this essay.

What the 'social' in social investment means in New Zealand

Some aspects of the former government's approach involved much more than reform of cash transfers and were focused on social services, and not necessarily those it provided. Thus, in the context of the New Zealand 'social investment approach', we take 'social' to mean any policy intervention that is funded by a government.

Returns and measuring returns

Investments – using resources to increase capital – is, as we noted above, costly, because the resources thus used have alternative uses. The purpose of the investment is to put aside resources today in order to produce more in the future. But how do we know that the investment is worth doing?

The answer lies in the idea of return. The return on an investment is simply the resulting future production above what would have happened without the investment.32 If the return is greater than the cost (the opportunity given up by undertaking the investment), then it is worthwhile.

This idea of comparing the total gains and losses from a policy change as a way of deciding whether to proceed is a key element of cost-benefit analysis (CBA) and is frequently used in social policy.33 Dreze and Stern define the purpose of CBA as being to 'provide a consistent procedure for evaluating decisions in terms of their consequences'.34

Conceptually, CBA involves three separate steps: converting the costs and benefits of a project into monetary values that can be compared; converting streams of costs and benefits that accrue through time into a single value (discounting); and then comparing the costs and benefits thus converted to find the 'best' project, which is the one with the highest ratio of benefits to costs. Each of these steps is not without controversy and difficulty; we will discuss each in turn.

Monetary values

CBA uses money as the sole measure of both costs and benefits.

On the cost side, the approach initially looked at the financial resources used in the project under review, measured in market prices. Today, these are referred to as 'accounting prices' and involve what the person or organisation undertaking the project would need to spend to buy the inputs into the project. Accounting prices have the great advantage of being relatively easy to calculate: you simply look to the relevant market and find the going rate for what you will need.

Working in the late 1960s, the economist Ian Little made significant advances in the method of cost-benefit analysis, in particular on the cost side, when he introduced the idea of using what have become known as 'shadow prices', which reflect the full economic costs of all the resources used in a project.35 Importantly, shadow prices can also include non-market costs like environmental impacts and the effects of projects on income distribution.36 The efficiency costs of taxes can also be included.37 While shadow prices are important conceptually, they have the disadvantage of often not being directly observable: the analyst often has to estimate non-markets costs, which can be a source of uncertainty and controversy. That said, provided the cost estimates are made transparent and applied consistently, they will significantly enrich the analysis.

Another controversial aspect of CBA, especially on the benefit side, is the need to put into monetary terms things that many people regard as unquantifiable. The most obvious is that of a human life. The philosophical issues involved in the valuation of human lives for cost-benefit analysis are well beyond the scope of this chapter. For now, we will simply observe that it is possible, by references to things like lifetime earnings and surveys of how much people would be willing to pay for roadworks that reduce the road toll, to calculate the ‘value of statistical life’.38 Treasury’s current *Guide to Social Cost Benefit Analysis* (2015) puts the statistical value of a life at $3.85 million.

From whose perspective?

In many instances, the costs and benefits measured in a CBA accrue to the same person or group of people, at least to a first approximation. For example, in analysing whether to build a road, the benefits go to ‘representative user’, who can also be assumed with not too much of a stretch to be the ‘representative tax-payer’ who will meet the costs.

With social spending, the two groups – those who benefit and those who meet the costs – are different and may have different perspectives. Consider a long-term welfare recipient who has lost confidence in her work skills, lost work habits, and is scared about redundancy and loss of access to emergency benefits if she takes a job. She might regard a shift to work as a negative benefit. But what if the person doing the CBA takes the more paternalistic view, from the point of view of the funder, that once she has made a successful transition to paid employment she will change her view – and uses that optimistic valuation in the CBA? Or is the concept that of a disinterested observer who weighs up the donor’s and the recipient’s views and somehow balances them out?

Again, these are difficult questions to answer. In the context of social investment, what matters is transparency: the perspectives used in measuring costs and benefits should be made clear.

Discounting

As the old saying goes, time is money. Many projects involve expenditure and benefits that occur over many years. While it is possible to simply add up all the costs on one side and all the benefits on the other, and compare the results, this would give a misleading picture, since things that happen in the future are less valuable than things that happen today. Discounting is the technique used to address this problem. There are, however, many different types of discounting, and common terms can unfortunately be used to mean different things.39

The simplest example is the ‘net present value’ or NVP method used in financial analysis – often by business to test whether an investment that involves expenditures and revenues over multiple periods should proceed.40 NVP compares the present value of cash flows received over time to the initial costs of an investment. If the NVP is positive, then the project is worthwhile.41 The discount rate used in NVP calculations at the firm level is often either the firm's cost of funds42 or a target rate of return on investments set internally. For our purposes, the important point is that the discount rate is being used solely to reflect the financial opportunity cost of the investment. Thus, market rates are an appropriate benchmark, which will include an element of compensation for risk.

In welfare economics, discounting is different. Welfare economics is concerned with comparing different social outcomes and deciding which is the best.43 What is being compared is not financial opportunity costs, but the weight to be given to different actors, including those separated by time, usually in the form of utility. Climate change gives a clear example. In his report to the UK government, Nicholas Stern concluded that early and significant action to address climate change was justified.44 To come to this conclusion, he used a sophisticated form of cost-benefit analysis (called an integrated assessment model) which gave very similar weight to the welfare of current and future generations, but more weight to the welfare of the poor over the rich.45

The rate at which future benefits are discounted and the period over which that discounting is applied are critical in the assessment of whether a proposal should proceed. Figure 2.1 shows the effects of discounting at three rates of interest: 2 per cent (the current official cash rate), 5 per cent (the bank deposit rate) and 10 per cent (the small business lending rate). One key point to note is that over lifetimes (60 years plus), discounting at even moderate rates means that future benefits have a very low current value (at 10 per cent, the current value of a future benefit received in 60 years' time is essentially zero).

In the context of social investment, it is important to be clear what discounting is trying to do. If it is simply an exercise of financial analysis, then a financial rate of return used in an NVP test is appropriate, and since we are using 'social' to mean government-funded, then the government's cost of funds would be the appropriate rate.46 However, if discounting is being used to compare welfare between different groups separated by time, then financial rates might not be appropriate. Whatever the motivation, the effects of discount rates on the assessment should be transparent.

Alternative to cost-benefit analysis

An alternative that does not reduce all values to a single monetary unit is multi-criteria decision-analysis (MCDA), which is sometimes called multiple criteria decision-making. In MCDA, options are compared on a range of criteria and a weighting is applied to each criterion, which are scored, often on a 1–10 scale. The option with the highest weighted score is then selected. While this approach avoids the difficulty of converting all relevant factors into monetary units, the criteria, the scoring and the weighting of score all have a subjective element that can vary considerably depending on who makes the decision.47

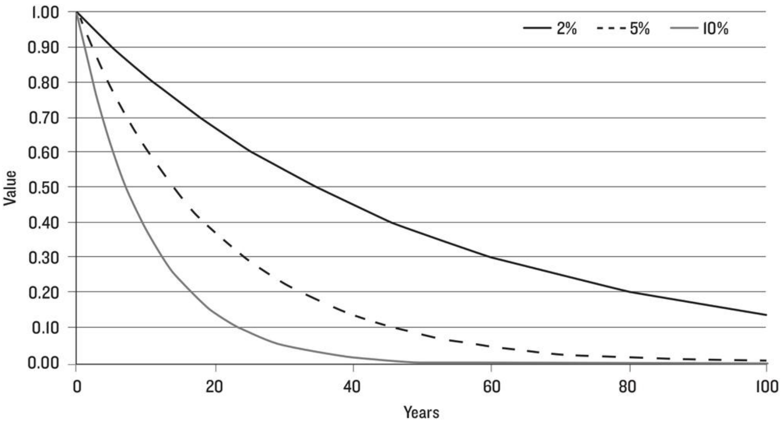


Figure 2.1: The effect of different discount rates. Source: The authors.

A less demanding decision tool than cost-benefit analysis that still uses money metrics on the cost side is cost-effectiveness analysis, which seeks to determine the least-cost approach to achieving a given target. An example would be finding the least-cost way of reducing heart attacks. This approach still requires investigation of the links between the intervention being analysed and welfare, since it asks what level of intervention will lead to the required outcome. Its drawback is that it often assumes what the appropriate target should be and there is no guarantee that any one selected target will result in the highest available improvement in welfare.

An even simpler approach is cost-utility analysis, which seeks to find the least-cost way of achieving a given input, rather than being based on outcome. Extending the heart treatment analogy, such an analysis could be used to determine the least-cost way of undertaking a particular type of heart surgery. As well as all the risks involved in cost-effectiveness analysis, cost-utility analysis carries the risk that the chosen input being investigated is not the best way of achieving any increase in welfare.

Actuarial valuation

A key part of the early applications of the social investment approach in New Zealand has been the use of actuarial valuations and periodic revaluations. The actuarial method, in relation to financial management, can be expressed very simply as projecting future cash flows and relating them to the assets held to finance them. Projecting cash flows consists of assessing the probability of payments being made in each relevant future period, projecting the amount of the corresponding payment, and combining the two to produce a cash flow over time. The resultant figure may then be converted into a present value by discounting using an appropriate risk-free discount rate, for comparison with the value of the asset. Box 2.1 illustrates the application of these methods for valuing an annuity fund and for the costs of various categories of welfare beneficiaries.

Box 2.1: Application of actuarial methods to annuities and to social welfare

A relatively straightforward example of the use of the actuarial method is in valuing an annuity fund. The assets are the amounts paid by the annuitants, together with shareholder capital, plus investment earnings to date, and less payments of annuities and expenses to date. The cash flow at a point in time is calculated by assessing the probability of the future survival of the existing annuitants, along with the amount payable on survival, and combining these. Completing the cash flow projection with anticipated expenses and discounting gives the liability to compare with the assets.

The cash flow calculation carried out by Taylor Fry for MSD is a considerably more difficult and complex exercise than that required for an annuity fund – see the discussion in Chapple for more detail.48 For an annuity fund there are just two states to consider: alive or dead. For social welfare, six states have to be managed: being (predominantly) on one of the four main benefits, being in receipt not of a main benefit but of another benefit, and not being on benefit (including having died). Benefit amounts are variable, since payments are CPI-indexed annually and may not be uniform over the assessment period (quarters were used by Taylor Fry). Assumptions as to rates of CPI and unemployment rates for future periods are needed.

Source: Geoff Rashbrooke and Derek Gill

One of the controversial features of the application of the social investment approach to social welfare has been the calculation of the forward liability. While the principles for valuing welfare benefits are still the same as for an annuity fund, there is one important point of difference – the lack of clarity about the assets against which these welfare payments are being made.

To illustrate this with the annuity fund example again, the fund manager can reduce the liabilities by buying out a part of the annuities (assuming regulatory conditions are met). If this is done in an actuarially equivalent manner, then liabilities will broadly fall – but so will assets, and there is no direct economic benefit.

With a valuation that focuses on the value of the liability but ignores potential changes in the asset, there is a risk of generating responses that hit the target (reduction in the forward liability) while missing the mark. Let us say an attempt is made to reduce the value of the forward welfare liability by introducing work-testing for Sole Parent Support recipients in order to make it more difficult to claim a benefit. This may improve outcomes for some. Others may drop out and turn to crime, or take up with abusive partners as a matter of necessity. All of these cases will have long-term consequences that are not caught by an analysis focused on direct forward fiscal liabilities. Moreover, they raise complex technical measurement issues about how well transition probability matrices can capture complex behavioural impacts.

Leaving aside the technical questions, the challenge raised is that without knowing what the asset is or how to value it, changes in the liabilities may have limited meaning.

A suggested definition

Pulling this discussion about terms together, we can provide what might be called a dictionary definition of social investment – what the everyday meaning of the term involves. Such a definition would be:

> Social investment means a government-funded programme that entails applying resources today in the expectation that a measurable improvement in a dimension of policy interest will result at some point in the future.

THE POLITICAL ECONOMY OF SOCIAL INVESTMENT

We now present a brief review of the literature and practice of social investment. As used in the literature, it is an elastic term and often very country-specific. It is alternatively described as a:

- conceptual or analytical framework for assessing policy options
- paradigm, orientation or organising principle for the overall design of social policy
- set of policy interventions
- set of policy tools
- set of funding models or mechanisms
- or as an ideologically or politically driven framing device or mode of discourse (e.g., to enhance the political attractiveness of particular policy inter-

ventions)

Social investment as an idea is not particularly recent, notwithstanding the renewed application of its principles to social policy in some OECD nations (to a greater or lesser degree). The proposition that (some) social spending can be regarded as an investment (rather than a cost) is an idea that can be traced back to the Swedish economist Gunnar Myrdal writing in the 1930s.49

The social investment perspective

To put it simply, the idea underlying social investment commonly found in the literature is that the state should not merely protect the social positions of particular 'at-risk' groups in a reactive manner (such as by granting cash benefits), but should rather build 'human capital' or 'social capital' by investing in individuals.

The three worlds of social policy

In his highly influential book *The Three Worlds of Welfare Capitalism*, Gøsta Esping-Andersen outlines a typology in which contemporary Western welfare states are said to belong to one of three 'worlds': liberal, conservative/corporatist and socio-democrat. 50 Before going on to describe these worlds, we note that he was writing in 1990 and much has happened in the world of social policy since then. Some of his descriptions and examples seem dated. That said, his taxonomy is still frequently cited in the literature, especially in the context of discussions of social investment.

In the liberal welfare state, means-tested benefits, modest universal transfers and modest social insurance schemes predominate. The focus is on low-income groups, and incentives to work are given special attention. Work is the main vehicle by which people provide for their needs and there is less focus on rights. This model is associated with the Anglo-Saxon world.

The conservative/corporatist world51 is associated with western Europe: France, Germany, Italy and Austria. While social rights are accepted, they are associated with class and status. Social insurance and pensions are used as vehicles for protecting rights, but contributions and benefits are income-based and there is a limited focus on redistribution. Benefit structures tend to favour non-working mothers. The principle of 'subsidiarity' applies: the state will only interfere where the family does not have the capacity to serve the needs of its members. The church is a heavy provider of social service, especially in areas like education and health. While some of these services are charitable and targeted at the poor, many middle-class families use church-based providers.

In Esping-Andersen's socio-democrat world, principles of universalism and de-commodification of labour prevail.52 Equality, especially between the working class and the middle class, is the aim (although in practice some social programmes are income-based). This model essentially crowds out the market and, at least according to Esping-Andersen, a 'universal solidarity in favour of the welfare state is created', in which 'all benefit; all are dependent; and all will presumably feel obliged to pay'. This socio-democrat world is, naturally, associated with the Nordic states.53

Social investment in the three worlds

The modern social investment approach does not sit well within Esping-Andersen's model: we can see it being applied in countries that have based their welfare system on different objectives and approaches. That said, it has frequently been advocated either as an alternative to, or as a way to supplement, liberal approaches to social policy. It seeks to move away from a narrow focus on meeting minimum standards and build human and social capital to allow people to lead better lives.

Giddens sees the social investment perspective as part of a separate model of the state, and he goes so far so to define it as 'third-way social democracy'.54 He explains that its calls for the restructuring of welfare regimes derive from the visions and concepts of an 'activating social policy'.

More recent work by Morel, Palier and Palme focuses on what is needed to develop a social investment welfare state.55 They compare the social investment perspective with what they see as two ideas of the welfare state: Keynesian and neoliberal.56 They see the Keynesian approach as being based on the here and now:

> The here-and-now was the most important time-frame and social citizenship focused on inequalities, inequities and challenges of the present that would be addressed in the present. The countercyclical economic instruments obviously supported such a notion of time.

Social policy, in this view, was passive and responded to the need to create aggregate demand.

In the neoliberal era since 1974, social policies have come to be portrayed as a cost rather than a stimulator of economic growth or a promoter of political and social stability.57 Social policy is increasingly seen through the lens of economic efficiency. Less emphasis is placed on providing income security and more on incentives to return to the labour market.

Morel et al. focus on the three distinctive elements of welfare states:

- responsibility mix of the citizenship regime
- social rights and duties
- governance dimension of social citizenship.

Responsibility mix of the citizenship regime

The responsibility mix is the fundamental ideology of a welfare state. It sets out the roles of the different actors and what can reasonably be expected of them. The social investment perspective's macro-economic analysis retains some of the logic that neoliberalism instituted: it acknowledges that the state plays a larger role than from a neoliberal perspective, but is enthusiastic about the market, where it is of course natural to speak of investments.

The overarching idea therefore is that activities are organised according to market principles, and individuals and their families are called on 'to invest in their own human capital' so as to succeed in the labour market. When families or the market cannot sufficiently provide for all, the state has a role to play under social investment but within the framework of market principles. The idea that social investment incorporates market ideology into the welfare state is possibly strongest in the current UK social impact investment approach.

	Keynesian perspective	Neoliberal perspective	Social investment perspective
Responsibility mix principally involves	Market, state, family	Market, family, community	Market, family, state, community
Market	Can provide well-being for all, with a few exceptions	Should provide well-being for all	May not provide sufficiently for all
Family	Children are the responsibility of the family	Families need to take responsibility and make choices for themselves	Families have primary responsibility for children, but the state has responsibility too
State	Should spend to provide protection against social risks	Spending should be limited, because the state can create the risk of dependency	Spending should be investments, such as in human capital to support labour market participation in the future as well as the present or to confront new social risks and poverty
Community	Represents citizens and advocates. Provides services	May serve as a cushion to spending cutbacks and	Potential partner in the provision of services, and source of local as well as expert knowledge

	in the shadow of the welfare state	market failure	

Table 2.1: Three perspectives on the responsibility mix of the citizenship regime. Source: N. Morel, B. Palier and J. Palme (eds), Towards a Social Investment Welfare State?: Ideas, Policies and Challenges, Policy Press, 2012, p.68.

Social rights and duties

Social rights and duties implicitly reveal the inherent objectives of different welfare states.

The social investment perspective alters thinking about social citizenship and social rights in two ways, and these intersect to shape spending patterns. The first is increasing attention to children. If the young are future citizens, by middle childhood and the teen years they have gained new rights and have become a focus of citizenship discourse.58 The second alteration introduces a new risk analysis into visions of social citizenship.

In other words, the social investment perspective refines the focus of the welfare state to address specific needs, largely at earlier ages, while also refining the focus towards specific risks to be covered. There is an impetus to increase the sophistication of the welfare state as it is embedded in the social investment perspective and prevention becomes the central idea.

Governance dimension of social citizenship

The governance dimension of the different types of welfare state reveals mostly how their respective models tend to be implemented. There are three central themes. The first is the longer time horizon, the second is the idea of devolution of power to community and social services, and the third is the use of outcomes or result-based evaluation.

	Keynesian perspective	Neoliberal perspective	Social investment perspective
Social goals	Provide social protection	Avoid policy instruments that foster dependency; promote autonomy	Invest in prevention and human and social capital, in order to ensure growth and prosperity
Vision of equality	Equality of condition and equal opportunities	Inequality is inherent in	Equality of opportunity

		markets and is necessary to motivate economic actors	
Risks to be covered by social and labour market policies	Unemployment, disability and sickness, extra costs of children, loss of income due to retirement or absence of a male breadwinner	Disability, sickness, threat of crime and social disorder, ageing	Family breakdown, low-wage work or unstable work, challenge of balancing earning with social care, demography

Table 2.2: Three perspectives on social rights and duties. Source: N. Morel, B. Palier and J. Palme (eds), Towards a Social Investment Welfare State?: Ideas, Policies and Challenges, Policy Press, 2012, p.72.

	Keynesian perspective	Neoliberal perspective	Social investment perspective
Time horizon in governance	Present, so as to avoid the past	Present, so as not to hobble the future	Future, which requires action in the present
Preferred forms of governance	Weberian hierarchical/ bureaucratic	Corporate models plus privatisation	Networking and partnerships
Ideal form of intergovernmental relations	State-building via conditionality	Unilateralism and downloading	Asymmetrical collaboration via results-based coordination
Focus for evaluation of success	Inputs (spending)	Bottom line (costs)	Outcomes (cost-benefit)

Table 2.3: Three perspectives on the governance dimension of social citizenship. Source: N. Morel, B. Palier and J. Palme (eds), Towards a Social Investment Welfare State?: Ideas, Policies and Challenges, Policy Press, 2012, p.75.

Which policies belong to social investment?

What kind of policies, then, can be said to underpin the social investment perspective? The focus on investing heavily in human capital is perhaps the one that gathers the greatest consensus among social investment proponents. It is based on the observation of a causal structure where education has been shown to be the central driving variable for GDP growth in Europe.59

Bonoli identifies education and full-time training as the only purely social investment policies,60 as proposed by Esping-Andersen in 2002. Knijn and Smit describe these policies as belonging to the transition labour model;61 to them, social investment policies are about good-quality public childcare and parental leave – showing a specific commitment to gender equality.62 A third view is represented by ‘flexicurity’ policies. Labour market policies inspired by flexicurity have been oriented towards increasing labour market flexibility, while also guaranteeing security of income and employment.

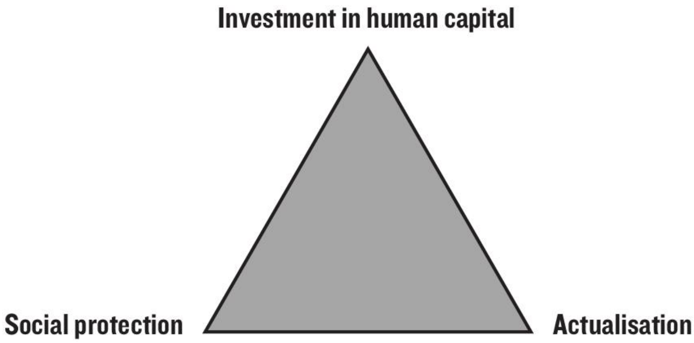


Figure 2.2: The three pillars of the social investment approach. Source: The authors, based on N. Morel, B. Palier and J. Palme (eds), What Future for Social Investment?, Research Report, Institute for Future Studies, Stockholm, 2009, p.64

Drawing this discussion together in the framework of Morel et al., we can arrange policies relevant to describing the social investment perspective into three different pillars.

Investment in human capital – the policy recommendation is to invest heavily in human capital. Skill acquisition during the different stages of education is realised through policies that promote high enrolment and quality instruction.

Social protection – relates to the relation between the productive and reproductive spheres, and hinges on policies that help parents combine work and family life. Here the aim is both to increase labour supply by supporting mothers' employment in order to foster economic growth and ensure the long-term fiscal sustainability of welfare systems, but also make families less exposed to the risk of poverty. Policies put forward typically include benefits, childcare services and parental leave schemes.

Actualisation – activating political strategies are aimed at integrating the entire population into the labour market, and thus attempt to increase the rate of the ‘productive’ as compared to ‘unproductive’ parts of the population.

INTERNATIONAL APPROACHES TO SOCIAL

European countries, where social investment policies are most visible, face common challenges related to environmental concerns and the threats of climate change, deregulated financial markets, mobile global capital, ageing populations and de-industrialisation.

During the Lisbon Summit in 2000, the European Union (EU) adopted a new approach to meet the future challenges of ageing populations and the shift towards a knowledge-based and service economy. Those are two very recurrent themes in the European social investment approach.

It gained further momentum following the global financial crisis (GFC) at the European Commission's launch of the Social Investment Package for Growth and Social Cohesion in early 2013, prompted largely by enduring high structural unemployment, particularly among younger generations.

The package makes a strong case for social investment no longer being dismissed as 'fair weather' policy when times get rough. The overall message boils down to not allowing human capital to go to waste through inactivity, as was the case in the 1980s and 1990s in many continental European welfare systems.63

Very few countries have enforced a pure social investment perspective to their welfare state. The clear break between social investment, Keynesian and neoliberal perspectives is really only true in theory.

Different approaches by country

Based on the three pillars of human capital, social protection and work actualisation, we can divide countries into different groups depending on how strongly their policy settings match the concept of social investment. If the latter is to be the defining feature of the new welfare state, then one should certainly differentiate between 'varieties of social investment'.

For each pillar, we have reviewed the member states of the EU to determine the extent to which social investment ideology forms the basis or has influenced the pillar based on the three elements of the social investment perspective (responsibility mix, rights and duties, and governance).

Broadly speaking, neither southern European countries (Italy, Spain, Greece and Portugal) nor eastern ones have really entered the social investment era. The continental European countries remain typically 'traditional compensatory welfare systems' (Keynesian), with few attempts to activate the social investment turn. The countries that seem to have gone the furthest are the Nordic countries and the Netherlands.

Thirteen countries (row 1 in Table 2.4) have a well-established social investment approach to many social policies. These countries tend to preserve and further develop good institutional linkages between different policy areas, especially when addressing key social challenges. However, many experts comment that while such an approach is evident, there is often no explicit reference to 'social investment' in national policy strategies.

Nine countries (row 2 in Table 2.4), while still to develop an explicit or predominant social investment approach, show some increasing awareness of it and have begun to apply elements of it in a few specific policy areas.

Finally, there are eighteen countries (row 3 in Table 2.4) where a social investment approach has not so far made many significant inroads into the overall policy agenda, though some seem to have started moving slightly in that direction in a few areas.

There are significant differences in country focus. The investment in human capital pillar is split into two policy sets. If one distinguishes, for instance, between compensatory social spending (old age, early exit and unemployment compensation) and investment (expenditures for families, active labour market policies, education), one sees that only a few countries have taken a social investment approach.

Cluster	Countries
Well-established social investment approach	AT , BE, CH, DE, DK, FI, FR, IS, LI, NL, NO, SE, SI
Still to develop an explicit or predominant social investment approach with some partial application	CY, ES, HU, IE, LU , MT, PL, PT, UK
Social investment approach is not in the overall policy agenda but there are signals of moving towards social investment	BG, CZ, EE, EL, HR, IT, LT, LV , MK, RO, RS, SK, TR, EE, HR, LT, LV , RO

Table 2.4: Implementation of the social investment approach is not uniform. Source: The authors, based on D. Bouget, H. Frazer, E. Marlier, S. Sabato and B. Vanhercke, Social Investment in Europe, Publications Office of the European Union, Luxembourg, 2015. pp.6–8.

Pillars	Policies	Countries
Investment in human capital	Childcare, early childhood health and development, and child poverty strategies	ES, PT, RO, SK
Social protection	Education and lifelong learning	FI, FR, MT, PL
Social investment approach is not in the overall policy agenda but there are signals of moving towards social investment	Income support	AT , CY, LU, MT

Table 2.5: Features of the social investment approach in Europe. Source: The authors, based on D. Bouget, H. Frazer, E. Marlier, S. Sabato and B. Vanhercke, Social Investment in Europe, Publications Office of the European Union, Luxembourg, 2015.

While policies geared towards preventing human capital depletion seem to have gone out of fashion, countries tend to emphasise either training or policies aiming at removing obstacles to labour market participation.

The main orientation of employment policy today is a mix of negative and positive incentives for jobless people to enter mostly low-skill employment in the services sector, so activation makes up the bulk of social investment approaches or policies observable in welfare states.

THE DEVELOPMENT OF SOCIAL POLICY IN NEW ZEALAND

The 'social investment approach' is but the latest in a long series of social welfare policies and practices in New Zealand. In this section, we briefly sketch the history of that policy development.

Colonial times

As with many other outposts of Britain, New Zealand's early approaches to the issue of poverty can be traced back to the early poor laws of England, especially the Elizabethan Act for the Relief of the Poor 1601. Relieving poverty was a local matter and different treatment was prescribed for different classes of pauper. But individuals were primarily responsible for supporting themselves and their family. The approach was recognisably liberal. As Susan St John puts it:

> When the largely young and hardy immigrants from the old country came to New Zealand they sought to reinforce with even greater vigour the strong anti-welfare mood becoming apparent in 19th century Britain. The dominant ideology was that individuals should be self-reliant and that families should care for their own.64

New Zealand's first foray into what would become social policy, the Destitute Persons Act 1846, placed the responsibility to care for a destitute person not able to support himself on their family. If a 'respectable householder' laid information on oath before two justices of the peace that a person was destitute and unable to support himself by his own labour, but had a father or other near relative in New Zealand who was of sufficient means to support them, then after a hearing, the justices could make an order requiring the relative to make payment not exceeding twenty shillings per week to the person for their support. This was a continuation of English practice from the 1601 Act.65 While re-enacted a number of times, the approach in the original Destitute Persons Act remained on the statute books until 1968.66

The Act also made provision for the care of illegitimate children (the justices could order the putative father to pay the mother between two and ten shillings per week). Deserting a wife or child under fourteen and leaving them with no support was a crime punishable by a fine of up to five pounds for the first offence and ten pounds for a second or subsequent offence.67

Tellingly, the Act made no provision for the care of destitute people, illegitimate children or deserted wives where there was no relative or father to provide material support.

The first state pensions

In 1898, New Zealand became one of the first countries to introduce a state-funded age pension. The initial modest pension was subject to a means, assets and character test. It was non-contributory and paid for entirely out of current revenues. Health and education were mainly local, private and charitable activities, with some central government oversight and funding. Housing – often of low quality – was largely provided by the private market. Slums soon sprang up in the major settlements.

The beginnings of the welfare state

Progressive moves were made in the early twentieth century to extend the coverage of state pensions beyond older people. The idea of the 'deserving poor', those whose straitened circumstances were regarded as no fault of their own, became a focus of attention.

Widows were clearly a deserving group – at least those with children – and were provided for under the means-tested Widows Pension Act 1911. A pension scheme for miners suffering lung damage was established in 1915.68

Early in the First World War, a pension scheme for war widows and soldiers disabled while serving in the New Zealand Expeditionary Force was established.69

The mass unemployment of the 1930s depression led to a rethink of state support. Poverty was widely experienced and gained public recognition. Long queues outside charitable aid offices and city mission halls were a visible reminder of a failure to adequately support the poor. The Unemployment Act 1930 established an Unemployment Board, charged with making arrangements with employers for the employment of the unemployed, promoting the growth of primary and secondary industries, and administering a new contributory scheme of sustenance payments to those out of work.70

The first Labour government, elected in 1935 with Michael Joseph Savage as Prime Minister, took major steps to introduce what would become known as 'the welfare state'. The Social Security Act 1938 extended the range and increased the rate of social assistance as well as introducing a new social security tax of 7.5 per cent to finance benefits. Aimed at ending poverty in New Zealand, the Act was based on the principle that every citizen had a right to a reasonable standard of living and that it was a community responsibility to ensure that its members were safeguarded against the economic ills from which they could not protect themselves. This was a deliberate move away from the family responsibility of the Poor Laws of England.

The new welfare state was based, in part, on the idea that the state could provide for the basic needs of families – food, shelter, education and health care – using uniform approaches. The basic needs were all the same and thus could be met with universal programmes.

Government provision of housing was a major plank of the new approach. The government embarked on a programme of building high-quality, comfortable houses for working people. The photograph of the Prime Minister helping to move furniture into the first state house in 1937 is an icon of New Zealand politics.

While this system of benefits was extensive, employment was still seen as the major cure for social evils. Thus, full employment was the main strategy the government followed to ensure prosperity. As Belgrave puts it:

> The most significant aspect of Labour's new welfare state was not its social security system, which to some extent merely consolidated existing benefits with added provision for unemployment and health care and old age, it was the introduction of economic stabilisation in 1938. This measure created a highly protected economy aiming to promote and then preserve full employment. Although the introduction of stabilisation was prompted by the demands of the British government and British financiers to tone down Labour's social experiments, its impact reinforced the long tradition in New Zealand's social policy, of placing employment above pensions. Once introduced, protection would be retained until the 1980s.71

A Royal Commission on Social Security in 1972 proposed that the state should ensure 'that everyone is able to enjoy a standard of living much like that of the rest of the community and thus is able to feel a sense of participation and belonging to the community'. This shifted the focus from meeting basic needs to ensuring that the proceeds of economic growth were shared more evenly. Successive governments accepted this approach and expanded the range and generosity of benefits and grants. A domestic purpose (sole parent) benefit was established in 1974. Supplementation benefits followed. A universal pension at age 60 at more than twice the previous level was introduced in 1976 (subsequently the age went to 65 and the payments were cut). Tertiary student grants and subsidies were expanded and benefits for special circumstances and special needs were added over time.

Economic reform

By the early 1980s, the country's economic situation was deteriorating. The policies used to promote full employment – heavy tariff protection of industry, subsidies, major infrastructure projects and extensive state employment – were no longer working (unemployment, which had stood at less than 1 per cent for most of the post-war period, reached the unheard-of and alarming level of 5 per cent in the first quarter of 1984) and were leading to slow economic growth and rising government debt.

The newly elected Labour government started a wide-scale programme of economic reforms, directed at removing what it saw as government-imposed inefficiencies. Its successor continued with reforms, especially in areas of welfare, health and education. Fiscal retrenchment was pursued vigorously. There followed ten years of little growth in real GDP per head and large-scale redundancies, especially in government trading departments and entities[72] and in regional centres reliant on protected industries. Figure 2.3 shows three broad phases of economic growth: the long post-war expansion, the ten-year period of limited growth after 1984,[73] and then a resumption of growth at a higher level, with the dip due to the GFC at the end.

The social welfare system strained under the numbers of newly unemployed and the effects of the post-Royal Commission increases in entitlements. Social welfare spending as a proportion of GDP, which had been falling since 1950, started to climb in 1972, reaching a peak of 16.8 per cent in 1993.

The perception of the state's role changed over time, with a return, at least at the official level, of attitudes closer to those of colonial times: individual responsibility became a guiding principle, with the state reduced to helping out during what were expected to be short periods of need.

The resumption of growth and the persistence of disadvantage

The economy started to grow in 1993 and the trajectory has been mostly upwards since, with global economic shocks like the late 1990s Asian financial crisis and the late 2000s GFC being the major determinants of local economic outcomes.

Between 1993 and 1999, the then Department of Social Welfare implemented a strategic initiative called 'From Welfare to Well-being', designed in part to address concerns that economic growth (which was starting to appear after ten years of economic restructuring) would be insufficient to deal with the observed growth in welfare dependency. A long-term scenario developed by the department's Social Policy Agency in 1994 (referred to internally as the 'grim vision') painted a picture of New Zealand divided between the beneficiaries of economic growth and the long-term benefit-dependent if action was not taken to tackle benefit dependency. As the Director-General of the department, Dame Margaret Bazley, put it in a speech in 1997:

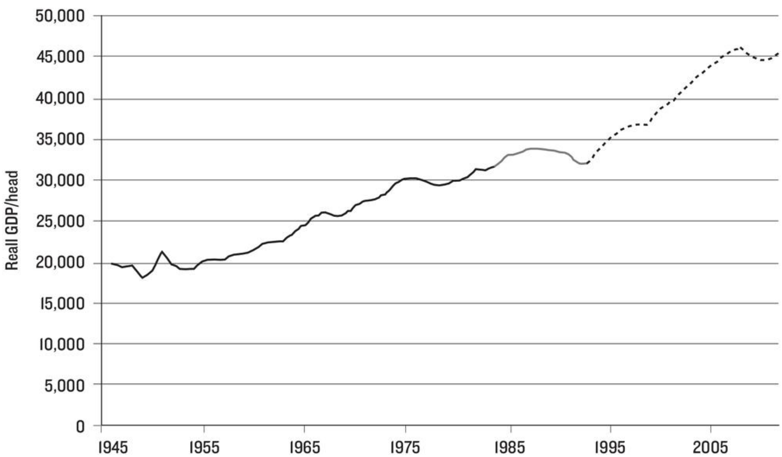


Figure 2.3: Three phases of growth. Source: NZIER long-term data set at https//:data150.nz/.

> Until that time, most New Zealanders, including Department staff, thought that the economic situation would improve and that people would move into employment as followed the 1930s recession … The ten year scenario indicated ... it was unlikely that beneficiaries would get the jobs ... that youth, women at home and the recently retired people would be more attractive to employers than beneficiaries.

In a paper delivered at a 'Beyond Dependency' conference the department convened in 1997, Rob Brown and Helene Quilter proposed that welfare dependency should be addressed by a series of interventions seen as 'investments against future costs'.74 Dependency was the main problem to be tackled, with the government moving from passive benefit payment (and passive benefit receipt on the part of beneficiaries) to a more active approach of assisting people into the labour market. While Brown and Quilter's paper contains elements of what is now proposed as the social investment approach (including focusing on the long-term benefit liability, an area we will return to below), their approach was on what the ministry could do to improve its services, operating within a framework of uniform benefits.

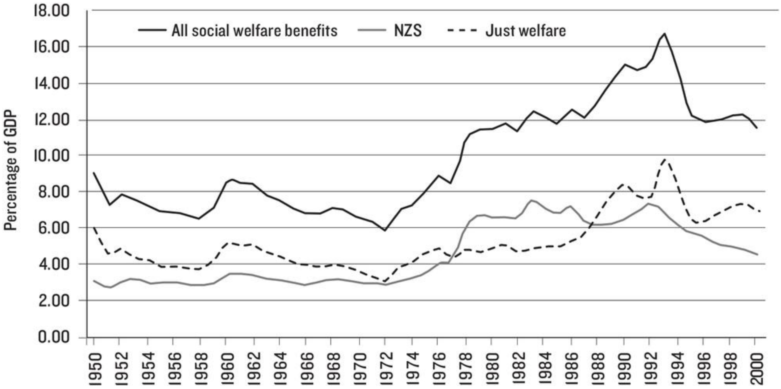


Figure 2.4: Spending on social welfare peaked in the early 1990s. Source: Based on data in chartpack with 'New Zealand's Long-term Fiscal Position', Treasury, 2006, www.treasury.govt.nz/government/longterm/fiscalposition/2006.

Elements of the 'grim vision' came to pass. While average incomes rose, the gains from economic reform and the resulting economic growth were spread unevenly. Discussion of cycles and pockets of disadvantage become common.

Speaking to a National Party conference in May 1997, the then Prime Minister, Jim Bolger, spoke about his concerns over rising numbers of benefit-dependent families and the impact this was having on social outcomes, and outlined aspects of a Strengthening Families project the government was working on:

> This effort which is in the developmental stage is spread across many departments and is designed to better coordinate the delivery of support and, in particular, to give people the opportunity to move to greater independence.
>
> The Ministers of Welfare, Health and Education are very supportive of the strategy, and the CEOs of all three departments are working together on the project.
>
> It makes sense to integrate this work because many of the children and families that come to one department for help also go to other agencies.
>
> In delivering more relevant help we must lower the barriers between agencies so that the left hand knows what the right hand is doing.
>
> The approach will be to try and tailor-make support for each individual family.

> The idea is to ensure better social, health and educational results for at-risk and dependent families and to break the cycles of disadvantage.
>
> A strength of the new approach is that it will be more community-based.

In its 1999 Briefing to the Incoming Government, Treasury observed:

> Irrespective of broad distributional issues, all governments will be concerned with the most disadvantaged. Disadvantage is statistically associated with a variety of factors: income, ethnicity, health, disability, age, family status, gender, educational attainment, work experience, region – it is not simply a matter of low income. As far as possible, governments need to focus on the dynamics of persistent disadvantage, rather than temporary difficulty. The most serious disadvantage is often multi-dimensional, and often persists through time and across generations. The causes of poor outcomes are complex and poorly understood, making them difficult to resolve. There is a need to ensure a focus on effectiveness and to test interventions robustly, modifying them in the light of experience. Examples include new organisational forms (e.g., 'wrap-around services') and pilot programmes such as Family Start. A more experimental approach will require discipline and courage on the part of both ministers and officials – to acknowledge that some programmes have failed and to ditch them.

By 2002, the Treasury staff were saying:

> Interventions designed to improve outcomes and to enhance well-being can be considered as social investments that involve current expenditure to produce a future benefit. Viewing interventions, from legislation to targeted assistance, as investments allows the costs to be arrayed against the benefits over time, and permits choices to be made among them. It also allows a portfolio of interventions to be selected.75

The ability of the welfare state, both in New Zealand and internationally, to address this issue was increasingly questioned:

> Many states have discovered or rediscovered permanent intergenerational poverty, which provides a critique of the evolution of welfare policies. If one of the original objectives of the modern welfare state was to reach down and provide greater equality of opportunity, freedom from want, and participation in society, then the design and implementation of welfare systems have been at least partially unsuccessful.76

As described in Chapter 1, in 2010 a Welfare Working Group (WWG) chaired by Paula Rebstock undertook a fundamental review of the welfare system. The Institute for Governance and Policy Studies at Victoria University hosted the group's secretariat.77 The group's work included examining whether an approach undertaken by the Accident Compensation Corporation (which Rebstock also chaired at the time) to measure and manage its long-term liabilities could have wider application.

In its final report, the WWG summarised its recommendations as:

> We have presented a plan for a large scale and comprehensive reform of the welfare system to reduce long-term welfare dependency. This reform is founded on a greater work focus for more people, reciprocal obligations, *a long-term investment view* (investing early to reduce the risk of poor long-term outcomes for many people), commitment to targets, better outcomes for Māori, better outcomes for children, a cross-government approach and more effective delivery. Two key elements are the introduction of Jobseeker Support (replacing all existing benefits), and the establishment of Employment and Support New Zealand.78

In a report to Cabinet on child poverty in 2013, Treasury said that while the proportion of New Zealand children living in households with low income was close to the OECD average, 'there appear to be significant issues with a large group of children spending the majority of their childhood reliant on benefits and low incomes. As a consequence, despite New Zealand having benefit levels close to the OECD average, we have high rates of material hardship'.79

The Ministry of Social Development's 2016 *Social Report* also concluded that while most New Zealanders are experiencing good and improving outcomes, the distribution of those outcomes is mixed, with some groups not doing well or not improving.80

This then was the context of the National-led government's social investment approach: a realisation that despite more than eighty years of active policy and billions in spending, and with real levels of national income 320 per cent higher in 2013 than in 1937, economic success had not been delivered for part of the population, and long-term liabilities were increasing.

THE NEW ZEALAND SOCIAL INVESTMENT APPROACH

Faced with entrenched disadvantage and large forward liabilities, the former National-led government, rejecting calls for significant increases in social spending, instead said it would use a social investment approach.

As Finance Minister, Bill English described the approach as follows:

> At core, social investment is a more rigorous and evidence-based feedback loop linking service delivery to a better understanding of people's needs and indicators of the effectiveness of social services. This needs to take account of the long term – including those benefits that might take years to be delivered. There will also be more systematic measurement of the effectiveness of services people are currently receiving. This information can then be used to do more of what works – and stop things that don't. Understanding the effectiveness of spending and doing what works are two principles with relevance to all public spending.81

The New Zealand version of a social investment approach is still developing and it is thus not surprising that a perfectly clear picture of what it entails has yet to emerge. We can, however, already see some clear indicators of what the government is doing.

As we noted in the introduction, policy consistency is never achieved in practice and for many governments (at least at the political level) it is never the aim anyway. The National-led government was noted for its caution, flexibility and pragmatism. It was not driven by a top-down ideology. Rather, it operated bottom-up, case-by-case, within some general preferences. If that means an overall picture that is hard to place within any known system of government, then so be it.

Element	Definition
Intertemporal	Returns on interventions are spread over time Costs and benefits should be assessed on a long-term basis
Effectiveness	Investment is to be justified on the basis of social return Outcomes matter and best way of achieving those outcomes should be used, regardless of provider Outputs should be assessed on the basis of how well they achieve outcomes
Evidence	Doing 'what works – and stop things that don't' based on evidence Needs are assessed on an individual basis, based on granular data

Table 2.6: Main elements of the New Zealand social investment approach. Source: The authors.

In this section, we look both at some emerging overarching themes and at some specific examples of the approach in action. Of these features, the National-led government specifically emphasised three differences from previous approaches to social policy: a much greater reliance on individual data; giving greater attention to evidence about policy effectiveness; and measuring rates of return on social interventions that are spread over time – potentially very long periods of time.

Looking across the whole social sector, we have seen some repeated features in the initial applications of the approach. In Table 2.1 we set out the main elements to date.

We now turn to specific examples of applications of the approach that help cast more light on what is proposed.

Welfare forward liability

The most concrete step towards implementing the approach has been the development of a welfare forward liability. MSD and ACC have both calculated the future welfare liability (i.e., in fiscal terms) of particular categories of people (e.g., different classes of beneficiaries or accident victims) via an actuarial analysis and are using such calculations to guide or inform the selection and targeting of interventions – such as active labour market policies (e.g., training programmes).

The broad aim has been to encourage agencies to select interventions and prioritise clients based on the expected reduction in the Crown's forward liability. To be effective, of course, agencies need reliable evidence not only about the fiscal liabilities of their various clients but also about which particular interventions are likely to be most cost-effective. Without such evidence there can be no assurance that the interventions selected will maximise net social returns. Simon Chapple (Chapter 18) is critical of the forward liability approach. He sees it as providing a one-sided metric: there are no counterfactual benefits against which the liability is judged. This means, in particular, that there is a risk that all reductions in the liability, regardless of the effect on people, will be judged equally.[82]

The investment approach implemented through a forward liability has received some criticism. In 2014 Chapple said:

> There are many problematic aspects of the forward liability investment model which is being applied in the welfare system. The problem of definition surrounding welfare reform and the performance management approach of MSD has been poor, the forward liability solution has not been carefully unpicked, and reasonable alternatives to this model have not been acknowledged, let alone examined in detail.[83]

The overall argument is that the welfare system does need much better, independent and regularly collected indicators of performance in terms of benefit take-up, underpayments and overpayments, and compliance with benefit conditions, as well as cost-benefit indicators of the effectiveness of programmes in generating better employment and earnings outcomes.

Policy design

Again in part due to the ongoing development of the social investment approach, it is not clear at which level of operations it is intended to operate. The underlying idea is that to implement a social policy based on the principle of social investment, the government must build an environment that is conducive to an investment mindset, where success is measured by rates of return.

At the level of programme design, we have seen three themes emerge from the early application of the approach: demand factors (which we call segmentation); a supply factor (intervention innovation); and a governance factor. The end result sought is an institutional change in the market for social development in New Zealand.

Demand – client segmentation

The demand side is about segmentation. It is built on an increasing understanding that the needs of individuals can vary significantly and thus what might work to address those needs is also likely to differ. This is a clear move from the early approach to social assistance, where needs were seen as uniform and thus could be relieved by uniform measures.

The objective is to build a strong understanding of the clients of the state, to divide them into groups with greater or lesser needs on which the expectations of return on investment are differentiated, thus allowing a targeted mix of interventions that better match unmet needs.

One distinctive element of this approach is the use of individual-level data, matching of data across social services and administrative datasets, and the use of evidence and evaluation to understand not just what works but what works for whom.

Supply – intervention innovation

Client segmentation has far-reaching consequences for the provision of interventions (the supply side). If customers have different needs, then they are likely to need different interventions to meet those needs. Treasury gives an example from unemployment assistance:

> Traditionally governments have focused on getting newly unemployed people back into work, as unemployment is one of the biggest welfare costs. But analysis of lifetime costs of people who receive a benefit found that

> one of the most expensive groups is people who have recently returned to work from being on a benefit. This is because they are likely to slip back onto benefits. In any given month, 70 percent of people who sign up for a benefit have been on a benefit before. This indicates that the government needs to do more to help those people stay independent.[84]

This focus on outcomes (what is achieved), as opposed to outputs (what is done) or inputs (who does it and for how much), is another element of the social investment approach in New Zealand. It is, however, not a new approach, at least at the conceptual level. The Public Finance Act 1989 and the State Sector Act 1988 were part of a suite of reforms intended to shift the focus from inputs to outputs and outcomes. In a 1989 paper, two of the key architects of the reforms, Graham Scott and Peter Gorringe,[85] wrote:

> The distinction between outputs of goods and services an agency produces and the outcomes the government seeks to achieve is central to the reforms … Under the new system, the performance of bureaucrats can be judged on whether they produce the outputs of services agreed to, and whether they do so efficiently. Politicians can be judged on whether they buy the right services to achieve social goals like wealth, justice and the relief of suffering. The distinction also highlights that politicians need not buy the services they require from the bureaucracy, and that the government need not be the only customer of the bureaucracy.[86]

Writing in 2004, Anna-Luis Cook concluded that while the core elements of the New Zealand model of public administration remained sound, the state sector had yet to implement an outcomes-based approach.[87]

The former National-led government's focus on outcomes as part of its social investment approach can, therefore, perhaps best be seen as a further attempt to use the tools given to ministers and managers in the existing public management system, as opposed to being conceptually new.

Governance

The final piece of the puzzle which ensures that supply responds to demand is governance structure and regulations. One of the key challenges in driving the institutional change is building a new incentive structure that leads to allocation of resources based on the two previous pillars.

All markets suffer from imperfect information, which therefore implies that when information is scarce, returns on investment (in the social investment framework) may not perfectly reflect the cost and benefits of a particular intervention.[88] New Zealand therefore needs not only the most effective funding interventions but also a learning structure which ensures that information is consistently refined and the state rewards risk-taking in the face of imperfect information.

The idea is to develop a governance structure and incentives that will generate the best possible information and ensure the state has enough information to justify taking risks in undertaking social investments.

Level	Features
Programme	Target resources within existing programmes (e.g., matching clients to programmes based on the expected effectiveness)
Portfolio	Allocate resources across a set of programmes within an agency
Whole-of-government	Allocate resources across agencies, and encourage cross-portfolio, multi-dimensional investment strategies, especially for assisting citizens with complex and multiple needs

Table 2.7: Level changes of the New Zealand social investment approach. Source: The authors

Table 2.7 shows the three main levels at which the government operates social programmes. We have seen suggestions that the governance element of the social investment approach might operate on all four, although there has been more emphasis on the programme and portfolio level to date.

Progressive implementation

The New Zealand social investment approach is still developing. We can, however, distinguish two separate phases of development. The first focused on actuarial considerations and the second phase placed greater emphasis on building individual-data capability.

It is hard to anticipate how the approach will evolve over time, but it will be shaped by the overarching idea of driving institutional change to foster intervention innovations through the three-pillar combination described above. Table 2.8 summarises the big questions that will need to be answered for this change to succeed.

NEW ZEALAND’S APPROACH IS UNIQUE

Both at the political economy level, as well as in practical implementation, the similarities between the New Zealand social investment approach and the European approaches stop at the underlying organising theme (i.e., invest rather than protect). The New Zealand approach is silent on reforms to the income redistribution system or education (human capital investment), which are central to

European approaches. It is also not concerned to a great degree with activation policies, in large measure due to this not being a significant problem here.

New Zealand also differs in its focus on a wider range of beneficiaries (not just the long-term unemployed, as in Europe). The idea of contracting non-government providers to deliver government social programmes is also not seen in other welfare states.

The objective of the approach – improving people's lives – is certainly not new. The idea that cash-based transfers will address all social ills is also not new. Nor is the idea that early interventions might lead to better long-term outcomes. Holding public service managers accountable to outcomes is not new in theory, but to date there have been few examples of rigorous accountability mechanisms being applied either consistently or with measurable effect.

Pillar	Social policy decision	Status quo (vastly caricatured)	Social investment approach (overly optimistic)
Client segmentation	Who to spend it on?	Those meeting programme eligibility criteria (broad proxies for disadvantage)	The individuals for whom spending offers the highest net social benefit
	How to measure the difference made?	Greater spending has greater effect Subjective or qualitative programme evaluation	Aggregation of individual-level outcomes as captured by administrative data
Intervention innovation	What to spend it on?	Existing programmes plus politically determined new initiatives	Whatever is demonstrated to have the most effect relative to its cost
	Who delivers the service?	Whoever delivered it previously – generally a mix of public, not-for-profit and for-profit	Whoever does the 'best' job, as measured quantitatively
Governance	How to allocate those funds?	Baseline is past allocations to administrative silos	Flexible allocation across administrative silos for highest net social benefit
	Who matches individuals to programme?	Policy-makers, via eligibility criteria, programme design and budget allocation	Case-worker, navigator or algorithm?
	How to feed this back into	Advocacy/lobbying	Funds should be flexibly allocated across

public decision-making?		administrative silos for highest net social benefit
What performance measures drive organisational behaviour	Varies across and within silos Often a crude count of transactions	Aggregated quantitative data at all levels
How to maintain and build taxpayer and voter support?	Appeal to solidarity, mutual support, and intra- and intergenerational fairness	Additional appeal based on long-term efficiency and effectiveness

Table 2.8: The big questions on social policy. Source: Dave Heatley, personal communication, 25 November 2016.

Using administrative data to identify people at risk of poor outcomes is new, not least because the data has only recently been made available and used by government agencies in policy design.

The three themes of client segmentation, intervention innovation and governance to drive institutional change are certainly novel, as is forward liability as a measurement tool – the use of which New Zealand has pioneered.

The only reason to be concerned with whether the social investment approach is new or not is the concern that the social welfare system is failing a significant portion of population. Social investment, Kiwi-style, is introducing promising new ideas to address pressing social problems. However, if it is just a new name for policies that have not worked, we should not expect much from it.

Social investment, especially as it is understood and practised in the European Union, is a known term in social policy; but it describes something rather different from what the former New Zealand government was proposing. As Humpty Dumpty says, you can use a word to mean anything. But it aids understanding if everyone uses the same words to describe the same thing.

References

Adler, P. S., and S. Kwon, 'Social Capital: Prospects for a New Concept', *The Academy of Management Review*, 27, 1 (2002)

Arjona, R., M. Ladaique and M. Pearson, 'Social Protection and Growth', *OECD Economic Studies*, 35, 2 (2002)

Arrow, K. J., W. R. Cline, K. Maeler, M. Munasinghe, R. Squitieri and J. E. Stiglitz, 'Intertemporal Equity, Discounting and Economic Efficiency', in J. P. Bruce, H. Lee and E. F. Haites (eds), *Climate Change 1995: Economic and Social Dimensions—Contribution of Working Group III to the Second Assessment Report of* *the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge, 1996

Antonucci, L., 'Social Investment in Europe: More than a Third-Way?', Inequalities: Research and Reflection from Both Sides of the Atlantic, November 2010, https://inequalitiesblog.wordpress. com/2010/11/26/social-investment-in-europe-more-than-a-third-way (accessed 5 September 2017)

Australian Department of Finance, *Handbook of Cost-Benefit Analysis 2006*, Financial Management Reference Material 6, Canberra, 2006, www.finance.gov.au/sites/default/files/Handbook_of_CB_analysis.pdf (accessed 5 September 2017)

Baker, R., and B. Ruting, *Environmental Policy Analysis: A Guide to Non-Market Valuation*, Productivity Commission Staff Working Paper, Canberra, 2014

Becker, G. S., 'Investment in Human Capital: A Theoretical Analysis', *Journal of Political Economy*, 70, 5, 2 (1962)

Belgrave, M., 'Social Policy History: Forty Years On, Forty Years Back', paper presented to the *Affording our Future* Conference, Wellington, 10–11 December 2012, www.victoria.ac.nz/sacl/centres-and-institutes/cpf/publications/pdfs/1.8-Belgrave-paper.pdf (accessed 5 September 2017)

Bonoli, G., 'The Politics of the New Social Policies: Providing Coverage Against New Social Risks in Mature Welfare States', *Policy & Politics*, 33, 3 (2005)

Bouget, D., H. Frazer, E. Marlier, S. Sabato and B. Vanhercke, *Social Investment in Europe*, Publications Office of the European Union, Luxembourg, 2015

Brown, R., and H. Quilter, 'New Directions at a Watershed for Welfare', in *Conference Proceedings: Beyond Dependency Conference*, Wellington, 1997

Burton, T., L. Butler, M. Piscetek, C. Reid, P. Rodway and R. Templeton, *The Benefits of Improved Social Sector Performance*, Treasury, Wellington, 2016

Carpinter, P., 'History of the Welfare State in New Zealand', paper presented to the *Affording our Future* Conference, Wellington, 10–11 December 2012, www.treasury.govt.nz/government/longterm/externalpanel/pdfs/ltfep-s2-03.pdf (accessed 5 September 2017)

Chapple, S., 'Forward Liability and Welfare Reform in New Zealand', *Policy Quarterly*, 9, 2 (2014)

Coen, R., and R. Eisner, 'Investment', in J. Eatwell, M. Milgate and P. Newman (eds), *The New Palgrave Dictionary of Economics*, 2nd edn, Macmillan, London, 2008

Cook, A., *'Managing for Outcomes' in the New Zealand Public Management System*, New Zealand Treasury Working Paper 04/15, Wellington, 2004

Dasgupta, P., 'Discounting Climate Change', *Journal of Risk and Uncertainty*, 37, 2 (2008)

Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016

Department for Communities and Local Government, *Multi-Criteria Analysis: A Manual*, London, January 2009

Dreze, J., and N. Stern, 'The Theory of Cost-Benefit Analysis', in A. J. Auerbach and M. Feldstein (eds), *Handbook of Public Economics*, vol.II, Elsevier Science Publishers B. V., North-Holland, 1987

English, B., 'Annual John Howard Lecture to Menzies Research Centre', Canberra, 25 June 2015

English, B., 'Speech to the Treasury Guest Lecture Series on Social Investment', presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015

Esping-Andersen, G., *The Three Worlds of Welfare Capitalism*, Princeton University Press, 1990

Frederick, S., G. Loewenstein and T. O'Donoghue, 'Time Discounting and Time Preference: A Critical Review', *Journal of Economic Literature*, 40, 2 (2002)

Gallo, A., 'A Refresher on Net Present Value', *Harvard Business Review*, 19 November 2014, https://hbr.org/2014/11/a-refresher-on-net-present-value (accessed 5 September 2017)

Gemmell, N., and D. Gill, 'The Myth of the Shrinking State?', *Policy Quarterly*, 12, 3 (2016)

Giddens, A., *The Third Way: The Renewal of Social Democracy*, Wiley, 1999

Gorringe, P., and G. Scott, 'Reform of the Core Public Sector', in A. Grimes, A. Jones, R. Procter and G. Scobie (eds), *Economics for Policy: Expanding the Boundaries*, Institute for Policy Studies, Wellington, 1989

Greenfield, A., H. Miller, K. Wolanski and G. McGuire, *Ministry of Social Development: Valuation of the Benefit System for Working-Age Adults as at 30 June 2014*, Taylor Fry Pty Ltd, Sydney, 2015

Hausman, D., and M. McPherson, 'The Philosophical Foundations of Mainstream Normative Economics', in D. Hausman (ed.), *The Philosophy of Economics*, 3rd edn, Cambridge University Press, Cambridge, 2008

Heal, G., 'Discounting: A Review of the Basic Economics', *University of Chicago Law Review*, 74, 1 (2007)

Heckman, J. J., and B. Jacobs, *Policies to Create and Destroy Human Capital in Europe*, IZA Discussion Paper 4680, Institute of Labor Economics, Bonn, 2009

Heckman, J. J., J. Stixrud and S. Urzua, 'The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior', *Journal of Labor Economics*, 24, 3 (2006)

Hemerijck, A., 'The Social Investment Package and The Europe 2020 Policy Agenda', Social Europe, 2014, www.socialeurope.eu/2014/07/social-investment-package (accessed 5 September 2017)

Hirshleifer, J., 'Where Are We in the Theory of Information?', *American Economic Review*, 63, 2 (1973)

HM Treasury, *The Green Book: Appraisal and Evaluation in Central Government*, London, 2003, www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf (accessed 5 September 2017)

Institute for Futures Studies, 'Sustainable Policies in an Ageing Europe: A Human Capital Response', *Research Report Series, Society and the Future*, 3 (2006)

Jacobsen, V., N. Mays, R. Crawford, B. Annesley, P. Christoffel, G. Johnston and S. Durbin, *Investing in Well-being: An Analytical Framework*, New Zealand Treasury Working Paper 02/23, Wellington, 2002

James, C., *The 'Investment Approach': Liabilities or Assets?*, Institute for Governance and Policy Studies Working Paper 15/01, Wellington, 2015

James, C., 'Social Investment: Chance for a Mentality Shift', Treasury seminar, Wellington, 7 March 2016

Jenson, J., 'Redesigning Citizenship Regimes after Neoliberalism: Moving Towards So-

cial Investment', in N. Morel, B. Palier and J. Palme (eds), *What Future for Social Investment?*, Institute for Futures Studies, Stockholm, 2009
Jorgenson, D., 'Efficiency versus Equity in Economic Policy Analysis', *The American Economist*, 29, 1 (1985)
Keeley, B., *Human Capital: How What You Know Shapes Your Life*, OECD Publishing, Paris, 2007
Knijn, T., and A. Smit., 'Investing, Facilitating, or Individualizing the Reconciliation of Work and Family Life: Three Paradigms and Ambivalent Policies', *Social Politics*, 16, 4 (2009)
Little, D., 'Methodological Individualism', in Mark Bevir (ed.), *Encyclopaedia of Political Theory*, SAGE Publications Inc., Thousand Oaks, 2010
Little, I. M. D., and J. Mirrlees, *Manual of Industrial Project Analysis*, vol.11, OECD Development Centre, Paris, 1969
Little, I. M. D., and J. Mirrlees, *Project Appraisal and Planning*, Heinemann, London, 1974
Little, I. M. D., and J. Mirrlees, 'Project Appraisal and Planning Twenty Years On', in *Proceedings of the World Bank Annual Conference on Development Economics*, The International Bank for Reconstruction and Development, Washington, 1991
Little, I. M. D., T. Scitovsky and M. Scott, *Industry and Trade in Some Developing Countries*, Oxford University Press, Oxford, 1970
McClure, M., *A Civilised Community: A History of Social Security in New Zealand 1898–1998*, Auckland University Press, 1998
Morel, N., B. Palier and J. Palme (eds), *Towards a Social Investment Welfare State?: Ideas, Policies and Challenges*, Policy Press, 2012
Ministry of Social Development, *Social Report 2016*, Wellington, 2016
Ministry of Social Policy, *From Welfare to Well-Being and Strengthening Families: An Historical Record 1993–1999*, 2001
New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015
Nordhaus, W., 'A Review of the Stern Review on the Economics of Climate Change', *Journal of Economic Literature*, 45 (2007)
Palme, J., and A. Cronert, *Trends in the Swedish Social Investment Welfare State: 'The Enlightened Path' or 'The Third Way' for 'the Lions'?* ImPRovE Working Paper No. 15/12, Herman Deleeck Centre for Social Policy, University of Antwerp, Antwerp, 2015
Prest, A., and R. Turvey, 'Cost-Benefit Analysis: A Survey', *The Economic Journal*, 75, 300 (1965)
Rosenberg, B., 'The "Investment Approach" Is Not an Investment Approach', *Policy Quarterly*, 11, 4 (2015)
St John, S., 'Redesigning the Welfare State in New Zealand', in C. Jones Finer and P. Smyth (eds), *Social Policy and the Commonwealth: Prospects for Social Inclusion*, Palgrave Macmillan, Hampshire, 2004
Schultz, T. W., 'Investment in Human Capital', *The American Economic Review*, 51, 1 (1961)
Slemrod, J. and S. Yitzhaki, 'Integrating Expenditure and Tax Decisions: The Marginal Cost of Funds and the Marginal Benefit of Projects', *National Tax Journal*, 54, 2 (2001)

Stern, N., *The Economics of Climate Change: The Stern Review*, Cambridge University Press, Cambridge, 2007
Stigler, G. J., 'The Economics of Information', *The Journal of Political Economy*, 69, 3 (1961)
Thatcher, M., interviewed for *Woman's Own*, 1987, www.margaretthatcher.org/document/106689 (accessed 7 November 2016)
Treasury, *Towards Higher Living Standards for New Zealanders*, Wellington, 1999
Treasury, *New Zealand's Long-Term Fiscal Position*, Wellington, 2006
Treasury, *Improving Outcomes for Children: Initial Views on Medium-Term Policy Directions*, report to the Ministerial Committee on Poverty, Wellington, 2013
Treasury, *Social Development and Housing Sector: The Estimates of Appropriations for the Government of New Zealand for the Year Ending 30 June 2015*, 2014
Treasury, *Case Studies of Social Investment*, 2015, www.treasury.govt.nz/statesector/socialinvestment/casestudies (accessed 5 September 2017)
Treasury, *Guide to Social Cost Benefit Analysis*, 2015, www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis/guide (accessed 7 November 2016)
Treasury, *He Tirohanga Mokopuna: 2016 Statement on New Zealand's Long-Term Fiscal Position*, Wellington, 2016
US Office of Management and Budget, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, 1992, www.whitehouse.gov/omb/circulars_a094 (accessed 5 September 2017)
Weber, M., *Economy and Society: An Outline of Interpretive Sociology*, University of California Press, Berkley, 1978
Weisbach, D. and C. Sunstein, 'Climate Change and Discounting the Future: A Guide for the Perplexed', *Yale Law and Policy Review*, 27 (2009)
Welfare Working Group, *Reducing Long-Term Benefit Dependency: Recommendations*, Victoria University of Wellington, Wellington, 2011
Wilson, K., *New Investment Approaches for Addressing Social and Economic Challenges*, OECD Science, Technology and Industry Policy Papers No.15, OECD Publishing, 2014

Notes

1 The authors would like to thank Sarah Spring, Gary Hawke, Dave Heatley, Jonathan Boston, Bryce Wilkinson and participants at an IGPS/NZIER workshop on social investment for their thoughtful comments and assistance. We would also like to thank Geoff Rashbrooke and Derek Gill of the IGPS for providing the section discussing the actuarial valuations. The opinions expressed in this chapter are the sole responsibility of the authors and do not reflect the views of the IGPS or NZIER.

2 Since we started writing this chapter, Mr English assumed the office of Prime Minister, with Ms Bennett as his deputy. In his first press conference on being elected leader of the National Party, however, Mr English explicitly stated that the government he led would give priority to advancing the social investment approach.

3 B. English, 'Speech to the Treasury Guest Lecture Series on Social Investment', presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015.

4 Social Investment Agency, www.siu.govt.nz (accessed 5 September 2017).

5 'Case Studies of Social Investment', Treasury, 10 September 2015, www.treasury.govt.nz/statesector/socialinvestment (accessed 5 September 2017).

6 Treasury, He Tirohanga Mokopuna: 2016 Statement on New Zealand's Long-Term Fiscal Position, Wellington, 2016.

7 T. Burton et al., *The Benefits of Improved Social Sector Performance, Treasury, Wellington*, 2016.

8 For details, see, 'Investing in Services for Outcomes', Ministry of Social Development, www.msd.govt.nz/about-msd-and-our-work/work-programmes/investing-in-services-for-outcomes (accessed 5 September 2017).

9 Steve Maharey, 'Social Welfare in New Zealand', address by the Minister of Social Services and Employment to the RNZAF Command and Staff College, No 41 Staff Course, Auckland, www.beehive.govt.nz/speech/social-welfare-new-zealand (accessed 17 October 2016).

10 Following submission of a paper by the Ministers of Finance and State Services in December 2015, Cabinet agreed to the following statement of what the social investment approach would be: Social Investment puts the needs of people who rely on public services at the centre of decisions on planning, programmes and resourcing, by: a) Setting clear, measurable goals for helping those people. b) Using information and technology to better understand the needs of people who rely on social services and what services they are currently receiving. c) Systematically measuring the effectiveness of services, so we know what works well and for whom, and then feeding these learnings back into the decision-making process. d) Purchasing results rather than specific inputs, and moving funding to the most effective services irrespective of whether they are provided by government or non-government agencies.

Compare this with the following statement from Treasury staff (Burton et al., *The Benefits of Improved Social Sector Performance*): *'social investment' denotes the variety of policies that improve outcomes by applying evidence-based investment practices to social spending to improve the fiscal and non-fiscal returns from government's investment in social services.*

11 For a review, see J. Jenson, 'Redesigning Citizenship Regimes after Neoliberalism: Moving Towards Social Investment', in N. Morel, B. Palier and J. Palme (eds), *What Future for Social Investment?*, Institute for Futures Studies, Stockholm, 2009, pp.27–44.

12 Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016, p.15.

13 B. English, 'Annual John Howard Lecture to Menzies Research Centre', Canberra, 25 June 2015. We thank Jonathan Boston for identifying these different objectives.

14 C. James, 'Social Investment: Chance for a Mentality Shift', Treasury seminar, Wellington, 7 March 2016. James is also sceptical about whether what the New Zealand government is proposing is actually an investment approach. See C. James, *The 'Investment Approach': Liabilities or Assets?*, Institute for Governance and Policy Studies Working Paper 15/01, Wellington, 2015.

15 B. Rosenberg, 'The "Investment Approach" Is Not an Investment Approach', *Policy Quarterly*, 11, 4 (2015), pp.34–41.

16 R. Coen and R. Eisner, 'Investment', in J. Eatwell, M. Milgate and P. Newman (eds), *The New Palgrave Dictionary of Economics*, 2nd edn, Macmillan, London, 2008.

17 Capital can, however, depreciate: through use, it wears out and there is a minimum amount of investment – determined by the rate of depreciation – that has to be applied to maintain the productive capacity of a stock of capital.

18 To be fair, ideas like human and social capital are of recent origin. The idea of human capital was developed in the 1950s and 1960s by economists Theodore Schultz and Gary Becker. For a discussion of Schultz's early work, see T. W. Schultz, 'Investment in Human Capital', The American Economic Review, 51, 1 (1961), pp.1–17. For one of Becker's early contributions, appearing in a special edition of the *Journal of Political Economy* devoted to the idea of 'investing in human beings', see G. S. Becker, 'Investment in Human Capital: A Theoretical Analysis', *Journal of Political Economy*, 70, 5, 2 (1962), pp.9–49. The idea of social capital is even more recent, having been developed in the 1990s: for a review, see P. S. Adler and S. Kwon, 'Social Capital: Prospects for a New Concept', *The Academy of Management Review*, 27, 1 (2002), pp.17–40.

19 *Concise Oxford Dictionary*, 10th edn, Oxford University Press, 2001.

20 M. Weber, *Economy and Society: An Outline of Interpretive Sociology*, University of California Press, Berkley, 1978.

21 See: D. Hausman and M. McPherson, 'The Philosophical Foundations of Mainstream Normative Economics', in D. Hausman (ed.), *The Philosophy of Economics*, 3rd edn, Cambridge University Press, Cambridge, 2007, pp.226–50; and D. Little, 'Methodological Individualism', in Mark Bevir (ed.), *Encyclopaedia of Political Theory*, SAGE Publications Inc., Thousand Oaks, 2010.

22 This is not quite the same thing as Margaret Thatcher saying that 'there is no such thing as society'. In an interview with *Women's Own* magazine in October 1987 (www.margaretthatcher.org/document/106689 [accessed 7

November 2016]), the then British Prime Minister said: I think we have gone through a period when too many children and people have been given to understand 'I have a problem, it is the government's job to cope with it!' or 'I have a problem, I will go and get a grant to cope with it!' or 'I am homeless, the government must house me!' and so they are casting their problems on society and who is society? There is no such thing! There are individual men and women and there are families and no government can do anything except through people and people look to themselves first…. There is a living tapestry of men and women and people and the beauty of that tapestry and the quality of our lives will depend upon how much each of us is prepared to take responsibility for ourselves and each of us prepared to turn round and help by our own efforts those who are unfortunate.

23 Over the years, New Zealand has variously had an Old Age Pensions Department, a Social Security Department, a Department of Work and Income, a Department of Social Welfare, a Ministry of Social Policy and a Ministry of Social Development, which have all undertaken similar functions.

24 M. McClure, *A Civilised Community: A History of Social Security in New Zealand 1898–1998*, Auckland University Press, 1998.

25 In the United States, 'social security' means an age-pension.

26 New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015.

27 Treasury, *Social Development and Housing Sector: The Estimates of Appropriations for the Government of New Zealand for the Year Ending 30 June 2015*, 2014.

28 K. Wilson, *New Investment Approaches for Addressing Social and Economic Challenges*, OECD Science, Technology and Industry Policy Papers No.15, OECD Publishing, 2014.

29 See Department for Digital, Culture, Media & Sport and HM Treasury, 'Social Investment', London www.gov.uk/government/policies/social-investment (accessed 5 September 2017).

30 See Global Social Impact Investment Steering Group, www.socialimpactinvestment.org/index.php (accessed 5 September 2017).

31 See OECD, 'Social Impact Investment', www.oecd.org/social/social-impact-investment.htm (accessed 5 September 2017).

32 Note that is a 'with and without' question, not 'before and after'. Implicitly, it involves a counterfactual, which, as we will note below in relation to measurement, might not always be easy to describe.

33 Cost-benefit analysis (CBA), as a technique in public investment appraisal, can be traced back to the work of Dupuit in the 1840s. It was codified in the United States in the early 1900s as part of the decision-making criteria adopted to decide which federally funded navigation projects would proceed (for a history, see A. Prest and R. Turvey, 'Cost-Benefit Analysis: A

Survey', *The Economic Journal*, 75, 300 [1965], pp.683–735). Many governments have published guidelines for how CBA should be undertaken within their jurisdictions. See, for example: Treasury, *Guide to Social Cost Benefit Analysis*, 2015, www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis/guide (accessed 7 November 2016); Australian Department of Finance, *Handbook of Cost-Benefit Analysis 2006*, Financial Management Reference Material 6, Canberra, 2006, www.finance.gov.au/sites/default/files/Handbook_of_CB_analysis.pdf (accessed 5 September 2017); HM Treasury, *The Green Book: Appraisal and Evaluation in Central Government*, London, 2003, www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf (accessed 5 September 2017); and US Office of Management and Budget, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, 1992, www.whitehouse.gov/omb/circulars_a094 (accessed 5 September 2017).

34 J. Dreze and N. Stern, 'The Theory of Cost-Benefit Analysis', in A. J. Auerbach and M. Feldstein (eds), *Handbook of Public Economics*, vol.II, Elsevier Science Publishers B. V., North-Holland, 1987.

35 Little's initial insight, gained while examining a heavy industrial plant in Bhopal, India, was that projects should be evaluated using world prices for inputs and outputs, since these represent the true economic cost of the project. His work on CBA is included in two books he co-wrote: I. M. D. Little, T. Scitovsky and M. Scott, *Industry and Trade in Some Developing Countries*, Oxford University Press, Oxford, 1970; and I. M. D. Little and J. Mirrlees, *Manual of Industrial Project Analysis*, vol.11, OECD Development Centre, Paris, 1969, later published as I. M. D. Little and J. Mirrlees, *Project Appraisal and Planning*, Heinemann, London, 1974. For a discussion of his work on CBA, see I. M. D. Little and J. Mirrlees, 'Project Appraisal and Planning Twenty Years On', in *Proceedings of the World Bank Annual Conference on Development Economics*, The International Bank for Reconstruction and Development, Washington, 1991.

36 For a discussion of using non-market values in environmental analysis, see R. Baker and B. Ruting, *Environmental Policy Analysis: A Guide to Non-Market Valuation*, Productivity Commission Staff Working Paper, Canberra, 2014.

37 Treasury recommends that 20 per cent be added to the cost of projects funded out of general revenue to account for the deadweight costs of taxes.

38 The term 'statistical life' is used because we are talking in the abstract about the value of a notional person, not a real individual. Experience suggests that societies are often prepared to expend more than the 'statistical value of a life' to rescue or save a known person.

39 For a discussion of discounting in the context of intertemporal decision-making of individuals, see S. Frederick, G. Loewenstein and T.

O'Donoghue, 'Time Discounting and Time Preference: A Critical Review', *Journal of Economic Literature*, 40, 2 (2002), pp.351–401. For review of discounting in welfare economics, see G. Heal, 'Discounting: A Review of the Basic Economics', *University of Chicago Law Review*, 74, 1 (2007). Regarding the role of discounting in climate change, see: K. J. Arrow et al., 'Intertemporal Equity, Discounting and Economic Efficiency', in J. P. Bruce, H. Lee and E. F. Haites (eds), *Climate Change 1995: Economic and Social Dimensions—Contribution of Working Group III to the Second Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge, 1996, pp.125–44; W. Nordhaus, 'A Review of the Stern Review on the Economics of Climate Change', *Journal of Economic Literature*, 45 (2007), pp.686–702; and P. Dasgupta, 'Discounting Climate Change', *Journal of Risk and Uncertainty*, 37, 2 (2008), pp.141–69.

40 For a description of the basis of NVP analysis, see A. Gallo, 'A Refresher on Net Present Value', *Harvard Business Review*, 19 November 2014, https://hbr.org/2014/11/a-refresher-on-net-present-value (accessed 5 September 2017).

41 In NVP calculations, outgoings (costs) are conventionally recorded as negative and income as positive. When summed, a positive result means that the discounted benefits are greater than the costs. A project with an NVP of zero is just worthwhile: the benefits exactly equal the costs.

42 Either the firm's cost of borrowing for small projects, or its cost of capital for large projects that might require a capital subscription from owners. The latter is commonly referred to as the WACC, or weighted average cost of capital, which is calculated by reference to the required shareholder return, the cost of borrowed funds and the debt/equity ratio of the firms.

43 'The purpose of welfare economics is to provide orderings of alternative economic policies': D. Jorgenson, 'Efficiency versus Equity in Economic Policy Analysis', *The American Economist*, 29, 1 (1985), pp.5–14.

44 N. Stern, *The Economics of Climate Change: The Stern Review*, Cambridge University Press, Cambridge, 2007.

45 The discount rate in the model that Stern used can be represented by the following formula: $\rho = \eta g+\delta$, where ρ is the discount rate, η is an inequality aversion factor – how much we care about the relative welfare of the rich and poor – g is the rate of economic growth and δ is the 'pure rate of time preference', or how much weight we give to the welfare of different generations only because they are separated by time. In his initial report, Stern used values of $\delta = 0.1$, $\eta = 1$ and $g = 1.3\%$. The result was a discount rate $\rho = 1.4\%$. Conceptually, Stern thought that δ should be set at zero: each generation should have the same weight. He decided, however, to give it a small positive value to account for the fact that there is a small probability Earth might be destroyed in some cosmic catastrophe. See D. Weisbach and C.

Sunstein, 'Climate Change and Discounting the Future: A Guide for the Perplexed', *Yale Law and Policy Review*, 27 (2009), pp.433–57.

46 For a discussion of the concept of a government's cost of funds, see J. Slemrod and S. Yitzhaki, 'Integrating Expenditure and Tax Decisions: The Marginal Cost of Funds and the Marginal Benefit of Projects', *National Tax Journal*, 54, 2 (2001), pp.189–201.

47 For a description on the technique, see Department for Communities and Local Government, *Multi-Criteria Analysis: A Manual*, London, January 2009. A short history of the technique can be found on the website of the International Society on Multiple Criteria Decision Making at www.mcdmsociety.org/content/short-mcdm-history-0 (accessed 5 September 2017).

48 S. Chapple, 'Forward Liability and Welfare Reform in New Zealand', *Policy Quarterly*, 9, 2 (2014), pp.56–62.

49 J. Palme and A. Cronert, *Trends in the Swedish Social Investment Welfare State: 'The Enlightened Path' or 'The Third Way' for 'the Lions'?* ImPRovE Working Paper No. 15/12, Herman Deleeck Centre for Social Policy, University of Antwerp, Antwerp, 2015.

50 G. Esping-Andersen, *The Three Worlds of Welfare Capitalism*, Princeton University Press, 1990. Although he acknowledges that his three worlds are abstractions and no single country adheres strictly to any one world.

51 Often called the Bismarckian approach, after the German Chancellor Otto von Bismarck, an early developer of corporatist social systems.

52 'De-commodification occurs when a service is provided as a matter of right, and when a person can maintain a livelihood without reliance on the market'.

53 It is perhaps not surprising that Gøsta Esping-Andersen, a Dane, has a favourable view of the socio-democrat model.

54 A. Giddens, *The Third Way: The Renewal of Social Democracy*, Wiley, 1999.

55 N. Morel, B. Palier and J. Palme (eds), *Towards a Social Investment Welfare State?: Ideas, Policies and Challenges*, Policy Press, 2012.

56 They take a more historical perspective to discussing the development of the welfare state than Esping-Andersen.

57 For a survey, see R. Arjona, M. Ladaique and M. Pearson, 'Social Protection and Growth', *OECD Economic Studies*, 35, 2 (2002), pp.7–45, and the references they cite.

58 Jenson, 2009.

59 Institute for Futures Studies, 'Sustainable Policies in an Ageing Europe: A Human Capital Response', *Research Report Series, Society and the Future*, 3 (2006).

60 G. Bonoli, 'The Politics of the New Social Policies: Providing Coverage Against New Social Risks in Mature Welfare States', *Policy & Politics*, 33, 3 (2005), pp.431–49.

61 T. Knijn and A. Smit., 'Investing, Facilitating, or Individualizing the Reconciliation of Work and Family Life: Three Paradigms and Ambivalent Policies', *Social Politics*, 16, 4 (2009), pp.484–518.

62 L. Antonucci, 'Social Investment in Europe: More than a Third-Way?', Inequalities: Research and Reflection from Both Sides of the Atlantic, November 2010, https://inequalitiesblog.wordpress.com/2010/11/26/social-investment-in-europe-more-than-a-third-way (accessed 5 September 2017).

63 A. Hemerijck, 'The Social Investment Package and The Europe 2020 Policy Agenda', Social Europe, 2014, www.socialeurope.eu/2014/07/social-investment-package (accessed 5 September 2017).

64 S. St John, 'Redesigning the Welfare State in New Zealand', in C. Jones Finer and P. Smyth (eds), *Social Policy and the Commonwealth: Prospects for Social Inclusion*, Palgrave Macmillan, Hampshire, 2004.

65 Section 7 of the 1601 Act (rendered using modern spelling) provided: And be it further enacted, That the father and grandfather, and the mother and grandmother, and the children of every poor, old, blind, lame, and impotent person, or other poor person, not able to work, being of a sufficient ability, shall at their own charges relieve and maintain every such poor person in that manner, and according to that rate, as by the Justices of Peace of that County where such sufficient persons dwell, or the greater number of them, at their general quarter Sessions shall be assessed, upon pain that everyone them shall forfeit twenty shillings for every month which they shall fail therein. Any amount so forfeited was to be 'employed to the use of the poor of the same Parish, and towards a Stock and habitation for them, and other necessary uses and relief as before in this Act are mentioned and expressed' (Section 11).

66 Discrete Destitute Persons Acts were enacted in 1894 and 1910. The operative provision of the 1910 version, section 3, provided: 'Every near relative of a destitute person, if that relative is of sufficient ability, is liable for the maintenance of that destitute person in manner hereinafter provided.'

67 Presumably, deserting a wife the second time, not deserting a second wife.

68 The Miner's Phthisis Act 1915. Phthisis, also referred to as pneumoconiosis in the Act, is a restrictive lung disease caused by the inhalation of dust. Depending upon the type of dust, the disease is given different names: including black lung or anthracnosis, from coal dust; asbestosis, from asbestos and silicosis (also known as 'grinder's disease'; or Potter's rot), from inhaling silica.

69 War Pensions Act 1915.

70 The benefit was paid at a rate of 21 shillings per week, with an additional 17 shillings and 6 pence a week payable in respect of the wife of married unemployed man, and a further 4 shillings for each child.

71 M. Belgrave, 'Social Policy History: Forty Years On, Forty Years Back', paper presented to the *Affording our Future* Conference, Wellington, 10–11

December 2012, www.victoria.ac.nz/sacl/centres-and-institutes/cpf/publications/pdfs/1.8-Belgrave-paper.pdf (accessed 5 September 2017).

72 In 1984, the government owned the postal and telecommunications systems, multiple financial institutions, the electricity generation and transmission systems, large forests, many farms, an unprofitable railway network, a domestic and international airline and a shipping fleet. The private sector was highly regulated. Regional development polices had seen both the public and private sectors establishing operations in provincial towns. For an analysis of the impact of these reforms across a number of metrics, see N. Gemmell and D. Gill, 'The Myth of the Shrinking State?', *Policy Quarterly*, 12, 3 (2016), pp.3–10.

73 When comparing the pre- and post-1984 economic performance, it is important to think about the counterfactual. Successive governments from 1984 were clearly of the view that the economic situation was unsustainable and that if economic policy was not adjusted, outcomes would deteriorate even further than they did.

74 R. Brown and H. Quilter, 'New Directions at a Watershed for Welfare', in *Conference Proceedings: Beyond Dependency Conference*, Wellington, 1997.

75 V. Jacobsen et al., *Investing in Well-being: An Analytical Framework*, New Zealand Treasury Working Paper 02/23, Wellington, 2002.

76 P. Carpinter, 'History of the Welfare State in New Zealand', paper presented to the *Affording our Future* Conference, Wellington, 10–11 December 2012, www.treasury.govt.nz/government/longterm/externalpanel/pdfs/ltfep-s2-03.pdf (accessed 5 September 2017).

77 The background papers to the Group's work are archived at: 'Welfare Working Group', Institute for Governance and Policy Studies, http://igps.victoria.ac.nz/WelfareWorkingGroup/Index.html (accessed 5 September 2017).

78 Welfare Working Group, *Reducing Long-Term Benefit Dependency: Recommendations*, Victoria University of Wellington, Wellington, 2011, emphasis added.

79 Treasury, *Improving Outcomes for Children: Initial Views on Medium-Term Policy Directions*, report to the Ministerial Committee on Poverty, Wellington, 2013.

80 Ministry of Social Development, Social Report 2016, Wellington, 2016.

81 English, 'Speech to the Treasury Guest Lecture Series on Social Investment'.

82 Chapple, 2014.

83 Chapple, 'Forward Liability and Welfare Reform in New Zealand'.

84 Treasury, 2015.

85 Graham Scott was Secretary to the Treasury from 1986 to 1993 and is

widely regarded as one of the leaders in the development of the 'New Zealand Model' of public management. Peter Gorringe was a Chief Analyst in Treasury's Policy Coordination and Development Section and developed important analytical features underlying that model.

86 P. Gorringe and G. Scott, 'Reform of the Core Public Sector', in A. Grimes, A. Jones, R. Procter and G. Scobie (eds), *Economics for Policy: Expanding the Boundaries*, Institute for Policy Studies, Wellington, 1989.

87 A. Cook, *'Managing for Outcomes' in the New Zealand Public Management System*, New Zealand Treasury Working Paper 04/15, Wellington, 2004.

88 See: G. J. Stigler, *'The Economics of Information', The Journal of Political Economy*, 69, 3 (1961), pp.213–25; and J. Hirshleifer, 'Where Are We in the Theory of Information?', *American Economic Review*, 63, 2 (1973), pp.31–39.

Chapter 3
Broader perspectives

Michael Mintrom

INTRODUCTION

Through its social investment approach to working with vulnerable individuals and families, the National-led government drove changes that could well signal a paradigm shift in notions of the social function of public policy.[1] If sustained, the approach promises to deliver higher levels of public value, from which all New Zealanders will benefit. Residents of other countries could similarly benefit if their governments were to broadly and consistently treat public policies as investments.

While conceptually similar to social investment approaches in various European countries,[2] New Zealand's approach has some unique operational features. In the previous chapter Killian Destremau and Peter Wilson have usefully documented its development and have noted areas of similarity and difference with European approaches. They have also offered a clear definition: 'Social investment means a programme funded by the government that entails applying resources today in the expectation that a measurable improvement in a dimension of policy interest will result at some point in the future.' Interventions are delivered to selected individuals and families, with the expectation that they will lead to better social outcomes and reduce future demands on welfare payments. The approach has required the combination and refinement of several analytical tools, some of which have long been used by government policy analysts in New Zealand and elsewhere.

This chapter offers broader perspectives on the approach, placing developments in New Zealand within an international context. Specifically, it reviews how analysts in other countries – particularly in the United States – have been using investment thinking to guide public policy development. Focus is placed on the deployment of analytical tools. The goal of this 'nuts and bolts' contextualisation is to indicate useful lessons for those asking 'Where next?' for the investment approach in New Zealand.

Two themes are developed here. First, investment thinking can be applied more broadly than has been the case so far, and further application would be of high value for New Zealand. After noting developments elsewhere, this chapter outlines a general approach to treating public policies as investments. Social investment as it has been practised to date in New Zealand is consistent with that approach. However, when we drop the term 'social' from a working description of an investment approach, we see that the analytical work performed so far in New Zealand could usefully inform future policy analysis across many areas of government activity, well beyond those typically thought of as comprising the social policy sector.

This does not curtail notions of 'the social'. Rather, it expands them. Many government activities outside the scope of traditional social policy – such as foreign policy and infrastructure funding – shape opportunities for all people, including beneficiaries of traditional welfare services. More effort should be made to scrutinise how various policy settings – often emerging from different portfolios – interact to affect people's life chances. Often in the past such scrutiny has been either cursory or completely lacking.

The second theme in this discussion is that investment thinking can easily conflict with other ways of thinking about and justifying public policy choices. Those proposing greater application of investment thinking need to be aware of both its strengths and its weaknesses. The approach can be undermined by institutional inertia and well-placed interest groups that benefit from the status quo. Less obviously, it can be undermined by naive or pedantic application. Those who promote 'rationalist' public policy perspectives and play down issues of social justice or human dignity can quickly and needlessly make enemies. Further, the information collection and processing requirements associated with specific forms of the investment approach can limit its application.

That said, there are subtleties to investment thinking that can be powerfully utilised by policy analysts. For example, the giving of serious attention to governance arrangements or efforts to promote local innovation in service provision can do much to improve social outcomes, and hence the returns from specific public policy investments. Such policy design work is not integral to the investment approach, but it is highly compatible with it. So long as investment thinking is informed by respect for local conditions and takes adequate account of the complexity of many social challenges, then it stands a strong chance of being broadly applied for many years to come. But the challenges of context and complexity should not be discounted, as Elizabeth Eppel and Girol Karacaoglu usefully remind us (Chapter 19).

In what follows, I first discuss international examples of the investment approach. I then note efforts to institutionalise it and expand its application. These initial discussions open space for outlining a general approach to treating public policies as investments. In the process, connections are drawn to the New Zealand social investment approach. This leads to consideration of several challenges that could limit its broader application. The chapter concludes with a set of lessons to guide its further development in New Zealand.

THE RISE OF THE INVESTMENT APPROACH

A centuries-long tradition exists of governments treating public policies as investments. The building of defence systems, the charting of territories and the provision of infrastructure have always been undertaken with the expectation that they would generate significant future gains. The same can be said for the development and extension of key features of what came to be called the welfare state – financial support for the needy, public pension schemes, public health services and public schooling. During the twentieth century, governments became more aware of the economic gains to be captured from effective provision of various policies and programmes.

While the instinct to invest is nothing new, the potential for governments and those who advise them to rigorously assess the merits of specific investments is a relatively recent phenomenon. Indeed, it is only within the past forty years that the necessary analytical approaches have become well known enough to be effectively deployed for treating public policies as investments. Further, while that knowledge exists, its uptake and application remain limited. That is why the New Zealand government's recent social investment efforts could well signal a paradigm shift.

The New Zealand approach has been pioneering in its combination of actuarial analysis and programme evaluation. As outlined in Chapter 1, the approach has its origins in the efforts of the Welfare Working Group, chaired by Paula Rebstock, which reported in 2011. The group's orientation and methods were informed by insights emerging from evaluations of welfare-to-work programmes in Canada and the US,[3] and equivalent programmes in the United Kingdom targeted at the long-term unemployed.[4]

Programme evaluation as an analytical approach has a fairly recent history. Few rigorous programme evaluations were conducted anywhere before the 1960s. They began to be used in earnest during the late 1960s. It was during this time that the approach became linked with experimental design, allowing for rigorous comparison of the effects of specific policies and programmes.[5] Proponents of good evaluation design have long noted the virtues of integrating cost-benefit analyses into programme evaluation.[6] However, combination of these techniques remains somewhat rare. While cost-benefit analysis was developed and used for military purposes starting during the Second World War, it was only during the 1960s and 1970s that it became recognised as a tool of general applicability across all areas of public policy.[7] Even then, it has most often been used for policy planning, rather than for assessment of the value derived from policies or programmes that have been in place for some time.[8]

In the New Zealand context, cost-benefit analysis has no history of broad application. It has certainly been applied to guide selection of roading projects to fund. It has also guided some other infrastructural projects – for example, water management schemes. Beyond guiding government purchase of pharmaceuticals, it has not been broadly applied in the area of health policy or in other areas of social policy. This is beginning to change. Actuarial analysis is most commonly used to assess the financial sustainability of insurance and pension schemes. Until its proposed use by the Welfare Working Group and its implementation by the Ministry for Social Development in combination with an analytics and actuarial consulting firm, Taylor Fry, actuarial analysis had not been considered a tool for policy analysis.

The formal treatment of public policies as investments, entailing the combination of cost-benefit analysis and programme evaluation, is largely still in its infancy. In a recent survey I explored examples of public policies being treated as investments across eight broad areas in the US. The areas were: public infrastructure, defence and homeland security, public education, health care, poverty alleviation, criminal justice, science funding and environmental protection. In all cases, good examples exist of rigorous analytical work that sheds significant light on the value of specific policy initiatives.[9] For my purposes, all such examples needed to have been published in peer-reviewed academic journals. While some work reviewed had its origins in informing governments of the value of proposed programmes, mostly it was used to provide insights after programmes had been established. In that sense, the work reviewed differed from the bulk of policy analysis, which tends to be future-focused, almost of necessity speculative in nature, and orientated to the needs of specific government audiences. However, this ex post analysis can offer valuable insights for governments as they consider future directions for public policy.

Many studies now exist that have treated specific policy approaches as investments. In the welfare area, several such studies have been gathered together by David L. Weimer and Aidan R. Vining.[10] A growing body of evidence is also emerging regarding ways to reduce poor-value spending in the field of criminal justice and apply an investment approach.[11] In the field of education, James Heckman combined cost-benefit analysis and the results of programme evaluations incorporating randomised controlled trials to demonstrate the significant public gains that can be derived from provision of high-quality early childhood education.[12] That evidence has been highly influential, including in the New Zealand context.[13] In another example, Alan B. Krueger combined cost-benefit analysis with evidence from Tennessee's Student Teacher Achievement Ratio (STAR) project, to explore the lifelong returns from reducing school class sizes.[14] Exploration of the effects of changing class sizes has been controversial, yet compelling insights have now emerged from multiple studies applying a range of analytical methods. They suggest that reduced class sizes can be beneficial to students when – and only when – they are accompanied by pedagogical changes.

In the field of health care, considerable focus has been placed on how preventative measures can improve population health, hence reducing overall health-care costs. To illustrate, Katherine Baicker, David Cutler and Zirui Song conducted a meta-analysis of the results of 36 workplace wellness programmes and found that they tend to generate very good returns on investment, in terms of both reduced health-care costs per employee per year and reduced absenteeism.15 These positive results were found even over the relatively short time horizons involved. This suggests that longer-term, the returns on investment could be even higher.

Going beyond the social sector, studies in the fields of electricity generation and subsidisation of green technology have begun to produce important insights concerning ways to improve the gains from investments. For example, Lucas W. Davis and Catherine D. Wolfram have shown how privatisation of nuclear power plants in the US led to significant gains in energy production and improvements in plant safety.16 Kyle Siler-Evans and colleagues have shown that subsidisation of wind farms can significantly reduce carbon emissions, but they also note that careful targeting of such subsidies would likely produce even better returns on investment.17

As well as recent developments in the US, New Zealand and elsewhere, investment thinking has also started to inform public policy development in Australia.18 Three examples are worth noting. First, policy-makers at the state level, especially in New South Wales, have been seeking to revise aspects of policing and criminal justice more broadly, especially where those systems come into contact with Aboriginal and Torres Strait Islander communities. These efforts have been closely informed by insights from the US, where advocates of 'justice reinvestment' have taken action in many states to reduce prison populations and transfer the money saved into improving educational and employment opportunities in communities where an excessively large proportion of the population have criminal records.19

Second, at the federal level, efforts have begun to apply an investment approach to employment services for unemployed youth. These efforts were prompted by the 2015 report of the Reference Group on Welfare Reform, which explicitly recommended that the federal government emulate New Zealand's social investment approach. In the process, the Department of Social Services engaged PricewaterhouseCoopers (PWC) to develop actuarial models to identify clients who are at risk of spending years on government welfare.20 In addition, new programmes have been established to better enable young people at risk to transition into stable employment.

Finally, beyond the social sector, the Australian government has recently done much to systematise the management of public infrastructure investments. Among other things, this has resulted in the creation of a stand-alone agency, Infrastructure Australia, tasked with applying consistent cost-benefit analyses to all large infrastructure projects, establishing clear funding priorities for the government, and ensuring post-completion reviews of all major projects.21

Two key observations emerge from this review. First, over recent decades, a fair number of efforts have been made to treat public policies as investments. Second, those efforts have been fragmented, spread thinly across many areas. This suggests considerable scope for energetic actors in and around government policy-making communities to promote broad and consistent treatment of policies as investments. Next, I discuss US efforts to advance investment thinking within policy communities.

TOWARDS BROAD AND CONSISTENT TREATMENT OF POLICIES AS INVESTMENTS

In the US, the Washington State Institute for Public Policy (WSIPP) carries out nonpartisan research to support legislative decision-making. The institute works closely with legislators and state agency staff to ensure its studies effectively answer policy questions. In many respects, it is like other non-partisan policy research organisations, such as the Congressional Budget Office. What makes WSIPP distinctive is that for decades it has focused on producing comprehensive, evidence-based reviews of policy strategies that follow a common methodology. Its overall purpose is to identify ideas that can deliver better outcomes per dollar of taxpayer spending. Towards this end, it has developed a general research approach that combines cost-benefit analysis with evidence amassed from evaluation studies. By consistently applying this approach, the institute has won a solid reputation for providing policy-makers with trustworthy estimates of the likely returns from investing in specific policies. In its words: ‘We identify a number of evidence-based options that can help policy-makers achieve desired outcomes as well as offer taxpayers a good return on investment, with low risk of failure.’

WSIPP’s analytical approach offers an excellent example of how to treat public policies as investments, and how carefully and consistently to estimate return on those investments. The calculation of risks associated with policies and programmes also helps to address a key concern of elected decision-makers. WSIPP staff routinely ask: How would policy change influence statewide outcomes? By estimating how a ‘portfolio’ of programmes and policies – introduced and implemented as a group – would affect valued outcomes in Washington State, they allow elected officials to make policy choices well-informed by estimates of likely impacts and trade-offs among different policy combinations.

In recent years, the Pew Charitable Trusts and the John D. and Catherine T.

MacArthur Foundation have been collaborating with state governments in the US to emulate the WSIPP approach and deliver evidence-based advice on policy investments. The Pew-MacArthur Results First Initiative works with governments to apply cost-benefit analysis that ‘helps them invest in policies and programmes that are proven to work’. It is predicated on the view that most states currently face tough budget choices and lack the resources to support traditional levels of public services. Increasingly, policy-makers are seeking to develop policies and programmes that will yield the greatest benefits in the most cost-effective way. Among other things, this collaborative work is intended to systematically identify which policies work and which do not; calculate potential returns on investment in alternative programmes; rank programmes on their projected benefits, costs and investment risks; and identify ineffective ones that could be targeted for cuts or elimination. So far, much of the work associated with this initiative has focused on rethinking aspects of criminal justice and providing support to at-risk youth.

Another initiative, Results for America, also promotes the importance of evidence-based policy-making and treating public policies as investments. This organisation has established networks of like-minded policy-makers across all levels of government. It also uses its website as a clearing-house for the sharing of stories about efforts to promote investment thinking in policy-making. In 2013, Results for America launched a national ‘Moneyball for Government’ campaign calling upon leaders at all levels of government to:

- Build evidence about the practices, policies and programmes that will achieve the most effective and efficient results so that policy-makers can make better decisions;
- Invest limited taxpayer dollars in practices, policies and programmes that use data, evidence and evaluation to demonstrate how they work; and
- Direct funds away from practices, policies and programmes that consistently fail to achieve desired outcomes.

The 2014 book *Moneyball for Government*, edited by Jim Nussle and Peter Orszag, is a manifesto for treating public policies as investments. Nussle was director of the US Office of Management and Budget under Republican President George W. Bush.22 Orszag held the same position under Democratic President Barack Obama. Contributors to the volume all contend that basing policy choices on evidence of effectiveness is something of interest to politicians of any ideological persuasion.

A GENERAL INVESTMENT APPROACH

Since governments must apply coercion to raise taxes and citizens have many competing proposals for how the money should be spent, governments inevitably face resource constraints. A general investment approach should inform them about the returns that might be expected from specific policy investments. When broadly applied, such an approach holds the potential to assist governments set expenditure priorities and identify areas of low-value or even wasteful spending.

Here I present a five-step approach to treating public policies as investments. The approach is captured in Table 3.1: A Policy Investment Checklist. My intention is to show how both formal (or technical) and informal (or metaphorical) approaches hold the promise of bringing more rationality to the making of public policy. The approach is broadly consistent with both that of WSIPP and the New Zealand social investment approach. It can be usefully and uniformly applied across a variety of substantive areas.

Steps	Key questions
1. Focus on existing policies and programmes	Ask: Where are existing policies and programmes we can learn from? Policy analysts might need to show how lessons for policy design can be drawn from across countries with distinctly different contexts and policy areas.
2. Gather policy evidence	Ask: What is the best evidence we can work with? The 'gold standard' in evidence-based policy development is the randomised controlled trial. But other statistical evidence from quasi-experimental designs can also produce valid insights.
3. Measure desired effects	Ask: How much difference do policies and programmes of this kind tend to make? The more precise the answer, the greater the accuracy of the remaining analysis.
4. Assess costs and benefits in context	Ask two questions: First, how much is it likely to cost to produce the desired policy or programme effect here? Second, how much value – in dollar terms – is that desired effect likely to produce here? Return on investment is estimated by dividing the sum of estimated benefits by the sum of estimated costs. (Actuarial work allows simultaneous testing of return on investment across multiple interventions and can generate long-term aggregated estimates of their fiscal impacts.)
5. Offer robust advice	Ask: How much do our conclusions about this policy or programme depend on how we have interpreted the evidence? Good advice is honest about how much confidence can be placed in the conclusions drawn from the evidence. (Return on investment estimates derived from either cost-benefit analysis or actuarial modelling are driven by multiple assumptions; how changing those assumptions influences outcome estimates should always be explored.)

Table 3.1: A policy investment checklist. Source: The author.23

Focus on existing policies and programmes

In popular culture, we accord a lot of value to novelty. However, devising proposals for policy change that take advantage of existing knowledge is a risk-reducing strategy. In his argument in favour of comparative institutional analysis, Harold Demsetz observed that advocates of policy change too often present the relevant choice as being between an ideal norm and an existing 'imperfect' institutional arrangement.24 He called this a 'nirvana approach' based on the assumption that what works well in theory will always be better than current arrangements. Demsetz proposed that policy analysts should conduct comparative institutional analysis where 'the relevant choice is between alternative real institutional arrangements'.

When we consider public policies as investments, focusing on existing policies and programmes makes a lot of sense. Evidence generated from them can offer important insights into how much they cost to operate, their actual outcomes, and how well those outcomes match originally intended goals. Then, we can readily assess their benefits. The major difficulty with this approach is that it is explicitly conservative in nature. It cautions against doing anything novel. We might well ask how, then, innovations can ever start. The key is to think in terms of recombination.

For example, suppose a government is considering ways to encourage the emergence of a strong private or not-for-profit sector for the provision of high-quality early childhood education. Although this might be a new policy direction for that jurisdiction, its policy analysts could assess how well it might work by investigating the dynamics of charter schools in New Zealand and the US, or the success or failure of some private educational voucher arrangements in the US. Concentrating on already existing policies and programmes gives analysts access to a great deal of rich evidence that can inform future policy-making. Coupling this focus with the notion of recombination opens up plenty of opportunities for policy design work to be highly creative while building on existing knowledge of what actually works.

Gather policy evidence

A lot of evidence has been generated about the workings of policies and programmes, how they were implemented, how different groups of people make sense of them, and so on. All of this evidence can helpfully inform policy design work. Indeed, routine reports on programmes in the field often supply rich details that can enjoy a lot of relevance beyond meeting the needs of the original audience. Assessing the likely return on investment that a jurisdiction would obtain by adopting a policy already in place elsewhere demands both specific and high-quality information. Fortunately, the evidence-based policy movement has raised awareness among policy analysts and others about the issues they must consider when gathering such information.25

The 'gold standard' often evoked is the randomised controlled trial. In such experiments, researchers take care during programme implementation to isolate and measure the effects of a programme on the outcomes of interest to them. Lacking evidence derived from such experiments, they can seek evidence from statistical studies where methods such as regression analysis are used to conduct quasi-experimental assessments of policy impacts. Finding good-quality policy evidence is highly dependent on the development of good systems for data collection and the use of well-trained analysts to extract useful insights from those data.

Measure desired effects

When public policies are treated as investments, the fundamental purpose of gathering policy evidence is to measure whether the policy – or programmes associated with it – generated the desired effects. In randomised controlled experiments, programme effects are isolated by comparing before-and-after changes in valued outcomes between those entities (e.g., people, organisations) that, through randomisation, experienced the programme and those in the experiment that, again because of randomisation, did not experience the programme. In quasi-experimental research designs, analysts work with what evidence is available and seek to gain control over that evidence through application of different kinds of statistical modelling.

One approach involves meta-analysis – that is, evaluating multiple high-quality studies of the programmes of interest and determining their average 'effect size'. John Hattie has employed meta-analytic data methods to measure the effects of school activities aimed at improving student performance and concluded that most data indicate a hierarchy of educational interventions from those that appear to make a big difference to student learning to those that make no apparent difference.26

A significant research issue arises when we consider the measurement of desired policy and programme effects. That is, the paucity of high-quality quantitative research on policy outcomes greatly limits the extent to which researchers can perform meaningful statistical modelling work. Although meta-analyses are feasible in the fields of education and health and some areas of criminal justice, there remain many areas of policy interest for which quantitative studies exploring outcomes are limited. More such studies will hopefully emerge in the future. Indeed, if public policies are to be routinely assessed as investments, far more effort will need to go into funding high-quality programme evaluations.

Assess costs and benefits in context

Cost-benefit analysis lies at the heart of efforts to treat public policies as investments. Conceptually, the approach is straightforward. First, we define the scope of an analysis. Second, we identify all the effects of the policy or programme, both negative and positive. Once we have established an inventory, we assign dollar values to the negative impacts (which become dollar costs) and the positive impacts (which become dollar benefits). We also take into account the actual costs of running the programme of interest. Here, previous experience can prove extremely helpful. Third, we allocate these costs and benefits to each year included in the analysis. Finally, we compute the net present value of the programme. The chosen discount rate is usually the inverse of a prevailing interest rate. Therefore, the net present value is the total amount that comes from summing up discounted benefits minus costs over the assumed life of the policy or programme. By dividing the sum of estimated benefits by the sum of estimated costs, we then calculate return on investment (ROI). This is the expected return, in dollars, that would be realised for every dollar spent on the policy. Only if the return on investment is positive and well above zero should we believe that the policy under assessment represents a good use of public money. The actuarial modelling central to New Zealand's social investment approach allows for simultaneous assessment of the costs and benefits of multiple programmes.

Offer robust advice

Any advice on public policies as investments must contain evidence that the estimated returns from adopting specific policies are trustworthy. Choices made during the development of the estimation methods can affect the results obtained. Care must be taken to show how changes in the modelling assumptions would change the estimated returns. Such work, typically called sensitivity analysis, involves running several alternative scenarios using different assumptions to test the extent to which the results are robust or, alternately, how much they are being driven by modelling choices. Offering a range of ROI estimates is possible when we do this kind of sensitivity analysis.

We might use additional practices to improve the quality of the advice. For example, taking the kind of approach used by Hattie in his assessments of educational interventions can be very instructive in policy design discussions.27 Suppose we report the estimated ROI of a policy option, such as reducing class sizes in every public school across a specific jurisdiction. We might augment that estimate with evidence showing which alternative policy packages could be adopted at the same cost. Such a comparison would create an opportunity to explain how those alternative packages might improve student outcomes to a greater extent than the pursuit of smaller class sizes. Advice presented in this way encourages a different discussion about the pursuit of smart policy and ways to enhance the expected returns on costly policy investments.

CHALLENGES TO THE INVESTMENT APPROACH

The investment approach involves making powerful use of evidence. If a public policy is not generating positive returns to society, little reason exists to keep it in place. However, if we say that with reference to policies intended to support disadvantaged and vulnerable groups, we run the risk of appearing to lack compassion. Suppose the goal of a public policy is to ease the final years of life of people with terminal diseases. A hard-headed rationalist might suggest that funding such a policy is a waste of money: better to devote scarce resources to assisting young people become effective, productive citizens rather than assisting people who have no ability to give anything back to society in terms of contributing to families, engaging in the community and paying taxes.

This example challenges the investment approach. My response is this. There are good reasons for societies to be both rational and compassionate. There will always be debates over when it makes sense to be compassionate and how governments might demonstrate compassion. The investment perspective cannot help us resolve those debates. However, it can reveal the costs of different policies and their likely results, allowing for explicit discussion of social values and trade-offs. That is a valuable contribution to collective decision-making. Greater application of the investment perspective opens the possibility of avoiding the use of scarce resources on wasteful programmes. To the extent that savings occur through application of the investment perspective, society has the capacity to act out of compassion – and not rational calculation – to support those who cannot support themselves. Other challenges suggest limits to the investment perspective. These include:

- First, interest-group politics can drive policy debates and crowd out room for discussion of what actions would generate positive returns on investment for society.
- Second, once government programmes have been in place for a few years, they become difficult to remove, even if they are performing poorly. This institutional inertia can sometimes inhibit the making of sound investment decisions. That is because no political appetite may exist to mount the changes such decisions would necessitate.
- Third, there are times when good information on the performance of existing policies and programmes simply does not exist. Many policies and programmes stay in place for years without being subjected to evaluations. Even then, some of those evaluations might not include cost-benefit analyses of the investments.

Each of these challenges is significant. At the same time, the investment approach promises to raise the quality of public policy-making and, through that, the quality of people's lives. For those seeking to advance the approach, it would be useful to reflect on these challenges and how they might be addressed. Such reflection may well be most effective on a case-by-case basis, coupled with careful consideration of what strategies have previously proven effective in responding to criticisms of investment thinking.

WHERE NEXT FOR NEW ZEALAND'S APPROACH?

When governments treat public policies as investments, they exhibit a significant degree of respect for the future state of their jurisdiction and the evolving quality of life of their citizens.28 The social investment approach implemented so far in New Zealand has been designed to both reduce future fiscal liabilities and help vulnerable individuals and families to live independently and productively through the bulk of their adult lives. Initially, more emphasis was given to reducing future fiscal liabilities. That has been changing, with increasing attention being given to improving the capabilities of vulnerable individuals and families. The investment approach is well supported by departmental resources. This has allowed the development of powerful analytical tools and staffing capacity to maintain and expand datasets and conduct related research activities. This budgetary support has parallels with that of WSIPP, which is recognised as a leader in the production of investment analyses concerning public policy choices.

Looking to the future, as the investment approach is extended from social welfare services to other policy areas, state sector leaders will need to decide whether to replicate the current capability in other departments or to develop a form of centralised analytical capability. A unified approach to investment analysis is most likely to come from centralisation of capacity. That has many advantages. Nonetheless, opportunities for learning from experience and from diverse analytical efforts can sometimes be increased when capacity is developed in more than one location and a degree of collaboration and healthy competition is encouraged among units. At the same time, little can be gained by spreading resources thinly across organisations. WSIPP's strength and reputation grew through deliberate efforts to make it a single centre of excellence for its jurisdiction.

As portrayed in this chapter, the investment approach has emerged from the deliberate combination of key analytical tools. The bedrock tools are programme evaluation and cost-benefit analysis. These can be usefully augmented with evidence from comparative institutional analyses, randomised controlled trials and meta-analyses. Investment analysis can also benefit from other qualitative research methods, case study comparisons and 'design thinking' tools.29 When high-quality programme evaluations have been completed elsewhere, insight of relevance locally can often be derived. This avoids the need for local research replication exercises. Replication has its merits, but when analytical resources are limited they can usually be put to better uses. Devoting some organisational capacity to scanning analytical work performed elsewhere and carefully scrutinising highly relevant work could reduce unnecessary 'reinventing the wheel' locally.

Evidence from policy investment analyses done elsewhere has shown that returns from past investments can often be enhanced through contemporary incremental adjustments in service delivery. This suggests that there is merit in designing public policies in ways that allow for a degree of local innovation and client feedback on service quality and how it could be improved. When policy design is used to encourage innovation, several actions need to be taken. It is important to give organisations incentives to innovate, and to reduce the impediments to innovation. Finally, it can be helpful when mechanisms are put in place to monitor innovative programmes, collate key insights and make them broadly known.

Additional evidence has shown that changes in service delivery can sometimes enhance returns on initial investments. Governments everywhere will always face pressures to provide more and better services to citizens while keeping taxes as low as possible. Given these dynamics, experiments with the governance of service provision should be prioritised. It is an area of public management ripe for further evidence-based investigations of the conditions under which changes can produce sustained, beneficial outcomes for citizens.

These observations suggest that those seeking to advance the investment approach in New Zealand should do so in ways that allow for close work with local service managers, on the one hand, and traditional policy developers, on the other. It would be unfortunate if the approach came to be a narrow technical or fiscally focused exercise, operating at arm's length from other areas of government activity.

Finally, public policy decisions never last long without broad public support. This is the case even when financial analysis justifies specific actions. That suggests two things. First, those who seek to promote the investment approach should give serious attention to explaining its practical implications to citizens. That will require on-going dialogue, and a willingness to hear unwelcome feedback. Unless they are informed by the concerns of citizens, policy choices made in capital cities die in the suburbs. Second, proponents of the investment approach must appreciate the broader politics of public policy-making, and act accordingly. In practice, this might involve prioritising a few areas where big gains can be made by applying the investment approach. Advancing it incrementally and when the conditions seem right is more likely to result in the longevity of the approach than rapid scaling-up accompanied by insensitivity to broader public perceptions of investment thinking. For example, those who think time in prison should be used primarily for punishment and retribution are unlikely to be quickly convinced by those who claim rehabilitation and job skills training would be better investments.

CONCLUSION

Investment thinking can be more broadly applied than has been the case so far, and broader application would be of value to all New Zealanders. If more public policies were routinely treated as investments, significant leverage would be attained. For example, dollars spent to ensure good roads, schools and health-care systems contribute to economic growth. Under such conditions (and assuming other factors are not promoting greater government activity), the size of government would be expected to decrease over time as a proportion of GDP. When governments maintain their commitment to funding sound public policies that operate as investments, their size relative to GDP should shrink from year to year. The result is an entirely reasonable form of limited government.

Treating public policies as investments can indeed lead to longer-term reductions in the relative size of government in the economy, and reduce tax burdens. For example:

- When individuals receive good schooling, the odds are raised that they will go on to be productively employed, taxpaying citizens who make limited demands on government services.
- Health-care policies that encourage preventative care make it less likely that individuals will need expensive, publicly subsidised medical interventions later in life.
- Effective systems of criminal justice can reduce the risk that juvenile deviants will fall into lives of crime punctuated by prison time. Keeping people out of prison can save a lot of taxpayer money.

These are just three examples of how treating public policies as investments can reduce subsequent demands on government spending. Yet this focus on investing today to make savings tomorrow represents only the most direct claim for why an investment perspective matters. More importantly, people who benefit from a good education, who experience good health and who live within the law have high-quality lives. Their education, good health and good citizenship allow them freedoms and opportunities they would otherwise miss. The experience of living a good life is impossible to quantify in any simple fashion. Still, everyone benefits when as many people as possible are enabled to live well. Consistently treating public policies as investments offers a promising pathway towards that outcome.

References

Aos, Steve, Marna Miller and Elizabeth Drake, *Evidence-Based Public Policy Options to Reduce Future Prison Construction, Criminal Justice Costs, and Crime Rates*, Washington State Institute for Public Policy, Olympia, 2006

Argyrous, George, ‘Evidence Based Policy: Principles of Transparency and Accountability’, *Australian Journal of Public Administration*, 71, 4 (2012)

Arulampalam, Wiji, Paul Gregg and Mary Gregory, ‘Unemployment Scarring’, *The Economic Journal*, 111, 475 (November 2001)

Baicker, Katherine, David Cutler and Zirui Song, ‘Workplace Wellness Programs Can Generate Savings’, *Health Affairs*, 29, 2 (2010)

Boardman, Anthony E., David Greenberg, Aidan Vining and David Weimer, *Cost-Benefit Analysis: Concepts and Practice*, 4th edn, Prentice Hall, Boston, 2011

Boston, Jonathan, *Governing for the Future: Designing Democratic Institutions for a Better Tomorrow*, Emerald Group Publishing, Bingley, 2017

Bouget, Denis, Hug Frazer, Eric Marlier, Sebastiano Sabato and Bart Vanhercke, ‘Social Investment in Europe: A Study of National Policies’, European Union Directorate-General for Employment, Social Affairs and Inclusion, Brussels, 2015

Brown, David, Chris Cunneen, Melanie Schwartz, Julie Stubbs and Courtney Young, *Justice Reinvestment: Winding Back Imprisonment*, Palgrave Macmillan, Basingstoke, 2016

Campbell, Donald T., and H. Laurence Ross, ‘The Connecticut Crackdown on Speeding: Time-Series Data in Quasi-Experimental Analysis’, *Law and Society Review*, 3, 1 (1969)

Davis, Lucas W., and Catherine D. Wolfram, ‘Deregulation, Consolidation, and Efficiency: Evidence from U.S. Nuclear Power’, *American Economic Journal: Applied Economics*, 4, 4 (2012)

Demsetz, Harold, ‘Information and Efficiency: Another Viewpoint’, *Journal of Law and Economics*, 12, 1 (1969)

Destremau, Killian, and Peter Wilson, *Defining Social Investment, Kiwi-style*, New Zealand Institute for Economic Research Working Paper 2016/5, NZIER, Wellington, 2016

Department of Social Services/PWC, *Valuation Report 30 June 2015: Baseline Valuation*, final report, Canberra, 2016

Greenberg, David, Victoria Deitch and Gayle Hamilton, *Welfare-to-Work Program Benefits and Costs: A Synthesis of Research*, Manpower Demonstration Research Corporation, Washington DC, 2009

Hattie, John, *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*, Routledge, New York, 2008

Heckman, James J., ‘Skill Formation and the Economics of Investing in Disadvantaged Children’, *Science*, 312 (30 June 2006)

Hendra, Richard et al., *Breaking the Low-Pay, No-Pay Cycle: Final Evidence from the UK Employment Retention and Advancement (ERA) Demonstration*, Research Report 765, Department for Work and Pensions, London, 2011

Infrastructure Australia, *Australian Infrastructure Plan: Priorities and Reform for Our Nation’s Future*, Canberra, 2016

Krueger, Alan B., ‘Economic Considerations and Class Size’, *The Economic Journal*, 113, 485 (2003)
Melese, Francois, Anke Richter and Binyam Solomon (eds), *Military Cost-Benefit Analysis: Theory and Practice*, Routledge, London, 2015
Mintrom, Michael, *Public Policy: Investing for a Better World*, Oxford University Press, New York, 2017
Mintrom, Michael, and Joannah Luetjens, ‘The Investment Approach to Public Service Provision’, *Australian Journal of Public Administration*, 2017
Mintrom, Michael, and the Taskforce on Early Childhood Education, *An Agenda for Amazing Children*, Ministry of Education, Wellington, 2011
Nussle, Jim, and Peter Orszag (eds), *Moneyball for Government*, Disruption Books, San Bernardino, 2014
Palme, Joakim, and Axel Cronert, *Trends in the Swedish Social Investment Welfare State: ‘The Englishtened Path’ or ‘The Third Way’ for ‘the Lions’?* ImPRovE Working Paper 15/12, Herman Deleeck Centre for Social Policy, University of Antwerp, Antwerp, 2015
Quade, E. S., ‘A History of Cost-Effectiveness’, The RAND Corporation, Santa Monica, 1971
Reference Group on Welfare Reform, *A New System for Better Employment and Social Outcomes*, Department of Social Services, Canberra, 2015
Rossi, Peter H., Mark W. Lipsey and Howard E. Freeman, *Evaluation: A Systematic Approach*, 7th edn, Sage, Thousand Oaks, 2004
Siler-Evans, Kyle, Ines Lima Azevedo, M. Granger Morgan and Jay Apt, ‘Regional Variations in the Health, Environmental, and Climate Benefits of Wind and Solar Generation’, *Proceedings of the National Academy of Sciences*, 110, 29 (2013)
Weimer, David L., and Aidan R. Vining (eds), *Investing in the Disadvantaged: Assessing the Benefits and Costs of Social Programs*, Georgetown University Press, Washington DC, 2009
Weiss, Carol H., *Evaluation*, 2nd edn, Prentice Hall, Upper Saddle River, 1998

Notes

1 The author would like to express appreciation to Jonathan Boston, Derek Gill, Girol Karacaoglu and workshop participants for their comments on earlier versions of this chapter. The opinions expressed here are the sole responsibility of the author and do not reflect the views of the IGPS or NZIER.

2 Denis Bouget et al., ‘Social Investment in Europe: A Study of National Policies’, European Union Directorate-General for Employment, Social Affairs and Inclusion, Brussels, 2015; Joakim Palme and Axel Cronert, *Trends in the Swedish Social Investment Welfare State: ‘The Englishtened Path’ or ‘The Third Way’ for ‘the Lions’?* ImPRovE Working Paper 15/12, Herman Deleeck Centre for Social Policy, University of Antwerp, Antwerp, 2015.

3 David Greenberg, Victoria Deitch and Gayle Hamilton, *Welfare-to-Work Program Benefits and Costs: A Synthesis of Research*, Manpower Demon-

stration Research Corporation, Washington DC, 2009.

4 Wiji Arulampalam, Paul Gregg and Mary Gregory, 'Unemployment Scarring', *The Economic Journal*, 111, 475 (November 2001), pp.577–84; Richard Hendra et al., *Breaking the Low-Pay, No-Pay Cycle: Final Evidence from the UK Employment Retention and Advancement (ERA) Demonstration*, Research Report 765, Department for Work and Pensions, London, 2011.

5 See, for example, Donald T. Campbell and H. Laurence Ross, 'The Connecticut Crackdown on Speeding: Time-Series Data in Quasi-Experimental Analysis', *Law and Society Review*, 3, 1 (1969), pp.33–54.

6 Peter H. Rossi, Mark W. Lipsey and Howard E. Freeman, *Evaluation: A Systematic Approach*, 7th edn, Sage, Thousand Oaks, 2004; Carol H. Weiss, *Evaluation*, 2nd edn, Prentice Hall, Upper Saddle River, 1998.

7 E. S. Quade, 'A History of Cost-Effectiveness', The RAND Corporation, Santa Monica, 1971.

8 Anthony E. Boardman et al., *Cost-Benefit Analysis: Concepts and Practice*, 4th edn, Prentice Hall, Boston, 2011; Francois Melese, Anke Richter and Binyam Solomon (eds), *Military Cost-Benefit Analysis: Theory and Practice*, Routledge, London, 2015.

9 Michael Mintrom, *Public Policy: Investing for a Better World*, Oxford University Press, New York, 2017.

10 David L. Weimer and Aidan R. *Vining (eds), Investing in the Disadvantaged: Assessing the Benefits and Costs of Social Programs*, Georgetown University Press, Washington DC, 2009.

11 Steve Aos, Marna Miller and Elizabeth Drake, *Evidence-Based Public Policy Options to Reduce Future Prison Construction, Criminal Justice Costs*, and Crime Rates, Washington State Institute for Public Policy, Olympia, 2006.

12 James J. Heckman, 'Skill Formation and the Economics of Investing in Disadvantaged Children', *Science*, 312 (30 June 2006), pp.1900–2.

13 Michael Mintrom and the Taskforce on Early Childhood Education, *An Agenda for Amazing Children*, Ministry of Education, Wellington, 2011.

14 Alan B. Krueger, 'Economic Considerations and Class Size', *The Economic Journal*, 113, 485 (2003), pp.F34–F63.

15 Katherine Baicker, David Cutler and Zirui Song, 'Workplace Wellness Programs Can Generate Savings', *Health Affairs*, 29, 2 (2010), pp.304–11.

16 Lucas W. Davis and Catherine D. Wolfram, 'Deregulation, Consolidation, and Efficiency: Evidence from U.S. Nuclear Power', *American Economic Journal: Applied Economics*, 4, 4 (2012), pp.194–225.

17 Kyle Siler-Evans et al., 'Regional Variations in the Health, Environmental, and Climate Benefits of Wind and Solar Generation', *Proceedings of the National Academy of Sciences*, 110, 29 (2013), pp.11768–73.

18 Michael Mintrom and Joannah Luetjens, 'The Investment Approach to Pub-

lic Service Provision', *Australian Journal of Public Administration*, 2017.

19 David Brown et al., *Justice Reinvestment: Winding Back Imprisonment*, Palgrave Macmilllan, Basingstoke, 2016.

20 Department of Social Services/PWC, *Valuation Report 30 June 2015: Baseline Valuation*, final report, Canberra, 2016.

21 Infrastructure Australia, *Australian Infrastructure Plan: Priorities and Reform for Our Nation's Future*, Canberra, 2016.

22 Jim Nussle and Peter Orszag (eds), *Moneyball for Government*, Disruption Books, San Bernardino, 2014.

23 Mintrom, *Public Policy: Investing for a Better World.*

24 Harold Demsetz, 'Information and Efficiency: Another Viewpoint', *Journal of Law and Economics*, 12, 1 (1969), pp.1–22.

25 George Argyrous, 'Evidence Based Policy: Principles of Transparency and Accountability', *Australian Journal of Public Administration*, 71, 4 (2012), pp.457–68.

26 John Hattie, *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*, Routledge, New York, 2008.

27 Ibid.

28 Jonathan Boston, *Governing for the Future: Designing Democratic Institutions for a Better Tomorrow*, Emerald Group Publishing, Bingley, 2017.

29 Mintrom and Luetjens, 'The Investment Approach to Public Service Provision'.

Chapter 4
The intertemporal dimension

Jonathan Boston

The challenge is to convince a sometimes sceptical or critical electorate that paying a price now may be in their best interests in the long-term.

House of Commons Public Administration Select Committee[1]

... social investment is a more rigorous and evidence-based feedback loop linking service delivery to a better understanding of people's needs and indicators of the effectiveness of social services. This needs to take account of the long term – including those benefits that might take years to be delivered.

Bill English[2]

INTRODUCTION

Investments, whether financial or otherwise, necessarily take time to deliver their primary benefits.[3] While many investments, like education and training, generate immediate consumption benefits, few of the expected and desired returns are instantaneous. Of course, the speed with which the benefits flow varies greatly, as does their certainty, regularity, linearity and duration, as well as the point at which the gains are expected to exceed the costs. This variability applies not only to investments in physical infrastructure, such as houses, power stations, roads and water services; it applies equally to social investments, such as public expenditure on early childhood education, health promotion, prisoner rehabilitation and the provision of social services. Similarly, the variability in the flow and pattern of benefits applies not only to public expenditures with a specific investment dimension, but also to other governmental interventions that constitute what can be termed 'policy investments'.[4] The latter include reforms designed to improve overall economic, social or environmental outcomes. Among these are fiscal consolidation programmes, trade liberalisation initiatives, public management reforms and efforts to enhance regulatory frameworks.

But how does the dimension of time affect governments' policy decisions about when, where and in whom to invest? How do temporal considerations influence the form and quantity of social investments? For instance, how do they affect resource allocation priorities and/or which regulatory levers to pull? Further, what impact does the dimension of time have on the political economy of social investment, including investments that may take decades – or even lifetimes – to deliver their full returns? And what relevance might temporal considerations have for the recent efforts in New Zealand to develop a more explicit, rigorous and comprehensive approach to social investment (e.g., via a greater reliance on integrated data and advanced analytics)?

There is a flipside to such questions. This relates to the impact of relying more explicitly on an *investment lens* or *framing* to guide policy decisions on social expenditures and regulatory interventions to alter human behaviour.[5] There are many possible (overlapping and competing) framings – for example, social *protection*, social *insurance*, social *justice*, social *security*, social *development*, social *welfare*, social *participation*, social *inclusion*, social *cohesion*, and social *resilience* and *sustainability*. How might the adoption of a social *investment* lens (and, indeed, different social investment approaches)[6] affect the temporal horizons and intertemporal preferences of policy-makers? Would they give more weight to *longer-term* goals, including the interests of future generations (and our 'future selves'), thereby countering what many see as a short-termist tendency or presentist bias in democratic policy-making?[7] Similarly, could an investment lens contribute to more attention being given to preventative measures and precautionary interventions – and, more generally, the quest for better anticipatory governance?[8] Also, could it alter the political economy of social policy – perhaps encouraging more cross-party consensus on what constitutes equitable and cost-effective interventions, and in so doing enhance policy durability?

This chapter explores such questions. It attempts, in other words, to reflect on social investments – and, more specifically, the evolving social investment approach in New Zealand – through a temporal lens. It begins by examining several analytical issues at the interface of time and social investment. It then considers how temporal considerations might affect the political economy of social investment. This includes a brief discussion of a presentist bias in democratic policy-making and how such a bias might be countered. The issue of generational biases in fiscal policy and the topic of intergenerational fairness are also touched upon.[9] It should be noted that this chapter endeavours to build on, rather than duplicate, related analyses elsewhere in this book. Accordingly, it is selective and avoids a detailed treatment of issues addressed more fully in other chapters.

THE NATURE OF SOCIAL INVESTMENT – SOME BRIEF CLARIFICATIONS

As Killian Destremau and Peter Wilson highlight in Chapter 2, any analysis of 'social investment' immediately raises the question of what governmental activities legitimately fall within this category. What, in other words, constitutes an 'investment', what is 'social' and what is a 'return' on investment? Further, are there any social policy interventions, whether in the form of resource transfers or regulations, that are not in some sense social *investments*?

Suppose, to start with, that a broad definition of investment is adopted. Such a definition would presumably include all public expenditures and regulatory measures designed, at least in part, to generate net returns, somehow defined. Hence, it would go beyond a definition which limited investments solely to public outlays, and more specifically outlays that entail the postponement of consumption in order to generate better long-term outcomes, such as improved productive capacity (e.g., by enhancing human capital).[10] As such, it would include *compensatory* social *spending* (e.g., pensions and job-seeker benefits), as well as expenditure primarily designed to enhance skills, capabilities and expertise (e.g., via active labour market policies). Likewise, it would include both passive and active social expenditures, not least because such measures tend to overlap and are interrelated. In short, under a broad definition, a social investment approach could embrace any social policy interventions that have the potential to enhance overall societal outcomes.

Having said this, two caveats deserve mention immediately. First, as with other forms of investment, social investments are likely to deliver markedly different rates of return (however conceptualised); some, no doubt, will produce negative returns, although not intentionally. Hence, assessing alternative types and identifying those likely to be the most cost-effective is critically important. To the extent that the evidence and analytics underpinning a social investment approach enhance our capacity to assess the relative merits of different kinds of interventions, they will serve a useful purpose.

Second, the social investment approach, at least as it has evolved in New Zealand in recent years, has focused primarily on *resource allocation* rather than *regulatory* interventions.[11] In practice, however, these two types of policy intervention are often closely related: changes in resource flows are coupled with alterations to regulatory arrangements (e.g., the eligibility criteria for social assistance, the taxing of negative externalities etc.). And changing the regulatory environment will sometimes be the best way to deliver better societal outcomes (however narrowly or broadly defined).

If an investment refers to something that generates a *return*, this begs the question of how a return should be conceptualised. In short, what constitutes a benefit or an improvement? There are no simple answers. Indeed, the question raises fundamental philosophical and ethical issues – ones that go to the heart of how a social investment approach is defined.

Potentially, returns can include many different things – with the parameters varying according to what is believed to represent a *desirable outcome*. Typically, returns are thought to include benefits of an *economic* nature, such as improved economic performance, as reflected, for instance, in higher aggregate output, greater productivity, lower inflation, more employment and better fiscal outcomes. But returns can also be defined more broadly to embrace desirable social, cultural or environmental outcomes. These might include gains in *objective well-being*, as measured, for example, by improvements in health status, longevity, educational attainment and housing quality. Additionally, they might include gains in *subjective well-being* and/or the achievement of broader and perhaps more intangible goals. Among the latter might be improvements in social cohesion, social mobility, distributional fairness, societal trust and sustainability, or changes to deeply entrenched but harmful cultural practices and attitudes (e.g., racism, sexism etc.).

Precisely what items should be included in the list of returns and how they should be valued and prioritised are matters that go beyond the bounds of this chapter. But three points deserve emphasis.

First, as Destremau and Wilson show, unless the nature and scope of the desired returns are clarified, there is a risk of a conceptual and policy muddle. Without clarity about which societal outcomes are being sought or which forms of capital matter most, a social investment approach could mean absolutely anything. Potentially, any social intervention could be regarded as an *investment* (i.e., because it is designed to produce net returns, however vague or otherwise, that matter to its advocates). Arguably, a completely open-ended approach would lack not only analytical rigour but also practical utility. Hence, there is a need to delineate some plausible and realistic boundaries.

Second, based on official documentation (e.g., Cabinet papers and departmental reports) and ministerial speeches, the social investment approach in New Zealand has thus far embraced a relatively broad range of outcomes.[12] Three categories of outcome figure prominently:

1. fiscal outcomes (e.g., the costs of services and income support, and changes in tax revenue);
2. outcomes for specific individuals (e.g., changes in income, health status and educational attainment); and
3. overall societal outcomes (e.g., changes in societal well-being, interconnectedness and equity).

Also, the relevant documentation specifies that the aim is to move beyond ‘single agency outcomes’ to embrace a ‘broader range of joint outcomes’ (i.e., outcomes of relevance to multiple governmental agencies). Equally, there is an emphasis on improving the quality of people's lives, being 'person-centred', taking 'a broad "whole-of-life" approach', looking beyond 'immediate goals', giving proper attention to 'more aspirational outcomes', and capturing 'long-term individual and social benefits'. At the same time, the recent approach has focused primarily on 'vulnerable populations' (especially working-age beneficiaries) and other 'expensive customers' – for example, prisoners.[13] While this is understandable, especially given the National-led government's initial emphasis on reducing its long-term fiscal liability,[14] there is a strong case for a more systematic and holistic framework.[15] This would include an interest in outcomes related to not only those individuals defined as 'vulnerable' or 'high-risk' or classified as 'customers' and 'clients', but also those regarded as citizens (as Michael Cullen argues in Chapter 17).

Importantly, Bill English – who helped mastermind the social investment approach in his roles as Finance Minister (2008–16) and then Prime Minister (2016–17) – included a diverse range of outcomes in his list of policy goals. They were: greater 'social mobility', more 'resilience' for 'vulnerable people', 'fewer customers' and less 'demand for public services', 'fewer dysfunctional families', 'fewer people who commit crime' and 'reductions in recidivism', less welfare dependence, a greater ability for those on benefits 'to make choices', a broader 'range of organisations and providers', a more accountable welfare state and 'smaller government'.[16] As he put it, 'reducing misery, rather than servicing it' is part of the quest.[17]

Third, and more generally, where the boundary around *outcomes* is drawn has profound implications for what is regarded as an investment – as well as whether particular investments are judged as desirable (i.e., whether they generate positive outcomes, whether these benefits outweigh the costs and whether the rate of return is sufficient to warrant additional investment). Clearly, if returns are limited to *fiscal* or even *economic* benefits (e.g., improvements in human capital or productivity), the range of possible desirable social investments will be much smaller than if returns also embrace other forms of capital (e.g., social and natural), not to mention wider societal goals, such as enhancing capabilities and opportunities, social mobility, democratic legitimacy, political stability or collective intergenerational well-being.[18] Much the same applies to the cost side of the ledger.

To illustrate: take a policy area like retirement incomes (or pensions). A tax-funded, universal pension like New Zealand superannuation is not commonly seen as a *social investment*, no doubt partly because it occurs late in a person's life-cycle. And to the extent that it is perceived as an *investment*, many people would probably regard it as a poor one. Yet any assessment of such matters depends fundamentally on the evaluative criteria adopted and how they are applied. On a broad view, the returns on a retirement income scheme like New Zealand superannuation might include: a greater sense of financial security for the elderly and those approaching retirement; enhanced gender equity; the minimisation of income poverty and material deprivation; the protection of human dignity; and a greater sense of social solidarity and inclusion (because everyone beyond a certain age is treated the same and regarded as equally deserving). Including returns of this nature in any assessment is likely to generate a different conclusion from one which excludes these (or similar) criteria. Of course, much will also depend on how such returns are valued and whether the desired portfolio of outcomes could be achieved at a lower fiscal (or societal) cost.

Just as the term *investment* is being broadly defined here, so too is *social*. Accordingly, social investments include a wide range of governmental interventions covering education, health care, housing, income support, elder care, criminal justice and so forth. They are not limited to a narrow range of *social services* (e.g., those provided by carers, district nurses or social workers). Similarly, given the definition of investment, the discussion which follows covers measures that involve government expenditure (e.g., on active labour programmes, education, health care and social housing) and regulatory interventions. The latter include taxes, levies or charges (e.g., on tobacco or sugar-sweetened beverages) and restrictions on certain kinds of production or consumption (e.g., limiting or banning the sale of sugar-sweetened beverages).

Also, it is important to recognise that few social investments which entail fiscal costs are *pure* investments. This is because they may generate private consumption benefits.19 In some cases, such as education and training, these latter benefits are immediate; in other cases, such as the construction of social housing, there may be a modest delay before the consumption benefits are fully realised. In many cases the private consumption benefits associated with a social investment are likely to be much more important to citizens – and politically salient to voters – than the investment benefits. This will be due partly to timing (many of the consumption benefits will occur long before the investment benefits) and partly to the different nature of the benefits (most consumption benefits are direct and personal while many of the benefits of social investments are indirect and public). Politically, such differences matter. While an investment framing may help ‘sell’ some social policy interventions, it may also need to be supplemented with other policy framings to achieve the desired electoral resonance.

Bear in mind, in this context, that many aspects of the welfare state are designed not only to enable and encourage greater productive capacity in the future but also to support current consumption (e.g., of food, clothing, shelter, education etc.). Indeed, much consumption activity constitutes, at least in part, an investment in a person’s future productive capacity. After all, if people lack sufficient nutritious food, for example, their capacity to learn and work productively will be impaired.

TIME AND SOCIAL INVESTMENTS

Turning, then, to the dimension of time and its impact on social investment: Bill English, drawing on the example of social investment, claimed that a 'hallmark' of his government's approach was 'to think long-term'.[20] But this begs many questions about what it means to 'think long-term' and how different temporal horizons affect policy decisions.

First, presumably, temporal considerations can influence how social problems and their possible solutions are assessed.[21] In particular:

1. the temporal sequence (i.e., the timing, flow and duration) of the costs and benefits of an investment will affect the estimated returns (i.e., the net present value);
2. other things being equal, the longer the time horizons of an investment, the greater the uncertainty regarding the estimated returns; and
3. the past may provide an unreliable guide to the future.

Potentially, such factors could influence decisions regarding the nature, level and prioritisation of social investments in various ways. They may also affect *social* investments (or particular types of social investment) to a greater extent than other kinds of investment (because the former typically have long time-frames and significant levels of causal uncertainty).

Second, from a political economy perspective, temporal considerations may affect social investments for various reasons:

1. It may be difficult to generate political support for the kinds that entail large non-simultaneous exchanges (i.e., substantial intergenerational transfers from current to future voters).
2. It may be difficult to generate political support for social investments designed to alleviate creeping, looming or slow-burner problems (i.e., problems that are on the horizon, growing in scope and scale, but not yet politically salient) (see below).
3. Governments may be confronted with the risk of dynamic (or time) inconsistency.[22] For instance, they may be concerned that a future government will discontinue or substantially alter a particular social investment, thereby reducing its likely returns. Faced with such risks, they may decide against certain types of investment even though they are expected to deliver overall societal benefits.
4. Policy-makers and voters may be influenced by various cognitive biases (e.g., loss aversion, the endowment effect, system justification, a negativity bias and an optimism bias) which affect their intertemporal preferences.[23]
5. The nature, structure, quantum, timing and intertemporal focus of social investments may be affected by short electoral cycles, brief ministerial tenures and other institutional and political factors which influence planning hori-

zons (e.g., budgeting systems, bureaucratic silos, partisan politics, ideological conflicts, and the influence of powerful sectoral groups).

Potentially, considerations of this nature may contribute to lower aggregate levels of social investment than might be desirable. They may also skew the pattern of social investment towards interventions that are electorally attractive.

Note, too, that the analytical and political economy issues outlined above are closely connected. For instance, other things being equal, the greater the uncertainty over the net benefits of a proposed investment, the greater the challenges of mobilising the necessary political support.

Time and the analysis of social investments

Duration and temporal sequence of costs and benefits

Social investments, like most other kinds of investment, differ in the duration of their effects and the temporal sequencing of their costs and benefits. These differences matter analytically and may have important policy and political implications.

Some investments are relatively short-lived in the sense that they are designed to address a specific social problem that is expected to be short-term or transitory. One such example was the government's provision of temporary subsidies to employers and employees in the immediate aftermath of the February 2011 earthquake in Christchurch. The subsidies – in the form of an earthquake support subsidy to employers and an earthquake job loss subsidy to employees – were designed to help keep businesses financially viable and provide for the needs of workers during the initial recovery phase. In each case, the fiscal costs were short-term, while the various benefits extended over a longer period. By enabling many businesses to remain viable, the subsidies had the potential to maintain employment, thus generating some medium-term fiscal savings (e.g., due to lower unemployment than would otherwise have been the case) and fiscal gains (e.g., from higher tax revenues). Any success in minimising unemployment and financial insecurity may also have contributed to fewer negative health and social impacts arising from the earthquakes, with some of the potential benefits extending over relatively long time-frames (i.e., many years).

By contrast, many – if not most – social investments are semi-permanent or permanent (albeit in a context where their precise policy specifications may vary over time). Typically, such investments are designed to combat enduring problems like crime, chronic illness, serious disability, unemployment or family dysfunction, meet ongoing and persistent needs (e.g., for food, shelter, clothing, health care, home help etc.) and/or prevent harm and suffering – for instance, from domestic violence or substance abuse. The public funding of education (at all levels), social housing and health care falls into this permanent category.

Somewhere between temporary investments like post-earthquake employment subsidies and permanent outlays are interventions designed to mitigate, if not fully solve, major social problems. The hope in such situations is that they will be effective enough to allow the level of the investment to be dramatically reduced at some future point, if not terminated altogether. Social investments in New Zealand falling within this latter category include various public health initiatives such as campaigns to curb smoking), measures to eradicate or substantially lower the incidence of seriously debilitating diseases (e.g., meningitis, poliomyelitis and rheumatic fever), experimental programmes such as the 16 social sector trials led by the Ministry of Social Development during 2011–16, and specifically targeted initiatives like Whānau Ora.

While the duration of social investments varies markedly, perhaps the more important issue from a policy perspective is the *incidence* (i.e., the speed and flow) of their costs and benefits. Leaving aside permanent social programmes with more or less continuous costs and benefits, the benefits of social investments typically extend over much longer time-frames than the costs. And in some cases, the benefits may be intergenerational.

Take an effective investment in prisoner rehabilitation and reintegration.[24] Aside from the economic and social benefits enjoyed by the individuals directly affected (i.e., those who do not reoffend), there will be many wider benefits (or positive externalities): reduced fiscal costs (e.g., from lower imprisonment rates), various social benefits (e.g., from having fewer victims of crime and a greater sense of safety) and benefits for the families of those rehabilitated back in the community (from having a parent and/or partner at home rather than in prison). For the children of those prisoners who are successfully rehabilitated, such benefits are potentially very long-term – a lower risk of offending, better educational and employment outcomes, improved health status, greater self-esteem, higher lifetime incomes, longer life expectancy and so on.

As English emphasised, any assessment of a proposed social investment ‘needs to take account of the long-term – including the benefits that might take years to be delivered’.[25] And as he recognises, ‘long-term’ in this context can mean many decades or even multiple lifetimes. Yet this immediately raises serious conceptual and methodological challenges.

First, the nature and magnitude of the long-term benefits may be extremely difficult to ascertain and quantify, let alone value in monetary terms. Second, the value placed on them (e.g., those which accrue beyond, say, 10 or 20 years) will depend heavily on the discount rate applied in the relevant cost-benefit analysis (as discussed by Destremau and Wilson). Other things being equal, the higher the discount rate, the lower the value. A high discount rate of, say, 8–10 per cent will cancel out many of the benefits that accrue over a lifetime, not to mention those of an intergenerational nature. How the future – and especially the distant future – is valued, therefore, is critically important for social investments, especially those with expected long-term impacts, which is common. Take a social investment to reduce the problem of 'glue ear' in children: a successful intervention early in a child's life may dramatically alter their educational and employment trajectory, bringing substantial lifetime benefits. But if a high discount rate is applied, some of these gains will count for little or nothing.

Destremau and Wilson discuss discount rates more fully in their chapter. But several points deserve underscoring. First, there is no agreement among economists, philosophers, ethicists and others on the 'correct' rate for evaluating public investments. 26 This is reflected in the fact that governments around the world recommend the use of different rates in cost-benefit analyses. Second, there is merit in applying a lower rate the further into the future one goes. Hyperbolic discounting of this nature helps ensure that long-term costs and benefits are not rendered completely irrelevant. Otherwise, there is a risk of underinvesting in policy interventions early in a person's life-cycle because the long-term benefits are discounted away. Third, there is a good case for undertaking sensitivity analyses – i.e., ascertaining what difference the use of alternative rates make. In this regard, Treasury's recent approach is commendable: it recommends using at least two discount rates when undertaking cost-benefit analyses – with the latest guidance (October 2016) endorsing real discount rates of 6 per cent and 3 per cent (reduced from the previous rates of 8 and 4 per cent).27

While both the duration of the expected benefits of a social investment and the speed with which they are generated will affect its perceived utility, the *type* of benefits generated and their particular *temporal sequence* may also matter. This is because some benefits may well count more than others (i.e., for methodological and/or political reasons). After all, some benefits are more direct and tangible, as well as more readily observable and measurable. Economic, material and physical benefits are typically easier to quantify and monetise than many cultural, social, psychological, aesthetic or moral benefits. Given this chapter's focus on the temporal dimension, one of the questions that arises is whether different kinds of social investment not only generate different combinations of tangible (or economic) and intangible (or non-economic) benefits, but also different temporal flows of such benefits. Compare an investment to address a problem in early childhood (e.g., a subsidy for eye examinations and spectacles) with one later in a person's life-course (e.g., a subsidy for training): in all probability the economic benefits of the former will be slower to arrive than those of the latter, while the non-economic benefits are likely to flow at roughly the same pace. How such variations affect the analysis of social investments (and their estimated rates of return) will depend on the methodologies adopted – not least the extent to which intangible benefits are properly identified, quantified and valued.

Time and uncertainty

It is impossible to know for certain what will happen in the future: there is always much that is incalculable, unpredictable, and uncontrollable – and surprises are inevitable.28 Even with the best available information and using the most advanced modelling and other techniques, only limited knowledge of what is in store can be acquired. Moreover, as a general rule the level of uncertainty about the future increases as time-frames lengthen. Having said this, some things tend to be easier to forecast (e.g., demographic patterns and trends) than others (e.g., the social and economic impacts of artificial intelligence, advanced robotics, sentient tools and autonomous vehicles).

If uncertainty increases as time-frames lengthen, then, other things being equal, social investments with extended time horizons are likely to involve greater risks and uncertainties than those with shorter time-frames.29 Uncertainty over the probable returns will grow for at least two reasons. First, longer time-frames implies greater causal uncertainties. Bear in mind, as Amanda Wolf says eloquently in Chapter 9, that the causal pathways through which social investments are expected to 'work' are often less well understood than those for other investments (e.g., in physical infrastructure). In many cases, the investments are likely to yield their benefits through multiple mechanisms, with the presumed causal chains (or intervention logics) often being long and complex. At each step in the relevant causal sequence outcomes may diverge from those predicted; and such differences may be cumulative and/or non-linear. Aside from this, there are bound to be complex interdependencies between the various investments being undertaken at any given time, and these in turn may have unpredictable long-term consequences. Accordingly, the longer the time horizons, the lower our confidence about the relevant causal relationships and likely outcomes.

Second, and related to this, as time horizons lengthen the more the external environment can be expected to change. This, in turn, will impact on the timing and magnitude of the benefits of a social investment. In some cases, these wider exogenous changes may significantly alter its cost-effectiveness. Take a training programme designed to equip students to undertake highly specific, technology-dependent tasks for which there is currently strong market demand. Potentially, the relevance and value of the acquired skills could be seriously affected by the rapid development of a new and disruptive technology, thereby rendering the programme obsolete and substantially reducing its overall returns.

Of course, the outcomes of a social investment might well be better, not worse, than forecast. But if policy-makers and voters display a negativity bias and are risk-averse, as some evidence suggests, then they are more likely to expect things to go wrong.30 Where an investment is expected to take a long time to deliver its results, risk-averse policy-makers may be unwilling to proceed.

There is another dimension of the problem: social investments involving large populations and thus large aggregations of costs and benefits may well generate more predictable outcomes than those affecting much smaller sub-groups. Yet one of the aims of a social investment approach, certainly as applied in New Zealand, is to enable more selective, targeted or tailored interventions – or 'surgical procedures', as one senior official put it. Having better-quality data on the circumstances and behaviours of these sub-groups may help offset the potentially greater uncertainties associated with narrow-spectrum treatments and small-scale interventions. Nevertheless, there is also a risk that more sophisticated data and analytics will merely intensify the uncertainty about which interventions will generate the greatest returns.

There is a vast literature on decision-making in the context of risk and uncertainty.31 All the relevant issues cannot be reviewed here, but several strategies are widely recommended. One is to spread risk by diversifying the portfolio of investments. Applied to social policy this would imply investing in a range of interventions to address a complex social problem rather than relying heavily on any one policy instrument or type of expenditure. Another strategy is to adopt a so-called 'no-regrets' approach. This might entail giving greater attention to the expected *co-benefits* of proposed investments and selecting interventions that are likely to deliver multiple benefits even if they may be somewhat less effective than an alternative approach in achieving the *primary* policy goal (if there is such a goal). Put differently, broad-spectrum treatments may sometimes be preferable to narrower – and possibly cheaper – ones.

The past as an imperfect guide to the future

Whatever the future may hold, our knowledge of the past and the present is also incomplete.32 Some of the available data, whether administrative in nature or based on surveys, is inexact, flimsy, unreliable or unhelpful. Further, the past may not be a consistent or dependable guide to the future: to the extent that human behaviour and societal trends over the longer term diverge from those of the past, then investments with rates of return based on historical evidence may generate actual results which diverge substantially from those expected. Hence, while there is no choice but to draw on the past to assess the merits of proposed investments, unexpected contingencies and unintended outcomes can never be ruled out. Such considerations are highly relevant when it comes to using predictive analytics to guide social interventions.33

Time and the political economy of social investments

As noted earlier, there are various reasons why temporal dimensions may affect policy choices: some investments involve significant non-simultaneous exchanges which may be politically unattractive; there may be insufficient political support to intervene early to mitigate creeping problems; and the risk of dynamic inconsistency may deter decision-makers from making a promising intervention. These problems are closely connected: both individually and collectively they have the potential to contribute to a presentist bias in policy-making.34

Non-simultaneous exchanges

As previously discussed, the temporal sequence of the costs and benefits of social investments frequently varies, with some of the benefits accruing over very lengthy time-frames. Hence, to one degree or another social investments involve non-simultaneous exchanges (i.e., intertemporal transfers). The magnitude of such transfers and the duration of the gap between the occurrence of the costs and benefits will depend on the type of investment. Some deliver almost immediate returns, quite apart from any consumption benefits; others may take many years before the main benefits accrue. Other things being equal, it seems reasonable to assume that these differences could affect the electoral appeal of the respective investments and their likely level of political support. In other words, the greater the temporal gap between 'pain' and 'gain', the less politically attractive the investment will be. If this is so, then there is a risk of governments under-investing in social interventions that involve significant intertemporal transfers – and perhaps especially intergenerational transfers which, for one reason or another, are politically salient.

Consider, for instance, the political economy of measures to reduce child poverty in a developed country like New Zealand: almost regardless of the specific measures adopted, any serious, comprehensive and ambitious anti-poverty strategy will involve significant fiscal costs.35 For instance, an effective strategy is likely to require, among other things, an increase in financial support for low-income families (whether in paid employment or receiving welfare benefits), greater housing assistance and additional in-kind provision. Most of the fiscal costs are likely to be relatively enduring; they will also involve various kinds of politically salient income redistribution – with shifts in disposable income between different types of households, as well as intertemporal transfers. In effect, a greater fiscal burden will fall on taxpayers without dependent children and those on high incomes with children. In the absence of the measures to reduce child poverty, these taxpayers might well have enjoyed a lower tax liability.

But the intertemporal dimension is equally significant: the costs (including the opportunity costs) of an anti-poverty strategy will be experienced almost immediately; by contrast, the main investment benefits (e.g., better lifetime outcomes for poor children) will accrue only slowly. Moreover, while the fiscal costs are direct, tangible, relatively certain and transparent, many of the investment benefits (as opposed to the consumption benefits) are not. Securing political support for transfers of this nature can be challenging. For philosophical and empirical reasons, there may well be political debate about the causes and scale of the policy problem. Equally, even if there is broad cross-party agreement on the desirability of reducing child poverty, there may be serious disagreement over the relative merits of the available policy options, including their affordability, efficacy, fairness and cost-effectiveness.

It would, of course, be wrong to conclude that governments invariably under-invest in social interventions involving significant cross-sectional and/or intertemporal transfers. Likewise, to the extent that there is under-investment in children (and particularly young children and/or those who are most vulnerable) within the developed world, the magnitude varies. For instance, OECD governments differ markedly in the extent to which they prioritise social investment in children and low-income families. This is evident from the substantial differences in both the quantum and proportion of public expenditure (e.g., via education, health care and family assistance) allocated to children, after taking into account demographic patterns.[36] These differences are in turn reflected in major contrasts across the OECD in rates of child poverty, participation in early childhood education and child morbidity. Some OECD countries have strong pro-natalist policies (e.g., France) and/or low rates of childhood deprivation (e.g., Scandinavian nations), while others such as Poland display a discernible pro-elder bias.[37] No doubt these contrasts reflect, at least to some extent, differences in political culture and societal values.

The nature of intergenerational fairness and how it should be conceptualised and measured is highly complex and cannot be fully explored here.[38] Nevertheless, with respect to the issue of whether fiscal policy in New Zealand, and especially the age incidence of taxes and public expenditure, favours particular age groups, several points are worth noting.

First, as might be expected, the available evidence indicates that the young and the elderly are, on average, net recipients of governmental assistance, while those aged between 25 and 64 are, on average, net contributors.[39] Figure 4.1 shows the net fiscal impact by age group in 2010, together with what is expected in 2060 (based on current policy settings and projected demographic changes). This shows that with New Zealand's population ageing over the next four to five decades, due to increasing longevity and lower fertility, the incidence of net taxation and government expenditure across age groups is likely to become increasingly skewed towards the elderly.

Second, fiscal policy settings have shifted substantially in favour of different age groups over recent decades. The introduction in the mid-to-late 1970s of a relatively generous universal pension (New Zealand superannuation) from the age of 60 resulted in a marked increase in net fiscal transfers to the elderly. Coupled with substantial budget deficits from the mid-1970s to the early 1990s, the overall distributional impact was to the disadvantage of the young and future taxpayers. Against this, there was a shift back in the other direction during the early 1990s, with the tightening of eligibility criteria for New Zealand superannuation and somewhat less generous levels of assistance, a large increase in expenditure on tertiary education and a substantial reduction in net public debt – largely driven by significant fiscal surpluses.

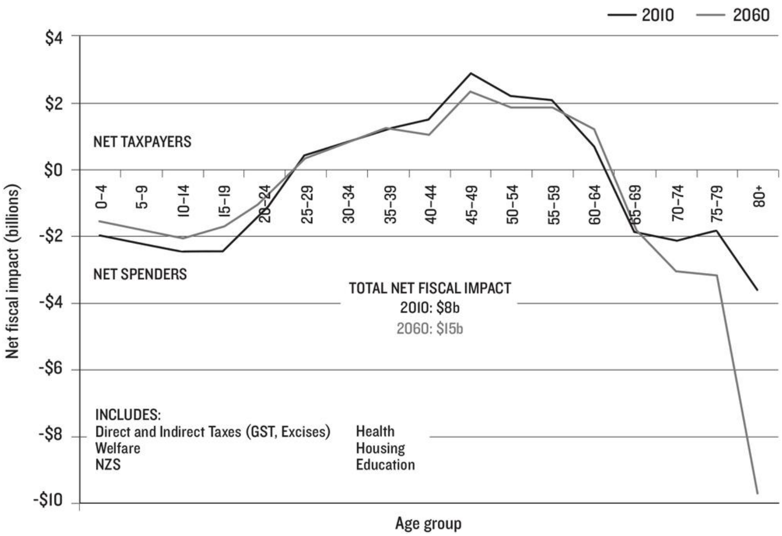


Figure 4.1: Net fiscal impact by age group: 2010 and 2060. Source: O. Aziz et al., The Distributional Impact of Population Ageing New Zealand, New Zealand Treasury Working Paper 13/13, Wellington, July 2013, p.19.

From a fiscal perspective, therefore, and leaving aside wider considerations (e.g., changes in stocks of natural capital and the quality of ecosystem services), current policy settings are not strongly pro-elderly in per capita terms. At the same time, the relatively high rates of childhood deprivation – which are around three times higher than the rates for those over 65 and also higher than in much of western Europe – suggest that additional investment of various kinds in low-income families would be advantageous.40

Creeping problems

Some social investments are designed to address a particular class of problems variously referred to as ‘creeping’, ‘looming’, ‘slow’, ‘slow-burner’, ‘slow-motion’, ‘slow-moving’ or ‘emerging’.41 As the names suggest, such problems develop gradually and incrementally, and often lack critical thresholds or abrupt tipping points. Moreover, there is often a substantial time lag between cause and effect. Hence, while their capacity to generate long-term harm may be evident, at least to the relevant experts, they normally lack vivid, dramatic or unmistakeable early warning signals that can mobilise public concern, thereby sparking an appropriate governmental response.

To compound matters, creeping problems often exhibit a high degree of path dependence (i.e., past events severely constrain future options). Accordingly, they become harder and more costly to alleviate with the passage of time. This means that delays in responding may reduce or even eliminate the possibility of low-cost solutions. As a result, the burden of managing and mitigating the problem will be shifted onto future citizens and taxpayers. Worse, the failure to intervene early may lead to serious and irreversible damage, with major implications for the well-being of future generations. Examples of contemporary social problems in New Zealand with 'creeping' features include: population ageing; high obesity rates, including high rates of childhood obesity; increasing levels of stress and declining mental health; and the spread of antimicrobial resistance.

There are many reasons why governments might fail to address creeping problems expeditiously or effectively.42 For example, the problem may not be detected early enough; the nature of the risks may be poorly communicated to those responsible for taking action; policy-makers may be distracted by more urgent problems; there may be little public pressure to take precautionary measures or early remedial action; interdepartmental, cross-sectoral or intergovernmental coordination and cooperation may be hard to secure; or the problem may be inherently 'wicked' in the sense that it has multiple causes and no complete or definitive solutions.43

Take the escalating global obesity pandemic and the implications for New Zealand.44 By way of background, about 50 per cent of people in the developed world are now overweight or obese. Failure to address this problem will have major long-term implications for population health, well-being and mortality; it will also impose considerable extra health-care costs on future citizens and increase the cost of mobility and transport (because heavier people are more expensive to move around). For instance, average annual health expenditures for obese people are roughly 25 per cent higher than for those of normal weight.

Obesity rates are particularly high in New Zealand. According to the 2014–15 Health Survey, around a third of adults (i.e., those aged 15 and over) are obese, while a further third are overweight.45 Among Māori adults, obesity rates are approaching 50 per cent, while 66 per cent of Pasifika adults are obese. To compound matters, childhood obesity rates are high by international standards and rising.

Although the long-term risks to population health and public expenditure are well understood, few governments around the world have been willing to implement comprehensive and integrated prevention strategies. Rather, they have adopted policy responses at the 'softer' or 'gentler' end of the available toolkit. The focus, in other words, has been on better health education (especially in schools), health promotion campaigns, and stricter labelling standards to enable consumers to evaluate how particular foods might affect weight gain. To date, such measures have had relatively little impact. More significant social investments will almost certainly be required. These might include a range of regulatory and fiscal measures: limiting nutritional choices (e.g., in schools); restricting the marketing and availability of unhealthy foods; taxing sugar or sugar-sweetened beverages and other unhealthy foods; and re-orienting the global food industry towards healthier products and away from processed and fast foods.[46]

But such measures face numerous obstacles. Some are complex to administer and difficult to enforce; some have regressive distributional effects; some impose costs or limitations on all citizens indiscriminately; and some are likely to be regarded as unduly paternalistic. Moreover, tough regulatory and fiscal measures are often strenuously opposed by powerful vested interests (e.g., large companies in the food and beverage industries). For such reasons, most governments have been cautious about their social investments. Very few, for instance, have imposed additional taxes on sugar-sweetened beverages – although in 2016 the British government announced its intention to do so.

The obesity pandemic is but one of a number of creeping social problems where early intervention is likely to pay dividends – both financial and non-financial – but where mobilising political support is very difficult. There are no simple policy answers in such cases. Securing political backing for measures which impose significant costs on powerful interests and/or which require substantial lifestyle and behavioural changes is never easy. Good evidence helps, but is often unpersuasive. Moreover, in the case of obesity, there is also the challenge of sustaining a package of measures over lengthy time-frames (i.e., decades). After all, short-term investments are likely to have little enduring impact. Hence, an anti-obesity programme must have adequate cross-party support to be effective. This may be difficult to negotiate; yet without it there is a risk of dynamic inconsistency.

Dynamic inconsistency

Dynamic (or time) inconsistency refers to situations where individuals' (or societal) goals or preferences change over time in a way that undermines the achievement of the original objectives.[47] For instance, the benefits of a person's decision to lose weight or cease smoking will not be realised if the actions of the person's 'future self' are inconsistent with those of his or her 'present self'. In situations where there is a risk of dynamic inconsistency, a central issue is whether individuals can successfully bind themselves to a course of action, perhaps through some kind of 'commitment device'.[48]

From a social investment perspective, dynamic inconsistency might be relevant in at least two policy contexts. First, if desirable social outcomes depend on individuals taking a series of consistent steps over an extended period of time, the question arises of how the relevant investment might be designed so as to encourage consistent behaviour and discourage reneging. Second, there is the broader issue of whether the social investment might itself be subject to dynamic inconsistency. That is to say, a future government could reverse, amend or terminate the investment, thereby reducing or even eliminating its expected benefits. In some situations, the prospect of subsequent policy reversals may deter a government from embarking on certain kinds of investment, thus reducing future well-being (i.e., below what might otherwise have been the case).

Policy instability or inconsistency is likely to matter most in relation to social investments in the following situations:

1. the investment must be continued over an extended period (a decade or longer) in order to deliver an adequate rate of return;
2. the investment requires a significant initial outlay of *political* capital (e.g., because it is expensive fiscally or likely to encounter public opposition, perhaps because it requires behavioural changes or challenges vested interests); and
3. the investment is fungible and readily reversible.

As with other kinds of investment, social investments vary in their degree of reversibility. Investments in human capital and the physical infrastructure needed for the delivery of social services (e.g., educational and health-care facilities) are typically lasting and not readily reversed. But many other social investments are reversible, at least in technical terms, and do not involve large sunk costs. Of course, there may be major political hurdles to their reversibility: this will depend on their electoral salience. The latter, in turn, will be influenced by the nature and scale of the investments, not least the number of net recipients. Those with wide coverage, and especially those with many middle-class recipients, are likely to be more difficult to alter or terminate than those targeted to vulnerable populations. Similarly, social investments that generate a strong sense of entitlement, perhaps because the benefits received depend partly on the level of individual contributions, will be politically harder to amend than those lacking such features.

Also, whereas many investments in physical infrastructure involve ‘lumpy’ goods – where critical thresholds must be crossed in order for the main benefits to be generated – social investments rarely fall into this category: their benefits, once they have commenced, tend to flow in a relatively linear and continuous fashion. Policy changes at some point in the future are therefore less likely to render the investment totally futile.

Nevertheless, some social investments may involve relatively high stakes, perhaps because their success, at least politically, depends on meeting specific and challenging targets. Examples might include the efforts of various OECD governments in recent decades to achieve substantial and sustained improvements in educational performance, curb benefit dependency and meet ambitious child poverty reduction targets. In New Zealand, the recent Better Public Services initiative has set relatively demanding, high-profile goals with ten explicit, measurable, medium-term targets.[49] While it is questionable whether governments would suffer significant electoral damage if they failed to meet targets of this nature, it would nonetheless be politically embarrassing.

With respect to the social investment initiatives in New Zealand, most of the projects recently announced or under consideration involve relatively modest new fiscal outlays or minor shifts in departmental budgets. Electorally, such changes are unlikely to be particularly salient. They may, however, have a significant impact on particular service providers, including external contractors and non-governmental organisations, and/or specific groups of recipients. Equally, while there may be a risk of dynamic inconsistency with respect to some of the new investments, the impact of this on their design, implementation or effectiveness is unlikely to be marked.

In terms of dynamic inconsistency, there are two main risks. The first is to the social investment approach as a whole. The risk here is that the new Labour-led government might conclude, for one reason or another, that the new methodologies, tools and investment strategies lack value. This might be because of philosophical and/or methodological concerns. Alternatively, it might stem from the new government's desire to develop its own political framing and take a fresh approach to social policy reform. I will return to this point shortly.

The second risk relates to the pursuit of social investments where sustained and consistent efforts over extended periods (e.g., decades) may be necessary to deliver effective outcomes. The design of public pensions falls into this category. Repeated and major changes to retirement incomes policies can have damaging impacts on savings behaviour and distort investment flows. Other examples where a substantial degree of policy stability is likely to enhance overall programme effectiveness might include strategies to address chronic health problems, like obesity and poor mental health, and major policy initiatives to counter childhood hardship and disadvantage.

To the extent that the risk of dynamic inconsistency poses a problem, what solutions are available? There are at least two main options. The first is to structure policies in ways that enhance their public support. In so doing the political costs of subsequent policy reversals will be increased, thereby reducing their likelihood. But in many cases this may be neither possible nor desirable. The second option, particularly in a country with a multi-party parliament like New Zealand, is to seek *explicit* cross-party agreement on the overall policy framework. The multi-party accord on pensions in 1993 (between National, Labour and the Alliance) provides a good example.[50] It is perhaps surprising, however, that there are so few explicit agreements in New Zealand of this kind, despite the introduction of proportional representation in 1996.[51] In some democracies (e.g., Scandinavian ones), formal multi-party agreements on major social (and other) policy issues are relatively common.[52]

Of course, there are many *implicit* cross-party agreements on important social policy issues in New Zealand. Examples include support for a predominantly publicly funded health care system, a largely publicly funded education system, and the provision of social housing for disadvantaged families and individuals.

Thus far, the social investment approach appears to enjoy implicit cross-party support. Such backing may not extend to all aspects of the approach. Nor is it likely to generate an explicit, formal cross-party agreement. But this may not matter.

After all, the framing of social interventions (whether fiscal or regulatory) in the language of *investment* is politically appealing, and this attractiveness extends across the ideological spectrum. From both a centre-right and centre-left perspective, a focus on investment indicates future returns and, at least in theory, enables new social expenditures (possibly even large ones) to be justified in terms of their cost-effectiveness. It takes the emphasis away from *short-term* fiscal costs and redirects it to the expected *long-term* benefits (including fiscal savings). As a framing device, therefore, the language of social investment – whatever its precise meaning, merits or underpinning analytics – is arguably politically sustainable. Hence, irrespective of the durability of individual investments and various shifts in emphasis, the overall project has inherent resilience.

Other factors that may affect the political economy of social investments

Finally, numerous other factors may affect the political economy of social investments, including both their temporal focus and the timing of their selection and implementation. Among these are the electoral cycle and ministerial tenure. New Zealand has a short parliamentary term by international standards; this often truncates the planning horizons of governments. The tenure of ministers in individual portfolios also tends to be brief – typically shorter than the three-year parliamentary term and of a much less certain duration. Similarly, partisan competition – or what my former colleague Andrew Ladley once described as the 'iron law of political contest' – limits the opportunities for explicit and durable political bargains. Aside from this, decision-making on social investment issues, including the temporal dimensions, is affected by budgeting systems, bureaucratic silos,[53] intra-party politics, identity politics (see briefly below) and the preferences of powerful sectoral groups. Collectively, such factors are likely to lend more weight to short-term interests and considerations, and favour governmental interventions that generate rapid returns – ideally, visible and measurable ones.

PROTECTING LONG-TERM INTERESTS

The preceding discussion suggests that for both analytical and political reasons governments may under-invest in socially desirable public outlays and regulatory interventions, especially those designed to enhance long-term societal outcomes. The analytical reasons concern how future costs and benefits are discounted, the methodological challenges posed by causal uncertainty and the fact that uncertainty generally increases with greater temporal distance. From a political economy perspective, under-investment may be driven by electoral, partisan and institutional considerations.54 Potentially, such factors could affect both the aggregate level and composition of social investment. Claims that the overall level of social investment by governments in developed economies like New Zealand is *sub-optimal* raise formidable conceptual and philosophical issues. It is not possible to address these here. But, in brief, it is highly doubtful – especially in the context of deep uncertainty, conflicting ethical principles, incommensurable 'goods' and policy trade-offs – whether it is meaningful to talk about *optimal* levels of social investment or, indeed, any other kind of investment. Nevertheless, reasonable people might be persuaded that aggregate investment levels below a specified threshold are likely to generate unacceptable levels of social harm and impair a country's overall development.

Irrespective of whether there is a *correct* overall quantum of social investment, a strong case can be made that the political incentive structure in contemporary democracies is likely to make *certain forms* of investment less attractive.55 Hence, regardless of the aggregate investment level, the composition of the portfolio of investments may be neither equitable nor efficient. Policy areas at the greatest risk of under-investment are likely to include those with one or more of the following characteristics:

1. there is much greater certainty about the nature, timing and magnitude of the costs than about the benefits;
2. there are significant non-monetary benefits which are hard to quantify, let alone monetise;
3. the main monetary benefits are relatively delayed, while the costs are mostly near-term; and
4. the costs of the investment fall disproportionately on powerful organised groups while the benefits are spread more evenly across the population.

To the extent that social investments may be skewed towards interventions that generate near-term gains at the expense of those with larger longer-term paybacks, what, if anything, might be done to protect long-term societal interests? Arguably, a presentist bias of this nature constitutes a wicked governance problem, and there are no simple or easy answers.56 But perhaps the first response should be to recognise that such a risk exists. Efforts can then be made to design policy tools, frameworks and systems which increase the attention that analysts and decision-makers devote to longer-term risks and opportunities. Consideration can also be given to the deployment of commitment devices – whether procedural or substantive in nature – to help ensure that long-term interests are regularly brought into focus. I have considered such devices in detail elsewhere.57

It is too early to make a full assessment of how, and to what extent, the social investment approach in New Zealand has impacted on the nature, composition and time horizon of policy investments overall; nor can we be confident about what changes will occur in the future. In theory, more and better data on the merits of current and prospective interventions should shift the temporal focus of policy-makers somewhat towards the future. In other words, it should have an attention-focusing effect, with more emphasis being given to the goals of reducing long-term social harm and minimising future fiscal liabilities. This, in turn, should encourage earlier intervention to mitigate existing and looming social problems, notwithstanding some additional short-to-medium term fiscal costs. If so, investments earlier in an individual's life-course should be expected to increase, thereby (hopefully) relieving some of the pressures in the future for remedial interventions (see the next chapter, by Sarah Hogan).

Such expectations appear to be at least partially consistent with what has happened thus far in New Zealand. For instance, the evidence generated via the social investment approach, including the findings and recommendations of the Welfare Working Group (2011), has underscored the high lifetime welfare costs of particular categories of beneficiary (e.g., teen sole parents). This has already prompted various changes in policy and practice (e.g., increased work obligations and penalties, greater investment in the education of teen parents, more intensive financial oversight and wrap-around services for young people on benefits etc.), with a number of positive results.58

Likewise, the Child Hardship Package (CHP) in the 2015 Budget represented a governmental response to evidence of significant childhood hardship, together with evidence that extra upfront expenditure would not only alleviate deprivation but also contribute to better long-term economic and social outcomes.59 Interestingly, however, the CHP was not treated by the government as a core component of its social investment approach. Nor, subsequently, was the Family Incomes Package announced in the 2017 Budget.

Instead, the focus of the social investment approach has been on 'vulnerable' populations, especially those with multiple and complex needs. It has not been extended significantly into the heartlands of education, housing or health care, which involve far larger fiscal expenditures. Nor does it appear to have led to a much stronger emphasis on creeping problems like obesity or mental illness – or a greater focus on regulatory interventions. Conceptually, of course, there is nothing to prevent such extensions. Nevertheless, as discussed earlier, an investment lens is not necessarily equally applicable or illuminating across the full range of social policy instruments. Also, ideological factors or vested interests may dissuade governments from embracing some social investments with apparently good rates of return, perhaps because they are regarded as too coercive, paternalistic or commercially damaging. Note, for instance, the decision early in the term of the National-led government to halt the previous Labour-led government's initiatives to discourage the sale of unhealthy foods in school tuck shops: the policy shift was motivated primarily by a concern that the interventions were paternalistic rather than ineffective. They represented what many saw, rightly or wrongly, as the actions of an overweening nanny state.

To the extent that the Integrated Data Infrastructure (IDI) and other policy tools under development generate more reliable and compelling evidence of 'what works', governments may be willing to make larger intertemporal transfers than hitherto to enhance long-term societal outcomes. Better evidence, after all, should make it politically easier to justify such transfers. If so, it might also boost cross-party support for addressing wicked long-term problems like substance abuse, educational disadvantage, intergenerational poverty and entrenched social inequalities. Yet there are many ifs and buts. Policy priorities and investment patterns – including their intertemporal dimensions – may not change significantly for a variety of reasons.

While more evidence will be available in the future, in some cases it may not contribute greatly to our understanding of how best to alleviate serious and long-standing social problems. Determining what works – or what works best – is likely to be an ongoing challenge, as other contributors to this volume discuss. Above all, our knowledge of complex causal pathways seems destined to remain partial and incomplete.60 In fact, in some cases more evidence may make us more uncertain, rather than less. Moreover, within any given time horizon only a limited number of social investments can be expertly evaluated.

There is another possible problem too – a heightened risk of identity politics affecting policy decisions. More and better evidence may not only illuminate the nature of the intertemporal transfers implied by current or proposed investments, but also shed greater light on other aspects of their distributional impacts – such as their effect on the transfer of public resources between different social groups based on age, ethnicity, gender, family size, household type and region. Greater transparency regarding fiscal transfers may pose political challenges as well as opportunities. For instance, the way in which a proposed social investment is framed could sharpen public debate in relation to ethnic differences and intensify race-based discourse, potentially in ways that undermine public support – perhaps because those likely to be net contributors to the cost of the investment question whether the net recipients are sufficiently deserving. In short, to the extent that more transparency exacerbates an 'us versus them' mentality and reinforces or intensifies social cleavages, it may lessen the prospects of governments making desirable social investments (at least of certain kinds). The topic of identity politics and its interface with a social investment approach warrants separate consideration.

Aside from this, evidence is only one ingredient in the policy-making process. And good data are not valued equally by decision-makers. Without an ongoing commitment to policy learning and evidence-informed policy-making, the results of research and evaluation may carry little weight. Additionally, there is the issue of agenda-setting and attention spans. In policy-making environments characterised by intense political pressures and rapidly moving events, getting longer-term, emerging and creeping issues onto the political agenda – and then getting them taken seriously – is challenging. A social investment lens may thus have only a modest impact on a government's policy priorities and intertemporal preferences. The risk of a presentist bias may be little diminished.

It is, of course, early days. New Zealand's social investment approach is still evolving. It would be unwise to prejudge or underestimate its potential impact. Yet, for multiple reasons, it seems highly likely that ethical judgments, ideological convictions, political considerations and entrenched interests will continue to influence social interventions, including both expenditures and regulatory instruments, and probably carry more weight than recommendations based on relative rates of return, however well-founded these may be.

CONCLUSION

One of the critical attributes of an investment framing in the domain of social policy is that it focuses the attention of policy analysts, decision-makers and the wider public on the *future* – and especially the potential for future net benefits. Investments, after all, are about future returns: they are forward-looking; they point to a horizon beyond the present. But how distant and all-encompassing will this horizon be?

Ideally, a social investment perspective should shift the temporal focus of a country's policy community into the future and bring intergenerational issues and those of long-term stewardship more firmly into the spotlight. In so doing, it should help counter the strong incentives in democratic modes of governance to prioritise near-term interests and outcomes, not least short-term electoral considerations. Theoretically, too, an investment lens should contribute to a deeper concern for citizens' overall well-being, hopefully taking a lifetime or life-course perspective. Likewise, it might be expected to encourage a broader, system-wide, whole-of-government orientation among policy-makers and their advisers.

But, as discussed in this chapter, none of these benefits are guaranteed, in New Zealand or elsewhere. Much depends on how an investment approach is conceptualised and applied. There are also risks. For instance, a social investment approach might – as was evident initially in New Zealand – privilege some future-oriented indicators, such as future fiscal liabilities, to the neglect of other important long-term outcomes – ones that are broader in scope but less readily quantifiable or politically salient. There is also a risk in New Zealand's case of the approach being unduly narrow, prioritising tightly targeted measures to assist those deemed 'vulnerable' while ignoring the potentially large economic and social returns from well-designed, broad-spectrum interventions (e.g., to address creeping problems like obesity). It will be interesting, therefore, to observe how the New Zealand model continues to evolve and whether the boundaries of what constitutes a *social* investment are gradually extended.

While much of the foregoing discussion has understandably focused on New Zealand, broader questions of a more comparative nature also arise. One of these is how different societies value the future, how they judge intertemporal trade-offs, and how they understand their intergenerational responsibilities. As noted earlier, it appears that some countries, such as those in Scandinavia, are more willing than others to invest *collectively* to enhance their long-term well-being: for instance, they devote significantly more of their society's resources to their children, research and development, social infrastructure and active labour-market interventions.

But why is this? What particular cultural norms and values facilitate – or hinder – a future-focused policy orientation? Most parents, for instance, willingly make sacrifices for the future well-being of their children. But what influences their readiness to invest, via governmental processes, in other people's children? What factors shape whether and to what extent they identify with the needs of people who are spatially or temporally distant? Who, in other words, do citizens regard as their *neighbours*? Who merits their compassion and concern? For whom do they desire fairness and a safe prospect? What factors influence how citizens think about and value their society's collective well-being and how does this shape their intertemporal preferences? These are but a few of the fascinating questions raised by the concept of social investment. And, as is often the case, such questions are much easier to pose than to answer.

References

Aaron, H., 'Presidential Address: Seeing Through the Fog: Policy-Making with Uncertain Forecasts', *Journal of Policy Analysis and Management*, 19, 2 (2000)

Adler, M., and M. Fleurbaey (eds), *Oxford Handbook of Well-Being and Public Policy*, Oxford University Press, Oxford, 2016

Ascher, W., *Bringing in the Future: Strategies for Farsightedness and Sustainability in Developing Countries*, Chicago University Press, Chicago, 2009

Aziz, O., C. Ball, J. Creedy and J. Eedrah, *The Distributional Impact of Population Ageing New Zealand*, New Zealand Treasury Working Paper 13/13, Wellington, July 2013

Berridge, M., and L. Marriott, *Sugar, Rum and Tobacco: Taxes and Public Health in New Zealand*, Bridget Williams Books, Wellington, 2017

Boston, J., *Governing for the Future: Designing Democratic Institutions for a Better Tomorrow*, Emerald, Bingley, 2017

Boston, J., *Safeguarding the Future: Governing in an Uncertain World*, Bridget Williams Books, Wellington, 2017

Boston, J., and R. Prebble, 'The Role and Importance of Long-Term Fiscal Planning', *Policy Quarterly*, 9, 4 (2013)

Boston, J., and S. Chapple, *Child Poverty in New Zealand*, Bridget Williams Books, Wellington, 2014

Boston, J., J. Wanna, V. Lipski and J. Pritchard (eds), *Future-Proofing the State: Managing Risks, Responding to Crises and Building Resilience*, ANU Press, Canberra, 2014

Broome, J., *Weighing Goods: Equality, Uncertainty, and Time*, Basil Blackwell, Oxford, 1995

Broome, J., *Climate Matters: Ethics in a Warming World*, W. W. Norton, New York, 2012

Brown Weiss, E., *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity*, United Nations University, Tokyo, 1989

Buckle, R., and A. Cruikshank, *The Requirements for Long-run Fiscal Sustainability*, New Zealand Treasury Working Paper 13/20, Wellington, 2013

Chapple, S., 'Forward Liability and Welfare Reform in New Zealand', *Policy Quarterly*, 9, 2 (2013)

Cook, L., 'Improving the Effectiveness of Social Services: The Challenge for Public Administration', unpublished paper, Wellington, 2017

Colchero, M., B. Popkin, J. Rivera and S. Ng, 'Beverage Purchases from Stores in Mexico Under the Excise Tax on Sugar Sweetened Beverages: Observational Study', *British Medical Journal*, 352 (2016)

Courtney, H., J. Kirkland and P. Viguerie, 'Strategy Under Uncertainty', *Harvard Business Review* (November–December 1997)

Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016

Early Childhood Education Taskforce, *An Agenda for Amazing Children: Final Report of the ECE Taskforce*, Wellington, 2011

Edwards, D., and E. Judd, 'Measuring Tomorrow's Outcomes Today: Adopting an Investment Approach within the Ministry of Social Development', paper presented at the New Zealand Society of Actuaries Biennial Conference, *Brave New World: Big Data, Longevity and ERM*, Dunedin, 2014

Elster, J., *Ulysses Unbound: Studies in Rationality, Precommitment, and Constraint*, Cambridge University Press, Cambridge, 2000

English, B., 'Annual John Howard Lecture to Menzies Research Centre', Canberra, 25 June 2015

English, B., 'Speech to the Treasury Guest Lecture Series on Social Investment', presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015

English, B., 'Pre-Budget Speech', 3 May 2017

European Environment Agency, *Late Lessons from Early Warnings: Science, Precaution, Innovation*, Copenhagen, 2013

Evans, L., and N. Quigley, *Intergenerational Contracts and Time Consistency: Implications for Policy Settings and Governance in the Social Welfare System*, New Zealand Treasury Working Paper 13/25, Wellington, December 2013

Expert Advisory Group on Solutions to Child Poverty, *Solutions to Child Poverty in New Zealand: Evidence for Action*, Children's Commissioner, Wellington, 2012
Goffman, E., *Frame Analysis: An Essay of the Organization of Experience*, Harvard University Press, Cambridge MA, 1974
González-Ricoy, I., and A. Gosseries (eds), *Institutions for Future Generations*, Oxford University Press, Oxford, 2017
Government Office for Science, *Tackling Obesities: Future Choices*, project report, Foresight Programme, Government Office for Science, London, 2007
Greenfield, A., H. Miller, K. Wolanski and G. McGuire, *Ministry of Social Development: Valuation of the Benefit System for Working-Age Adults as at 30 June 2014*, Taylor Fry Pty Ltd, Sydney, 2015
Healy, A., and N. Malhorta, 'Myopic Voters and Natural Disaster Policy', *American Political Science Review*, 103, 3 (2009)
Heller, P., *Who Will Pay? Coping with Aging Societies, Climate Change and Other Long-Term Fiscal Challenges*, IMF, Washington DC, 2003
House of Commons Public Administration Select Committee, *Governing the Future: Second Report of Session 2006–07*, London, 22 February 2007
Hovi, J., D. Sprinz and A. Underdal, 'Implementing Long-Term Climate Policy: Time Inconsistency, Domestic Politics, International Anarchy', *Global Environmental Politics*, 9, 3 (2009)
Hughes, T., 'Predictive Analytics for Policy and Practice: Reflections from the Criminal Justice System', *Policy Quarterly*, 11, 2 (2015)
Jacobs, A., *Governing for the Long Term*, Cambridge University Press, Cambridge, 2011
Jacobs, A., 'Policymaking for the Long Term in Advanced Democracies', *Annual Review of Political Science*, 19 (June 2016)
James, C., 'Making Big Decisions for the Future', *Policy Quarterly*, 9, 4 (2013)
James, C., 'Social Investment: Chance for a Mentality Shift', 2016, www.colinjames.co.nz/2016/03/07/investment-chance-for-a-mentality-shift (accessed 5 September 2017)
Kahneman, D., *Thinking, Fast and Slow*, Penguin, London, 2011
Karacaoglu, G., *The New Zealand Treasury's Living Standards Framework: A Stylised Model*, Treasury, Wellington, 2015
Keddell, E., 'Substantiation Decision-Making and Risk Prediction in Child Protection Systems', *Policy Quarterly*, 12, 2 (2016)
Kydland, F., and E. Prescott, 'Rules Rather than Discretion: The Inconsistency of Optimal Plans', *Journal of Political Economy*, 85, 3 (1977)
Lempert, R., and S. Popper, 'High-Performance Government in an Uncertain World', in R. Klitgaard and P. Light (eds), *High Performance Government: Structure, Leadership, and Incentives*, The RAND Corporation, Santa Monica, 2005
MacKenzie, M., 'Future Publics: Democratic Systems and Long-Term Decisions', PhD thesis, University of British Columbia, Vancouver, 2013
Makhlouf, G., 'Growing our Economic Capital: Investing in Sustainable Improvement in Our Wellbeing', speech at Victoria University of Wellington, 3 November 2016
Mansbridge, J., and C. Martin (eds), *Negotiating Agreements in Politics*, taskforce report, American Political Science Association, Washington DC, 2013
Ministry of Health, *Annual Update of Key Results 2014/15: New Zealand Health Survey*,

Wellington, 2015
Mulgan, G., *The Art of Public Strategy: Mobilizing Power and Knowledge for the Common Good*, Oxford University Press, Oxford, 2009
New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015
Nolan, B., 'What Use is "Social Investment"?', *Journal of European Social Policy*, 23, 5 (2013)
Nordhaus, W., *The Climate Casino: Risk, Uncertainty, and Economics for a Warming Planet*, Yale University Press, New Haven, 2013
OECD, *Doing Better for Children*, Paris, 2009
OECD, *Doing Better for Families*, Paris, 2011
Olson, R., *Missing the Slow Train: How Gradual Change Undermines Public Policy and Collective Action*, Wilson Centre, Washington DC, 2016
Raubal, H., and E. Judd, *2013 Benefit System Performance Report for the Year Ended 30 June 2013*, Ministry of Social Development, Wellington, 2014
Raubal, H., and E. Judd, *2014 Benefit System Performance Report for the Year Ended 30 June 2014*, Ministry of Social Development, Wellington, 2015
Redburn, S., *Budgeting for Investment*, Discussion Paper 6, Economic Studies at Brookings, Brookings Institution, Washington DC, 2017
Reeves, R., *Ulysses Goes to Washington: Political Myopia and Policy Commitment Devices*, Centre for Effective Public Management, Brookings Institution, Washington DC, 2015
Rittel, H., and M. Webber, 'Dilemmas in a General Theory of Planning', *Policy Sciences*, 4 (1973)
Room, G., *Complexity, Institutions and Public Policy*, Edward Elgar, Cheltenham, 2011
Rosenberg, B., 'The "Investment Approach" Is Not an Investment Approach', *Policy Quarterly*, 11, 4 (2015)
St John, S., 'Superannuation in the 1990s: Where Angels Fear to Tread?', in J. Boston, P. Dalziel and S. St John (eds), *Redesigning the Welfare State in New Zealand: Problems, Policies, Prospects*, Oxford University Press, Auckland, 1999
Sassi, F., *Obesity and the Economics of Prevention: Fit not Fat*, OECD, Paris, 2010
Stern, N., *The Economics of Climate Change: The Stern Review*, Cambridge University Press, Cambridge, 2006
Swinburne, B., G. Sacks, K. Hall, K. McPherson, D. Finegood, M. Moodie and S. Gortmaker, 'The Global Obesity Pandemic: Shaping by Global Drivers and Local Environments', *The Lancet*, 378, 9793 (2011)
Taleb, N., *The Black Swan: The Impact of the Highly Improbable*, Penguin, London, 2007
Taylor Fry, *Actuarial Advice of Feasibility: A Long-Term Investment Approach to Improving Employment, Social and Financial Outcomes from Welfare Benefits and Services*, report to the Ministry of Social Development and Treasury, 27 October 2011
Taylor Fry, *Actuarial Valuation of the Benefit System: Technical Briefing*, 2012
Thaler, R., and C. Sunstein, *Nudge: Improving Decisions about Health, Wealth and Happiness*, Yale University Press, New Haven, 2008
Thompson, D., 'Democracy in Time: Popular Sovereignty and Temporal Representation', *Constellations*, 12, 2 (2005)
Thompson, D., 'Representing Future Generations: Political Presentism and Democratic Trusteeship', *Critical Review of International Social and Political Philosophy*, 13, 1

(2010)
Treasury, *Cost-Benefit Analysis Primer*, Treasury, Wellington, 2005
Treasury, *Affording our Future: Statement on New Zealand's Long-Term Fiscal Position*, Treasury, Wellington, 2013
Treasury, *CBAx Tool User Guidance*, Treasury, Wellington, 2016
Vanhuysse, P., *Intergenerational Justice in Aging Societies: A Cross-National Comparison of 29 OECD Countries*, Bertelsmann Stiftung, Gütersloh, 2013
Welfare Working Group, *Reducing Long-Term Benefit Dependency: Recommendations*, Wellington, February 2011
Workman, K., 'Back to Churchill: An Old Vision for Prisoner Reintegration', *Policy Quarterly*, 5, 2 (2009)
Zuber, S., 'Measuring Intergenerational Fairness', in I. González-Ricoy and A. Gosseries (eds), *Institutions for Future Generations*, Oxford University Press, Oxford, 2017

Notes

1 House of Commons Public Administration Select Committee, *Governing the Future: Second Report of Session 2006–07*, London, 22 February 2007.

2 B. English, 'Speech to the Treasury Guest Lecture Series on Social Investment', presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015.

3 I would like to thank Simon Chapple, Killian Destremau, Derek Gill, Girol Karacaoglu, Gerald Minnee, Michael Mintrom, Simon Wakeman, Peter Wilson, Amanda Wolf and John Yeabsley for their helpful comments on earlier versions of this chapter.

4 J. Boston, *Governing for the Future: Designing Democratic Institutions for a Better Tomorrow*, Emerald, Bingley, 2017; A. Jacobs, *Governing for the Long Term*, Cambridge University Press, Cambridge, 2011.

5 There is a large literature on policy framing. This examines the ways in which policy-makers and voters can draw different conclusions from exactly the same information and analyses, depending on how the data are presented and the specific language used (W. Ascher, *Bringing in the Future: Strategies for Farsightedness and Sustainability in Developing Countries*, Chicago University Press, Chicago, 2009; E. Goffman, *Frame Analysis: An Essay of the Organization of Experience*, Harvard University Press, Cambridge MA, 1974; G. Mulgan, *The Art of Public Strategy: Mobilizing Power and Knowledge for the Common Good*, Oxford University Press, Oxford, 2009).

6 As Killian Destremau and Peter Wilson note in their chapter, the concept of 'social investment' has been applied in a number of analytically different ways across the developed world since the mid-twentieth century.

7 See, for instance: Boston, *Governing for the Future*; J. Boston, *Safeguarding the Future: Governing in an Uncertain World*, Bridget Williams Books, Wellington, 2017; J. Boston et al. (eds), *Future-Proofing the State: Man-*

aging Risks, Responding to Crises and Building Resilience, ANU Press, Canberra, 2014; P. Heller, *Who Will Pay? Coping with Aging Societies, Climate Change and Other Long-Term Fiscal Challenges*, IMF, Washington DC, 2003; A. Healy and N. Malhorta, 'Myopic Voters and Natural Disaster Policy', *American Political Science Review*, 103, 3 (2009), pp.387–406; M. MacKenzie, 'Future Publics: Democratic Systems and Long-Term Decisions', PhD thesis, University of British Columbia, Vancouver, 2013; D. Thompson, 'Democracy in Time: Popular Sovereignty and Temporal Representation', *Constellations*, 12, 2 (2005), pp.245–61; and D. Thompson, 'Representing Future Generations: Political Presentism and Democratic Trusteeship', *Critical Review of International Social and Political Philosophy*, 13, 1 (2010), pp.17–37.

8 Boston, *Safeguarding the Future.*

9 E. Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity*, United Nations University, Tokyo, 1989; P. Vanhuysse, *Intergenerational Justice in Aging Societies: A Cross-National Comparison of 29 OECD Countries*, Bertelsmann Stiftung, Gütersloh, 2013; S. Zuber, 'Measuring Intergenerational Fairness', in I. González-Ricoy and A. Gosseries (eds), *Institutions for Future Generations*, Oxford University Press, Oxford, 2017.

10 B. Nolan, 'What Use is "Social Investment"?', *Journal of European Social Policy*, 23, 5 (2013), pp.459–68.

11 Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016; B. English, 'Annual John Howard Lecture to Menzies Research Centre', Canberra, 25 June 2015; English, 'Speech to the Treasury Guest Lecture Series on Social Investment'; New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015.

12 See, for instance: Office of the Minister of Finance and Office of the Minister of State Services, *Implementing Social Investment*, paper for Cabinet Social Policy Committee, December 2015; Office of Minister of Finance and Office of the Minister of State Services, *Implementing Social Investment: Report-Back*, paper for Cabinet Social Policy Committee, March 2016; D. Edwards and E. Judd, 'Measuring Tomorrow's Outcomes Today: Adopting an Investment Approach within the Ministry of Social Development', paper presented at the New Zealand Society of Actuaries Biennial Conference, *Brave New World: Big Data, Longevity and ERM*, Dunedin, 2014; English, 'Annual John Howard Lecture to Menzies Research Centre'; English, 'Speech to the Treasury Guest Lecture Series on Social Investment'.

13 English, 'Annual John Howard Lecture to Menzies Research Centre'.

14 See, for instance: A. Greenfield et al., *Ministry of Social Development: Valuation of the Benefit System for Working-Age Adults as at 30 June 2014, Taylor Fry Pty Ltd, Sydney, 2015; Taylor Fry, Actuarial Advice of Feasi-*

bility: A Long-Term Investment Approach to Improving Employment, Social and Financial Outcomes from Welfare Benefits and Services, report to the Ministry of Social Development and Treasury, 27 October 2011; Taylor Fry, *Actuarial Valuation of the Benefit System: Technical Briefing*, 2012; H. Raubal and E. Judd, 2013 Benefit System Performance Report for the Year Ended 30 June 2013, Ministry of Social Development, Wellington, 2014; and H. Raubal and E. Judd, 2014 *Benefit System Performance Report for the Year Ended 30 June 2014*, Ministry of Social Development, Wellington, 2015.

15 S. Chapple, 'Forward Liability and Welfare Reform in New Zealand', Policy Quarterly, 9, 2 (2013), pp.56–62; C. James, 'Social Investment: Chance for a Mentality Shift', 2016, www.colinjames.co.nz/2016/03/07/investment-chance-for-a-mentality-shift (accessed 5 September 2017); B. Rosenberg, 'The "Investment Approach" Is Not an Investment Approach', *Policy Quarterly*, 11, 4 (2015), pp.34–41.

16 English, 'Annual John Howard Lecture to Menzies Research Centre'.

17 Ibid.

18 M. Adler and M. Fleurbaey (eds), *Oxford Handbook of Well-Being and Public Policy*, Oxford University Press, Oxford, 2016; G. Karacaoglu, *The New Zealand Treasury's Living Standards Framework: A Stylised Model*, Treasury, Wellington, 2015; G. Makhlouf, 'Growing our Economic Capital: Investing in Sustainable Improvement in Our Wellbeing', speech at Victoria University of Wellington, 3 November 2016.

19 Nolan, 'What Use is "Social Investment"?'.

20 B. English, 'Pre-Budget Speech', 3 May 2017.

21 Jacobs, *Governing for the Long Term.*

22 J. Elster, *Ulysses Unbound: Studies in Rationality, Precommitment, and Constraint*, Cambridge University Press, Cambridge, 2000; F. Kydland and E. Prescott, 'Rules Rather than Discretion: The Inconsistency of Optimal Plans', *Journal of Political Economy*, 85, 3 (1977), pp.473–92.

23 D. Kahneman, *Thinking, Fast and Slow*, Penguin, London, 2011; R. Thaler and C. Sunstein, *Nudge: Improving Decisions about Health, Wealth and Happiness*, Yale University Press, New Haven, 2008.

24 K. Workman, 'Back to Churchill: An Old Vision for Prisoner Reintegration', *Policy Quarterly*, 5, 2 (2009), pp.24–31.

25 English, 'Speech to the Treasury Guest Lecture Series on Social Investment'.

26 J. Broome, *Weighing Goods: Equality, Uncertainty, and Time*, Basil Blackwell, Oxford, 1995; J. Broome, *Climate Matters: Ethics in a Warming World*, W. W. Norton, New York, 2012; W. Nordhaus, *The Climate Casino: Risk, Uncertainty, and Economics for a Warming Planet*, Yale University Press, New Haven, 2013; N. Stern, *The Economics of Climate Change: The*

Stern Review, Cambridge University Press, Cambridge, 2006.
27 Treasury, *CBAx Tool User Guidance*, Treasury, Wellington, 2016.
28 N. Taleb, *The Black Swan: The Impact of the Highly Improbable*, Penguin, London, 2007.
29 Jacobs, *Governing for the Long Term.*
30 Kahneman, *Thinking, Fast and Slow.*
31 H. Courtney, J. Kirkland and P. Viguerie, 'Strategy Under Uncertainty', *Harvard Business Review* (November–December 1997), pp.67–79; R. Lempert and S. Popper, 'High-Performance Government in an Uncertain World', in R. Klitgaard and P. Light (eds), *High Performance Government: Structure, Leadership, and Incentives*, The RAND Corporation, Santa Monica, 2005; Nordhaus, The *Climate Casino;* G. Room, *Complexity, Institutions and Public Policy*, Edward Elgar, Cheltenham, 2011; Stern, *The Economics of Climate Change.*
32 H. Aaron, 'Presidential Address: Seeing Through the Fog: Policy-Making with Uncertain Forecasts', *Journal of Policy Analysis and Management*, 19, 2 (2000), pp.193–206; see also Amanda Wolf's chapter in this volume.
33 T. Hughes, 'Predictive Analytics for Policy and Practice: Reflections from the Criminal Justice System', *Policy Quarterly*, 11, 2 (2015), pp.37–44; E. Keddell, 'Substantiation Decision-Making and Risk Prediction in Child Protection Systems', Policy Quarterly, 12, 2 (2016), pp.46–56; see also Tim Hughes, Chapter 7, this volume.
34 Boston, *Governing for the Future.*
35 J. Boston and S. Chapple, *Child Poverty in New Zealand*, Bridget Williams Books, Wellington, 2014.
36 OECD, *Doing Better for Children*, Paris, 2009; OECD, *Doing Better for Families*, Paris, 2011.
37 Vanhuysse, *Intergenerational Justice in Aging Societies.*
38 Zuber, 'Measuring Intergenerational Fairness'.
39 O. Aziz et al., *The Distributional Impact of Population Ageing New Zealand*, New Zealand Treasury Working Paper 13/13, Wellington, July 2013.
40 Boston and Chapple, *Child Poverty in New Zealand.*
41 Boston, *Governing for the Future*; European Environment Agency, *Late Lessons from Early Warnings: Science, Precaution, Innovation*, Copenhagen, 2013; R. Olson, *Missing the Slow Train: How Gradual Change Undermines Public Policy and Collective Action*, Wilson Centre, Washington DC, 2016.
42 Boston, *Safeguarding the Future*; Jacobs, *Governing for the Long Term*; Olson, *Missing the Slow Train.*
43 H. Rittel and M. Webber, 'Dilemmas in a General Theory of Planning', *Policy Sciences*, 4 (1973), pp.155–69.

44 M. Berridge and L. Marriott, *Sugar, Rum and Tobacco: Taxes and Public Health in New Zealand*, Bridget Williams Books, Wellington, 2017; M. Colchero et al., ‘Beverage Purchases from Stores in Mexico Under the Excise Tax on Sugar Sweetened Beverages: Observational Study’, *British Medical Journal*, 352 (2016), h6704; Government Office for Science, T*ackling Obesities: Future Choices*, project report, Foresight Programme, Government Office for Science, London, 2007; F. Sassi, *Obesity and the Economics of Prevention: Fit not Fat*, OECD, Paris, 2010; B. Swinburne et al., ‘The Global Obesity Pandemic: Shaping by Global Drivers and Local Environments’, *The Lancet*, 378, 9793 (2011), pp.804–14; *Report of the Commission on Ending Childhood Obesity*, World Health Organization, Geneva, 2016.

45 Ministry of Health, *Annual Update of Key Results 2014/15: New Zealand Health Survey*, Wellington, 2015.

46 Sassi, *Obesity and the Economics of Prevention.*

47 Kydland and Prescott, ‘Rules Rather than Discretion’.

48 L. Evans and N. Quigley, *Intergenerational Contracts and Time Consistency: Implications for Policy Settings and Governance in the Social Welfare System*, New Zealand Treasury Working Paper 13/25, Wellington, December 2013; J. Hovi, D. Sprinz and A. Underdal, ‘Implementing Long-Term Climate Policy: Time Inconsistency, Domestic Politics, International Anarchy’, *Global Environmental Politics*, 9, 3 (2009), pp.20–39; R. Reeves, *Ulysses Goes to Washington: Political Myopia and Policy Commitment Devices*, Centre for Effective Public Management, Brookings Institution, Washington DC, 2015.

49 For details, see: ‘Better Public Services: Background Material’, State Services Commission, www.ssc.govt.nz/bps-background-material (accessed 5 September 2017).

50 S. St John, ‘Superannuation in the 1990s: Where Angels Fear to Tread?’, in J. Boston, P. Dalziel and S. St John (eds), *Redesigning the Welfare State in New Zealand: Problems, Policies, Prospects*, Oxford University Press, Auckland, 1999.

51 C. James, ‘Making Big Decisions for the Future’, *Policy Quarterly*, 9, 4 (2013), pp.21–28.

52 J. Mansbridge and C. Martin (eds), *Negotiating Agreements in Politics*, taskforce report, American Political Science Association, Washington DC, 2013.

53 Among the many challenges facing the design and implementation of certain kinds of social investment are those posed by the competing interests and perspectives of government departments and agencies. Where multiple agencies are expected to contribute to a cross-agency investment, each of the participants may be reluctant to ‘invest’ because they anticipate that they will not be able to capture a sufficiently large share of the benefits (however these might be perceived from a departmental perspective). In effect, they face a

collective action problem, with incentives to free ride.

54 Boston, *Governing for the Future*; S. Redburn, *Budgeting for Investment*, Discussion Paper 6, Economic Studies at Brookings, Brookings Institution, Washington DC, 2017.

55 Boston, *Governing for the Future*; Jacobs, *Governing for the Long Term.*

56 Boston, *Governing for the Future*; Boston, *Safeguarding the Future*; González-Ricoy and Gosseries (eds), *Institutions for Future Generations*. There is no suggestion that the presentist bias is totally pervasive, all-encompassing or inescapable. There are, after all, many examples of future-focused policy decisions designed primarily to protect long-term interests. In New Zealand, examples include the National Disaster Fund operated by EQC and the New Zealand Superannuation Fund. Likewise, throughout human history there have been examples of communities and nations making significant long-term investments, whether in the form of large architectural projects (such as the medieval cathedrals), major canal, road and railway networks, large-scale protective barriers (such as the Dutch system of dykes), and lengthy fortifications (such as the Great Wall of China).

57 Boston, *Governing for the Future.*

58 English, 'Annual John Howard Lecture to Menzies Research Centre'; English, 'Speech to the Treasury Guest Lecture Series on Social Investment'; English, 'Pre-Budget Speech'.

59 Boston and Chapple, *Child Poverty in New Zealand*; Expert Advisory Group on Solutions to Child Poverty, *Solutions to Child Poverty in New Zealand: Evidence for Action*, Children's Commissioner, Wellington, 2012.

60 L. Cook, 'Improving the Effectiveness of Social Services: The Challenge for Public Administration', unpublished paper, Wellington, 2017.

Chapter 5
Assessing the merits of early intervention

Sarah Hogan

INTRODUCTION

As thinking around the social investment approach has evolved in New Zealand, a heavy focus on early intervention has developed.1 From an intuitive perspective, early intervention is appealing. Even our language – 'nip it in the bud', 'an ounce of prevention is worth a pound of cure' – suggests that a preference for early intervention has been a part of our culture since long before anyone thought about social investment.

The health sector has grappled with early intervention and other approaches to prevention for centuries and, while some early intervention has been in place for decades, it is not the norm in the health sector. Early childhood interventions also have a place in the health sector, where they have been identified as cost-effective, consistent with Heckman's suggested rate of return on investment in human capital. But in developed countries, where the easy wins of prevention by vaccination, sanitation and maternity care have already been made, most health conditions are not subject to condition-specific prevention efforts in early childhood. The US Centres for Disease Control and Prevention (CDC) estimates that 75 per cent of health care spending is on people with chronic conditions.2

A high proportion of spending on secondary and tertiary prevention is expected due to the high cost of treating illness, especially for chronic conditions, and the difficulty of identifying during early childhood the population at risk of each chronic condition. To the extent that health practitioners practise primary prevention, it is mainly with patients who are already exhibiting risk factors for specific conditions.3

The experience of the health sector with prevention frameworks offers some valuable lessons for other sectors. This chapter describes the health sector approaches to prevention and their possible implications for social investment, including: a framework for types of prevention and intervention points; some considerations for moving prevention 'upstream'; the opportunities and challenges of intervening early in lives as opposed to early in the development of problems; and the risk of excessive intervention.

AN EARLY STORY OF INTERVENTION

Between 1831, when the first cases of cholera were reported in England, and 1854, tens of thousands of people in England died of cholera. John Snow, an obstetrician who was rapidly becoming well known for his development of the use of anaesthesia, took a particular interest in identifying the cause of cholera. The medical establishment at the time believed that it was an airborne disease. Snow's theory was that it was waterborne and that people were put at risk when drinking water contaminated by raw sewage. When he published his theory of the causes of cholera in 1849, Snow was dismissed by other medical professionals as plainly wrong.

In 1854 a major outbreak of cholera hit Soho, a suburb of London near Dr Snow's home. Snow immediately set out to prove that his theory of water contamination was correct and to identify the precise origin of the outbreak. He later wrote: 'Within 250 yards of the spot where Cambridge Street joins Broad Street there were upwards of 500 fatal attacks of cholera in 10 days … As soon as I became acquainted with the situation and extent of this irruption … of cholera, I suspected some contamination of the water of the much-frequented street-pump in Broad Street.'[4]

Knowing his peers would be reluctant to believe him without evidence, Snow collected information from hospitals, public records, victims, their families and neighbours to pinpoint the start of the outbreak and establish whether there was a connection to the Broad Street pump. Using a geographical grid of the area, with the pump at the centre, he charted every cholera death during the outbreak. This investigative work was pioneering medical research at the time. It showed that, apart from people who lived near the pump and used it to obtain drinking water, hundreds of cases of cholera could be tracked to nearby schools, restaurants, businesses and pubs.

To rule out other possible causes of the outbreak, Snow also investigated why others living in Soho at the time did not contract cholera. As he'd suspected, despite having been at risk of airborne contamination by living and working in close proximity of many who had fallen ill, those who remained healthy were distinguished from the ill by the fact that they had not been exposed to water from the Broad Street pump.

Snow's research was successful in persuading authorities to implement a simple, low-cost solution to prevent any further cholera cases in Soho: removing the pump handle. Sadly, Snow was unable to prove what had led to the contamination of the well in the first place, and authorities were reluctant to believe that city sewerage systems were to blame. It wasn't until Snow's conclusions were challenged by another researcher that the origin of the contamination was identified: a nappy, soiled by a baby ill with cholera from another water source, had washed into a leaky cesspool next to the pump. Although the lessons from this finding, along with Snow's research, took some time to be fully reflected in policy, they contributed to fundamental change in the thinking of both the medical establishment and city authorities about prevention of disease: it was now clear that costly cholera outbreaks could and should be prevented by improvements to sewerage systems and water sanitation.5

This use of data and information from the nineteenth century and subsequent measures to prevent further cholera outbreaks is an example of successful early intervention based on identification of risk factors. On a per person basis, the interventions to prevent further outbreaks were low-cost and very effective. This was particularly game-changing at a time when later intervention – the treatment of disease – was often ineffective, sometimes harmful and generally unaffordable to the poor.

APPROACHES TO PREVENTION IN THE HEALTH SECTOR

The recent focus on social investment has tended to treat early intervention as a novel idea that would never have been possible without big data. The Productivity Commission argued that government agencies have missed opportunities for early intervention for people with complex and interdependent needs, and similar issues were raised by the Expert Panel on Modernising Child, Youth and Family.6 But the health sector has a long history of early intervention, with the prevention of cholera since the nineteenth century being only one example.

Today, most interventions in the health sector can be thought of as prevention of some kind – preventing exposure, preventing disease or disability, preventing complications and adverse events, preventing pain, preventing premature death. These different types of prevention can be broadly categorised by three definitions widely used by health practitioners: primary, secondary and tertiary prevention. The sector also has a long history of seeking to prevent disease and disability as early as possible. This experience may provide some lessons for other sectors which have not focused on early intervention until much more recently. Importantly, prevention in health has not always involved early intervention, and the sector has developed a prevention framework which is helpful in thinking about the appropriate type and timing of prevention.

PRIMARY PREVENTION

Primary prevention involves intervening to eliminate or reduce the risk of disease in order to prevent it from occurring. This approach requires the identification of risk factors and interventions that remove the risk factor or minimise exposure to it, as in the case of John Snow's cholera research and subsequent actions to improve water sanitation. An obvious example of primary prevention today is population-wide vaccination,[7] whereby a highly effective but relatively inexpensive intervention is delivered to a population at risk of disease – in many cases the entire population, with early childhood being the best time to intervene, as exposure to risk can happen at any time and outcomes are worst in the very young and very old.

But many successful interventions that fit the definition of primary prevention in health rarely involve any contact at all between the target population and health practitioners: these interventions have included legislation and enforcement to restrict the use of hazardous materials (such as lead in paint or asbestos in building materials) or to ban unhealthy behaviours (such as smoking in the workplace). Similarly, requiring adherence to healthy practices (such as the use of helmets by motorbike riders) can be deemed successful primary prevention in health with little involvement from the health sector except in the identification of risks and outcomes and input to the institutional arrangements for regulation and enforcement. Instead of health practitioners implementing and delivering primary prevention, these interventions often involve the engagement of public health officials, the education system, the legal system and various levels of government.

Successful primary prevention in other sectors is likely to require a similar cross-sectoral approach. This point was made by the Chief Science Adviser, Sir Peter Gluckman, in a 2010 speech: 'One of the problems in New Zealand is that we think that educational research is only about education, health research is only about health, and social welfare is only about social welfare, yet of course all of these and other domains interact.'[8]

By definition, with health problems, a person only becomes a patient after becoming ill or at least after being exposed to risk. Health practitioners have had to think about how other sectors can intervene to help prevent a person from becoming a patient. The sector has harnessed the power of universal education as an opportunity for delivering vaccination programmes as well as ensuring that nutrition and physical activity are built into the curriculum. The justice sector will have similar challenges in handing over responsibility for delivering early intervention that ultimately prevents people from having unwanted interaction with the justice system. Whether this includes the education system, the health system or others, co-design and co-operation will be essential.

But most health interventions are not primary prevention. The vast majority consist of secondary and tertiary prevention.

SECONDARY PREVENTION

The objective of secondary prevention is to identify disease or injury in its early stages and treat it to prevent the development of complications or lasting disability. Successful interventions restore patients to full health, and further interventions may help to reduce the risk of recurrence. Examples include cancer screening programmes and interventions designed to accelerate access to cancer treatment, and the use of low-dose aspirin in patients who have already suffered heart attacks. General practitioners, practice nurses and pharmacists, as well as other health professionals such as dieticians and physiotherapists, are key players in secondary prevention.

TERTIARY PREVENTION

Tertiary prevention consists of rehabilitative interventions that treat a person whose disease has progressed to a point where they are already experiencing irreversible disability or complications. The intervention is designed to minimise the impact of ongoing illness or disability by helping the patient to manage long-term health conditions in a way that maximises their ability to engage in normal activities, enhances their quality of life, and prolongs their life expectancy. It is preventive in that it aims to prevent the worst impacts of disability and any further worsening of the condition. An example would be medication and counselling to help patients with epilepsy understand seizure triggers and manage their lives with ongoing seizures.

MOVING PREVENTION UPSTREAM: WHEN PRIMARY PREVENTION IS BEST

In the 1854 cholera outbreak, as with many health issues, the approach taken could have been primary, secondary or tertiary prevention. By preventing contamination of drinking water, authorities were engaging in primary prevention. Treating cholera-affected individuals in the very early stages of disease with exsanguination was (highly ineffective) secondary prevention. Today, cholera outbreaks are unheard of in developed countries, but if one were to occur, the options for secondary prevention are wider due to the availability of antibiotics and vaccines, and there are now options for tertiary prevention (such as renal dialysis for a cholera victim who has developed acute renal failure, a complication of cholera). With a wider range of options available, it is imperative that decision-makers know how to make the right choice.

The Ministry for Women has turned its focus on domestic violence towards primary prevention, acknowledging that 'while primary prevention is an emerging area of practice internationally, there is a growing consensus and evidence base that violence against women is predictable and preventable'.[9] Whereas in the past, efforts to prevent violence against women were focused on mitigating the impacts of violence and preventing reoffending and revictimisation, current strategies are going further than these secondary and tertiary prevention measures to include measures that have been shown to work on a primary prevention level. This is thought possible due to the availability of robust evidence that violence against women can be predicted. The strong evidence base for this social problem may be in part due to the involvement of health researchers and the World Health Organisation (WHO), which has published evidence on violence prevention because of the effects on physical and mental health.[10]

The WHO and other medical and public health bodies, like CDC, Public Health England and Britain's National Institute for Health and Care Excellence (NICE) have made significant contributions to the understanding of risk factors and disease epidemiology, by providing expertise and centralised assessment of evidence and publishing recommendations and guidelines in health care and public health. Because of these organisations, decision-makers have been well-informed on interventions that can successfully be moved 'upstream' to more primary prevention. In this way, the health sector is much closer than other parts of the social sector to systematised data and methods of research and analysis, as well as a systematised set of responses, including disease notification and surveillance.

CONDITIONS FOR PREVENTION TO BE COST-EFFECTIVE

Health and public health research and decision-making have traditionally been based on evaluations of interventions in terms of level of need, safety, effectiveness and cost-effectiveness. Cost-effectiveness allows interventions to be compared within a set of interventions with the same objective. For example, effectiveness of an intervention may be defined as the number of cases of fetal alcohol spectrum disorder (FASD) cases avoided, the number of inpatient days, or the number of life years saved.

More recently, the development of cost-utility analysis, where outcomes are measured in terms of broadly defined quality-of-life measures such as quality-adjusted life years (QALYs), which were developed in the 1970s,[11] has facilitated comparisons between interventions with different objectives.[12]

Whatever the method for estimating value for money, interventions that are considered successful primary prevention have been able to demonstrate:

- high effectiveness/utility relative to costs, taking into account the life-cycle of

interventions that can become less costly and more efficient over time as they are systematised and refined;
- low costs relative to the cost of the counterfactual (the problem or later interventions to address it);
- effective targeting to the population that needs it, based on a sound understanding of risk factors, or population-wide delivery when risk/prevalence is very high;
- a low rate of unintended harms or mechanisms for reducing unintended harms at low cost; and
- a moral or ethical imperative to prevent the counterfactual.

Of course, value for money is never the only consideration. Feasibility of implementation and delivery, affordability and ethical, legal and political concerns have all been important factors in decision-making, at times even outweighing value for money. For example, the US Advisory Committee for Immunisation Practices (ACIP), which provides policy recommendations on immunisation to CDC, based its policy recommendation on influenza vaccination on an expectation that universal vaccination would increase coverage in higher-risk groups, even though cost-effectiveness evidence was inconclusive.[13]

WHY IS PRIMARY PREVENTION NOT MORE COMMON IN HEALTH?

Although the social investment approach emphasises the return on investment that can be possible with early intervention, even the health sector with its long history of prevention and its well-established research community engages in relatively little primary prevention. This is true at least in terms of the amount of funding directed towards primary prevention: it is estimated that governments typically spend less than 3 per cent of health budgets on it.[14] There are two main reasons for this.

First, prevention is not always inexpensive, and even if it is in some contexts, it may not be in others. Water fluoridation is a good example. In a large urban area with modern reticulated water infrastructure, the cost of adding fluoride to the water is generally very low on a per-person basis. This is because the fixed cost of altering the system to allow fluoridation will be spread over a large population and the cost of the fluoride itself is negligible. In small communities with older water infrastructure, however, the fixed cost of making the system fluoridation-compatible can be even higher than for a large urban area, often requiring extensive upgrade of existing systems as well as any fluoride-specific add-on, and this cost will be spread over a much smaller population.

In many cases where primary prevention is low-cost, there was nevertheless a heavy upfront investment, such as in the development of vaccines, so an ability to foresee continued need along with a low *marginal* cost can allow some primary prevention to be successful. This is an example of where government intervention can contribute to moving prevention upstream by overcoming the consequences of imperfect capital markets, which tend to result in insufficient investment.15

Secondly, primary prevention is not always very effective. Again, fluoridation is a good example. In a large urban area, the vast majority of residents will be on reticulated water from the supply that is to be fluoridated. Also, residents probably have confidence in the quality of their tap water because it is delivered through modern, high-quality infrastructure and health concerns have been very rare. In addition, residents probably spend most of their time within the area, as they are likely to live, work and go to school there. This means that the fluoride added to the water is likely to reach the vast majority of the population and that individuals are likely to get enough fluoridated water to receive the envisaged health benefits. In a small rural community, on the other hand, many residents may have their own water supply, others may not drink their tap water due to concerns about safety, and many residents may spend large portions of the day working and going to school in other communities, thereby missing out on fluoridated water.

It is easy to see why fluoridation may be a cost-effective approach to improving oral health in large urban areas, but less so in small rural communities where the population is harder to reach and the intervention is costlier to implement.

But effectiveness requires more than being able to deliver an intervention: complex and interdependent risk factors can result in a wide range of effects for the same intervention.

The health sector has an advantage in understanding risk factors for many primary prevention interventions because medical research has a long history of robust science, clinical trials, publication of results and continual improvements to the understanding of genetics and disease epidemiology (thanks in part to the cholera epidemic described earlier) and successful delivery mechanisms. We are now able to identify disease risk with reasonable accuracy (although not always at low cost) where risk factors are purely medical. However, if early intervention requires an understanding of behavioural risk factors, even primary prevention in the health sector becomes a much less certain investment.

Again, the fluoridation example is useful in demonstrating how behavioural risk factors complicate intervention decisions. We know that lack of access to fluoridated water, inadequate teeth-brushing and consuming sugary drinks are all risk factors for poor oral health. However, even if we can be certain that fluoridated water will reach the vast majority of the population, we may know very little about the ways in which people will respond. Some populations may increase their intake of sugary drinks, believing that water fluoridation will protect them from poor oral health. Other populations may not increase their intake of sugary drinks, but may reduce other efforts to maintain good oral health – such as teeth-brushing, flossing or regular dental checks. Others may respond in different ways. Behavioural responses typically include numerous variations, adding to the difficulty of predicting responses.

BEHAVIOURAL RISK FACTORS

Behavioural risk factors are particularly challenging when there is a substantial time lag between the intervention and the outcome that is to be prevented, or where incidence is low, so that those who will ultimately experience the negative outcome tend to underestimate the risk of it happening to them. Even if the intervention and the set of behaviours in the population are compatible at the outset towards preventing the negative outcome, behaviours may change over time, reducing the effectiveness of the intervention.

Health practitioners recognise this fact, so health interventions that are heavily dependent on behavioural factors, especially behaviour modification, tend to be focused on specific populations at a more downstream point in disease progression – secondary prevention, rather than primary. Nutritional counselling for people with pre-diabetes is a good example. This is a costly intervention, as it requires ongoing support. To deliver it to a broad population would not be cost-effective if the negative outcome it aims to prevent is diabetes, since relatively few will develop diabetes and others may be many years away from that outcome. Even targeting those whose unhealthy eating habits suggest a high risk of diabetes in the future may waste limited resources on people who will change their behaviour independently. And gains from early intervention may be lost when other events change behaviours between the time of intervention and the time when the impact is expected to be observed.

EARLY INTERVENTION IN THE SOCIAL INVESTMENT FRAMEWORK

Despite the challenges of understanding and influencing human behaviour, increasingly there are calls for earlier intervention, not just in the development of disease or other negative outcomes but earlier *in people's lives*. Often, this will mean that intervention happens substantially earlier than the negative outcome it is intended to prevent. But the longer the time lag between intervention and outcome, the less clear the risk factors become and the more opportunities there are for interference from other influences. There may nevertheless be circumstances in which primary prevention can be effective even with a long time lag. Early childhood is now being increasingly recognised as a time when interventions that require long-term behaviour impacts can be most effective.

In public discussion about value for money in early childhood interventions, the Heckman curve or Heckman equation is often referred to, owing to interdisciplinary research on early intervention by James Heckman, a Nobel laureate economist, alongside developmental psychologists, sociologists, statisticians and neuroscientists. This growing body of research has found that: 'The highest rate of return in early childhood development comes from investing as early as possible, from birth through age five, in disadvantaged families. Starting at age three or four is too little too late, as it fails to recognize that skills beget skills in a complementary and dynamic way. Efforts should focus on the first years for the greatest efficiency and effectiveness. The best investment is in quality early childhood development from birth to five for disadvantaged children and their families.'16

Showing that even some well-established principles are not universally applicable, David Rea and Tony Burton found that the cost-effectiveness data on a number of programmes do not support Heckman's generalisation that intervention in early childhood is more efficient and effective.17 Clearly the need for evidence specific to each and every intervention cannot be ignored just because some general lessons have been learned about early intervention.

Prevention that starts in early childhood, or even in the womb, has been developed more recently than the traditional primary, secondary and tertiary approaches to prevention, as a result of increasing understanding of brain development from conception through to early childhood.18 The difference between these interventions and primary prevention is that primary prevention occurs before the onset of a disease, but not necessarily early in life. The social investment framework has a particular focus on early-in-life intervention, which is best described as 'primordial prevention' and 'primal prevention'.

PRIMAL AND PRIMORDIAL PREVENTION

Primordial prevention refers to interventions designed to prevent the development of risk factors early in life. For example, this type of prevention might include programmes designed to improve the diets of young children, such as breastfeeding support or restrictions on the contents of home-made lunches brought to early childhood centres. By improving children's diets, it is thought that not only will childhood obesity (a risk factor for adult obesity and a range of diseases) be prevented, but unhealthy eating habits and a palate accustomed to sugary, salty or fatty foods (also risk factors for adult obesity even without childhood obesity) can be prevented.

Primordial prevention is expected to be more effective than primary prevention at a later stage in life because the brain is thought to be at its most sensitive to environmental factors at this stage and habits formed in early childhood are more difficult to change later.

Primal prevention refers to the ‘primal period’, or the period from conception to 12 months of age, and is specifically concerned with the influence of parents on the developing brain and body. These interventions are designed to address harms done at very early stages of development which may have lasting negative consequences. Examples are programmes aimed at reducing consumption of alcohol during pregnancy, supplementation with folic acid during pregnancy to reduce neural tube defects, and identifying and addressing post-natal depression to ensure mother–newborn bonding.

Primal prevention relies heavily on educating parents and would-be parents about the impacts of their behaviours and choices on the long-term well-being of the child and on ensuring that adequate resources are available to provide the best start. Ideally, primal prevention measures promote parenting practices that provide an optimal physical and affective environment from conception to the first birthday. Primal prevention seeks to capitalise on the more sensitive early childhood period, in which it is thought interventions may be most effective, while acknowledging that caregiver behaviour may be the biggest risk factor. Of course, if changing adult behaviour is the key to capitalising on early childhood, interventions at this stage may be particularly challenging.

Not all interventions considered primal are primary. For example, primal and tertiary intervention intersect when parents receive counselling to help them bond with a child born with disabilities, or when they are educated in ways that help them support a disabled child to be more independent. But, by and large, the shift in focus toward primal and primordial intervention is about improving the success rate of primary prevention by moving it even further upstream to where intervention is not only early in the development of disease or another negative outcome but early in the development of the mind.

Fetal alcohol syndrome disorder, which went largely unrecognised until 1973, is a good example of this upstream change. A range of interventions is used: some are primal and at the same time include both primary and tertiary prevention measures. People born with FASD suffer from severe cognitive impairment, aggression and impulse control problems. As adolescents and adults, they are often diagnosed with clinical depression or other mental illness, have low educational achievement, exhibit a relatively high rate of criminal behaviour, are more likely to engage in inappropriate sexual behaviour, are more likely to be incarcerated or confined to psychiatric care, and have their own alcohol and drug problems. They also have a very short life expectancy and are more likely to die from suicide or violent assault.

Before 1973, with no recognition of the disorder, people with FASD received the same interventions as others with cognitive impairment or behavioural problems. Remedial education, psychiatric care and incarceration were essentially tertiary prevention measures aimed at reducing the impact of the disorder (including its impact on others). However, advances in the understanding of FASD risk factors have meant that there are now not only primal prevention measures designed to discourage consumption of alcohol by women who are or could be pregnant but also better designed tertiary interventions that address the early childhood environment of the child to improve long-term outcomes. Prevention of the negative impacts of FASD, therefore, has grown to encompass embryonic development and early childhood as well as adolescence and adulthood, when many of the most costly effects are observed.

Public health researchers have struggled at times to demonstrate the value of primal and primordial prevention because a strong evidence base for early-in-life interventions can be difficult to build. Such early interventions are subject to long time lags between the intervention and intended results, with complex and interdependent risk factors that change in importance over time. Research is also stymied by reliance on individuals' own reports of behaviour, as it is impossible to monitor every detail of a person's life over a long period. Even after many years of studying FASD, we still don't know what the safe level of alcohol intake is during pregnancy, because women's reported intakes may not be accurate. The longer the time lag, the more opportunity for external interference in the causal link between intervention and outcome, and the heavier the reliance on self-reported behaviours. With already complex problems that develop over years, it becomes particularly difficult to establish causality.

The long time lag and reliance on self-reported behaviours not only makes building evidence for the intervention difficult, it also makes identification of risk factors problematic. If the problem that needs to be prevented is not highly prevalent, cost-effectiveness requires targeting, but targeting is bound to be inaccurate when risk factors are not well understood, especially where the degree of risk is over-estimated. Ultimately, there may still be as much need for secondary and tertiary prevention.

The health sector has also learned that programme delivery is another challenging aspect of early interventions. Even vaccination programmes have to be designed carefully to achieve maximum coverage because take-up rates can be affected by messaging and delivery mechanisms (refrigeration, for example, is a major cause of vaccine failure).19 The WHO publishes a wide range of material to guide countries through developing national comprehensive multi-year strategic plans for routine immunisation to maximise efficiency according to best-practice evidence.20 But lifestyle modifications require even more complex delivery and ongoing patient interface. The effectiveness, and therefore cost-effectiveness, of these interventions can vary widely depending on how interventions are delivered and sustained.

Just as in the case of FASD, limited understanding of the root causes of both medical and societal problems often results in the use of secondary and tertiary prevention approaches. As scientific and psychological evidence has improved, there has been a shift in focus from those approaches to primary, primordial and primal interventions in the health sector. Other parts of the social sector are following suit, although not always with the evidence base that the health sector may have, and without a clear framework for determining the 'right' level of prevention. There is a motivation to move prevention upstream but no clear sense of how to get there. Of course, the health sector continues to maintain heavy investment in secondary and tertiary prevention, as these are largely considered to be essential parts of a preventive approach and are reflected in the Ministry of Health's new Health Strategy central theme in which New Zealanders not only live well and stay well but also *get* well. Cost-effective interventions for '*getting* well' are especially important where primary, primordial and primal prevention may not be successful or cost-effective. This is also likely to apply to other social sector issues.

In the health sector, the difficulty of identifying and understanding early risk factors has led to broad, population-wide approaches to primordial and primal prevention. In many cases, it would not be cost-effective to target specific health conditions in early childhood because identification of the risk of them occurring is not very effective. However, the sector has identified health promotion – encouraging healthy eating and regular physical activity – as a common intervention for diabetes, cardiovascular disease, many cancers and some mental illness, as well as other conditions; this may be cost-effective, if implemented population-wide at the primordial stage. The intervention may only make a small difference to each condition, but across the whole population, the impact is enough to justify the investment. It is also worth noting that population-wide health promotion continues beyond the primal and primordial stages because evidence that intervention in early childhood is cost-effective does not imply that continued intervention isn't required to *maintain* the effectiveness of the intervention.

Similarly, Jacobsen et al. cautioned that the portfolio of government investments to prevent negative outcomes in adults should not rely entirely on early childhood intervention, because the link between childhood experiences and adult outcomes lacks robust evidence of causality.21

COMBINED APPROACHES

The differences between the types of prevention are clear from a theoretical standpoint, but in practice there isn't always a clear distinction. Many prevention programmes encompass all approaches, and often they are mutually reinforcing. Definition of the problem to be addressed will sometimes mean that a particular health issue can be a seen risk factor, a disease or a complication. For example, diabetes can be seen as a risk factor for cardiovascular disease or as a disease, in which case obesity may be a risk factor. Seen differently, obesity may be the problem, with diabetes as a complication and unhealthy eating habits the risk factor. In the health sector, views of what is the problem versus what is a risk factor have changed as the epidemiology of disease has been better understood. What matters is not correct labelling of interventions as primary, secondary or tertiary prevention, but using the framework of the levels of prevention to find the best balance of interventions for a problem.

Fortunately, interventions concerning waterborne illness moved upstream to primary prevention in the nineteenth century and that level of prevention has been practised ever since. In rich countries, cholera outbreaks are now unheard of and vaccination programmes have all but eliminated many infectious diseases, such as polio and measles, so there is little need for anything but primary prevention. However, many other health conditions are addressed using a combination of all types of prevention described above. HIV/AIDS is a good example of this, where primary prevention delivered through both the health and education sectors complements the use of anti-retrovirals in the infected population.

Diabetes is an example of a common health condition where primary (including primal and primordial), secondary and tertiary prevention are all currently in practice: awareness of early childhood as a sensitive period in habit formation has led to efforts to increase breastfeeding and population-wide campaigns to encourage parents to minimise young children's sugar intake and limit availability of junk foods in schools. An understanding of risk factors, such as diet, obesity and genetics, allows nutritional and physical activity counselling to be used to prevent the onset of diabetes in some individuals and to minimise risk in high-risk individuals, such as those with a known family history of diabetes. Beyond primary prevention, early diagnosis of diabetes allows patients to access pharmaceutical treatments before complications develop, and foot care and management of renal decline allow the impact of complications to be minimised.

Few clinicians would argue that a combined approach to diabetes isn't the best strategy. Without secondary and tertiary prevention, too many patients would fall through the cracks due to poor targeting or changes in circumstances and behaviours. The rising prevalence of diabetes along with its connection to diet, however, raises important questions about prevention and whether more concentrated efforts should be made in early childhood.

A combined approach to preventing negative outcomes in adults is also favoured by Jacobsen et al., who argue that influencing adult outcomes is likely to require a range of interventions throughout the life-course, including both early and late interventions as insurance against the likelihood of both type I and type II errors,22 given the invisible nature of many risk factors and their uncertain links to long-term outcomes.23

VALUING INTERVENTIONS OVER A RANGE OF OUTCOMES

One challenge to demonstrating the value of early interventions in the health sector has been the traditional approach to research which looks at health conditions independently. Early childhood interventions to improve diet may not be cost-effective ways of preventing diabetes, but the prevention of diabetes is not likely to be the only outcome.

Just as medical specialists need to find ways of combining expertise to establish the full range of benefits of early interventions in children's diets, which could include diabetes, heart disease, oral health, even behaviour and educational attainment, governments wanting to take a social investment approach with a focus on early intervention are likely to be faced with the challenge of identifying benefits across all sectors – otherwise few early interventions will ever be able to demonstrate an acceptable value for money.

QUATERNARY PREVENTION: WHEN INTERVENTION REQUIRES ITS OWN PREVENTION

A final approach to prevention is relevant in health but also provides a valuable warning for social investment in early interventions. Quaternary prevention is concerned with preventing or reducing unnecessary, excessive and potentially harmful interventions, including diagnostic tests and monitoring.24 In discussions about the high rate of elective Caesarean births, or complications of cosmetic surgery, quaternary prevention is one of the issues.

In the health sector, it is defined as: 'Action taken to identify a patient or a population at risk of over-medicalisation, to protect them from invasive medical interventions, and provide them with care procedures which are ethically acceptable.'25 This definition reflects widespread recognition in the health sector that interventions are not always in the patient's best interests, that health practitioners can over-treat in the mistaken belief that they are helping, and that occasionally measures need to be taken to prevent intervention from occurring.

Excessive or unnecessary intervention may seem like a modern developed-country problem, but it has been an issue for as long as medical intervention has existed and is also common in developing countries. Patients were once 'bled' using dirty instruments and subsequently died of sepsis; children once had their tonsils and adenoids removed as a matter of routine, with many suffering pain and developing infections as a result; and, circumcision of male and female infants is widespread in many countries (male circumcision was recently widespread in New Zealand), despite being associated with a high complication rate. Though many of these interventions were based on the best medical knowledge of the time, they demonstrate that even the best-intentioned preventive intervention can cause more harm than good, especially when the full range of risks is not well understood.

Quaternary prevention is different from the other levels of prevention presented here, in that it is aimed at the provider of services rather than the person receiving them. It requires providers to consider potential harms, evaluate actions and self-monitor. Much unnecessary medical intervention takes place at the secondary prevention stage and is carried out by physicians keen to ensure patients are diagnosed early and go on to receive early treatment.

Some notions of primary, secondary and tertiary prevention and even primordial and primal prevention are beginning to make their way into broader social sector services (albeit without the conceptual formality found in the health sector). Quaternary prevention, on the other hand, has been largely ignored outside the health sector, with the possible exception of the justice sector, where it has been acknowledged that social investment approaches to reducing criminal offending and dependence on benefits have the potential to be excessive and even harmful by creating stigma and intrusion which may be counter-productive (see Chapter 7). But without a strong tradition of evidence-based intervention and ethical practice, there is a real risk that social sector interventions may go too far.

CONCLUSION

The health sector's experience with prevention provides some clear lessons for early intervention in the social investment framework. Wherever the intervention point, the basics of cost-effectiveness should not be ignored. All interventions to prevent negative outcomes must first demonstrate high cost-effectiveness, effective targeting if the problem is not widespread, and a low rate of unintended harms. But the health sector's ability to do this is the result of many decades of developing capacity to produce this kind of information. The social sector should be able to learn faster, as the pioneering work has been done, but it is still very much in the early stages, so even the most promising interventions will be relatively risky.

The cost-effectiveness of new health interventions in developed countries is low compared to what can be achieved in developing countries, as the easy wins from vaccination, sanitation and maternal care have already been achieved. It's important to remember that this is probably also true for the social sector, as these health interventions together with good nutrition, safety standards, social welfare and universal education form the package of easy wins for broader social sector outcomes. Further gains are likely to be achieved in the form of small improvements for the population as a whole or as larger gains for populations that are not getting as much benefit from existing interventions due to, say, lack of school readiness or poor nutrition.

Even if the social sector is forging ahead with primary, primal and primordial interventions, efforts to improve effectiveness should be maintained. A systematised approach to building an evidence base and generating policy-ready recommendations and guidelines would support consistency in decision-making and ensure that successful interventions are maintained and less successful ones are improved over time. Evidence is more than data about correlations. It needs to include an understanding of causal links and transmission mechanisms. Put simply, big data tells you where to look, but doesn't tell you what to do or what interventions are likely to be effective under particular conditions.26

Building an evidence base in the health sector has required the development of standards for research, including quality standards for data collection and analysis as well as guidance on study design and evaluation frameworks. These would be useful in the social sector, in particular with a mind to improving the relevance of research findings for policy decisions.

For social sector interventions, there is likely to be value in taking a broad approach to measuring outcomes and benefits, for example by developing better measures of well-being and understanding the relationship between child and adult well-being. In this way, a common reference point for outcomes would be available to facilitate comparison of different interventions for different groups in different areas, in the same way that QALYs have facilitated comparison of different health sector interventions. Better evidence of the relationship between well-being and other economically important outcomes such as employment, or societal value measures such as willingness-to-pay and societal willingness-to-pay, would allow outcomes of social sector interventions to be valued consistently.

If early childhood really is a unique opportunity for effective intervention, that increased effectiveness still needs to be considered against cost. Expectations regarding effectiveness of these early interventions also need to be realistic. Targeting is more difficult in early childhood due to the complex relationship between risk factors and outcomes. Resources are more likely to be wasted in early childhood interventions as circumstances and risk factors change, with people overcoming early exposure to risk even without intervention. Long time lags expose target populations to interference from other influences that may reverse the effects of interventions or be incompatible with ongoing interventions.

When the social sector does intervene, it does so with a workforce that is perhaps less rigorously trained than the health workforce. This may result in more variability in effectiveness, a factor that should be taken into consideration in programme design, which is likely in many cases to require specific training.

Many helpful lessons for the social sector emerge from the experience of the health sector with early intervention. Perhaps the most significant is that in the early days of the health sector, with a large number of providers and a lack of coordination or consistency as well as a weak understanding of risk, many early interventions failed or had limited success (such as efforts to prevent and treat cholera when it was thought to be an airborne disease) – but as robust approaches to using evidence (such as John Snow's research methods and later developments like the use of QALYs) expanded, all of those early experiences nevertheless provided valuable evidence.

Because of the complex nature of social problems, the early stage of development of evidence, and the multiplicity of agents and modes of intervention, the social sector must avoid reducing investment in secondary and tertiary prevention while it focuses on increased early intervention. The complexity of problems being tackled and the likely high rate of type I and type II errors in early intervention mean that many problems will still require significant later intervention. Primary prevention, especially of the primal and primordial types, is unlikely to be enough for any problem or any population. Targeting is most efficient at the secondary and tertiary prevention stages and these may be more cost-effective intervention points for some populations and some problems, preventing the worst outcomes. It is important also to remember that early intervention is not necessarily synonymous with early childhood intervention. Many problems can be cost-effectively prevented, often by waiting until risk factors become clearer and intervening when the target population can be better identified.

Finally, those promoting early intervention or other preventative approaches should keep in mind the danger of over-diagnosing, over-monitoring and over-intervening. If early childhood is a sensitive period, then it stands to reason that any unintended harms of intervention may also have a greater impact at that time.

References

Bentzen, Niels (ed.), *WONCA International Dictionary for General/Family Practice*, Wonca International Classification Committee, World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians, 2003

Ellsberg, M. et al., 'Intimate Partner Violence and Women's Physical and Mental Health in the WHO Multi-Country Study on Women's Health and Domestic Violence: An Observational Study', *The Lancet*, 371, 9619 (2008)

Expert Panel on Modernising Child Youth and Family, *Expert Panel Final Report: Investing in New Zealand's Children and their Families*, Ministry of Social Development, Wellington, April 2016

Fanshel, S. et al., 'A Health Status Index and Its Application to Health Services Outcomes', *Operations Research*, 18 (1970)

Gluckman, P., *Improving the Transition Reducing Social and Psychological Morbidity During Adolescence: A Report from the Prime Minister's Chief Science Advisor*, May 2011, www.pmcsa.org.nz/wp-content/uploads/Improving-the-Transition-report.pdf

(accessed 4 August 2017)

Gluckman, P., 'Medical, Life Sciences and Social Sciences Research: How They Should be Contributing to New Zealand's Development', speech at Auckland Medical Research Foundation, 6 May 2010, www.pmcsa.org.nz/wp-content/uploads/PDG-Speech-to-AMRF-6-May-20101.pdf (accessed on 4 August 2017)

Heckman, James J., 'Invest in Early Childhood Development: Reduce Deficits, Strengthen the Economy', The Heckman Equation, https://heckmanequation.org/resource/invest-in-early-childhood-development-reduce-deficits-strengthen-the-economy (accessed on 14 July 2017)

Hofmann, B., 'New Diagnostic Tests: More Harm than Good', *British Medical Journal*, 358 (2017)

Jacobsen, V. et al., *Investing in Well-being: An Analytical Framework*, New Zealand Treasury Working Paper 02/23, Wellington, December 2002

Jaffee, D. M., and F. Modigliani, 'A Theory and Test of Credit Rationing', *American Economic Review*, 59 (1969)

Lieu, T. et al., 'Cost-effectiveness of a Routine Varicella Vaccination Program for US Children', *Journal of the American Medical Association*, 271, 5 (1994)

Ministry for Women, *Current Thinking on Primary Prevention of Violence Against Women*, Wellington, October 2013

National Center for Chronic Disease Prevention and Health Promotion, *The Power of Prevention: Chronic Disease ... the Public Health Challenge of the 21st Century*, Centers for Disease Control and Prevention (CDC), 2009

National Institute for Health and Care Excellence (NICE), *Delivering Primary Prevention in Primary Care*, 2008, www.nice.org.uk/sharedlearning/delivering-primary-prevention-in-primary-care (accessed 7 August 2017)

Neumann, P. J. et al., 'Using Cost-Effectiveness Analysis in Health and Medicine: Experiences since the Original Panel', in P. J. Neumann et al. (eds), *Cost-Effectiveness in Health and Medicine*, 2nd edn, Oxford University Press, Oxford, 2016

New Zealand Productivity Commission, *More Effective Social Services*, August 2015, www.productivity.govt.nz/sites/default/files/social-services-final-report-main.pdf (accessed 8 August 2017)

Rea, D., and Tony Burton, 'Is the Heckman Curve Consistent with the Empirical Evidence on Program Returns by Age?', preliminary draft, 21 June 2017

Setia, S. et al., 'Frequency and Causes of Vaccine Wastage', *Vaccine*, 20, 7–8 (2002)

Torrance, G. W. et al., 'A Utility Maximization Model for Evaluation of Health Care Programs', *Health Services Research*, 7 (1972)

Tuthill, Kathleen, 'John Snow and the Broad Street Pump: On the Trail of an Epidemic', *Cricket*, 31, 3 (2003), www.ph.ucla.edu/epi/snow/snowcricketarticle.html (accessed on 14 July 2017)

Weinstein, M. C. et al., 'Foundations of Cost-effectiveness Analysis for Health and Medical Practices', *New England Journal of Medicine*, 296 (1977)

World Health Organization, *The Case for Investing in Public Health: A Public Health Summary Report for EPHO 8*, 2014

World Health Organization, *Comprehensive Multi-Year Planning (cMYP): A Tool and User Guide for cMYP Costing and Financing, Update 2014*, Department of Immunization, Vaccines and Biologicals, 2014

Notes

1 The author would like to express appreciation to Derek Gill and Cathy Scott for their input into the early thinking and to two external reviewers for their comments. The opinions expressed in this chapter are the sole responsibility of the author and do not reflect the views of the IGPS or NZIER.

2 National Center for Chronic Disease Prevention and Health Promotion, *The Power of Prevention: Chronic Disease ... the Public Health Challenge of the 21st Century*, Centers for Disease Control and Prevention (CDC), 2009.

3 National Institute for Health and Care Excellence (NICE), *Delivering Primary Prevention in Primary Care*, 2008, www.nice.org.uk/sharedlearning/delivering-primary-prevention-in-primary-care (accessed 7 August 2017).

4 Kathleen Tuthill, 'John Snow and the Broad Street Pump: On the Trail of an Epidemic', *Cricket*, 31, 3 (2003), pp.23–31, www.ph.ucla.edu/epi/snow/snowcricketarticle.html (accessed on 14 July 2017).

5 Around the same time, Florence Nightingale conducted ground-breaking research using data and records she had collected herself during the Crimean War. Her research paved a similar path to John Snow's in improving the sanitary design of hospitals to reduce infection rates amongst patients.

6 New Zealand Productivity Commission, *More Effective Social Services*, August 2015, www.productivity.govt.nz/sites/default/files/social-services-final-report-main.pdf (accessed 8 August 2017); Expert Panel on Modernising Child Youth and Family, *Expert Panel Final Report: Investing in New Zealand's Children and their Families*, Ministry of Social Development, Wellington, April 2016.

7 T. Lieu et al., 'Cost-effectiveness of a Routine Varicella Vaccination Program for US Children', *Journal of the American Medical Association*, 271, 5 (1994), pp.375–81.

8 P. Gluckman, 'Medical, Life Sciences and Social Sciences Research: How They Should be Contributing to New Zealand's Development', speech at Auckland Medical Research Foundation, 6 May 2010, www.pmcsa.org.nz/wp-content/uploads/PDG-Speech-to-AMRF-6-May-20101.pdf (accessed on 4 August 2017).

9 Ministry for Women, *Current Thinking on Primary Prevention of Violence Against Women*, Wellington, October 2013.

10 M. Ellsberg et al., 'Intimate Partner Violence and Women's Physical and Mental Health in the WHO Multi-Country Study on Women's Health and Domestic Violence: An Observational Study', *The Lancet*, 371, 9619 (2008), pp.1165–72.

11 S. Fanshel et al., 'A Health Status Index and Its Application to Health Services Outcomes', *Operations Research*, 18 (1970), pp.1021–66; G. W. Torrance et al., 'A Utility Maximization Model for Evaluation of Health Care Programs', *Health Services Research*, 7 (1972), pp.118–33; M. C. Weinstein

et al., ‘Foundations of Cost-effectiveness Analysis for Health and Medical Practices’, *New England Journal of Medicine*, 296 (1977), pp.716–21.

12 Weinstein et al., ‘QALYs: The Basics’, *Value in Health*, 12, Supplement 1, 2009, pp.S5–S9.

13 P. J. Neumann et al., ‘Using Cost-Effectiveness Analysis in Health and Medicine: Experiences since the Original Panel’, in P. J. Neumann et al. (eds), *Cost-Effectiveness in Health and Medicine*, 2nd edn, Oxford University Press, Oxford, 2016.

14 World Health Organization, *The Case for Investing in Public Health: A Public Health Summary Report for EPHO 8*, 2014.

15 D. M. Jaffee and F. Modigliani, ‘A Theory and Test of Credit Rationing’, *American Economic Review*, 59 (1969), pp.850–72.

16 James J. Heckman, ‘Invest in Early Childhood Development: Reduce Deficits, Strengthen the Economy’, The Heckman Equation, https://heckmanequation.org/resource/invest-in-early-childhood-development-reduce-deficits-strengthen-the-economy (accessed on 14 July 2017).

17 D. Rea and Tony Burton, ‘Is the Heckman Curve Consistent with the Empirical Evidence on Program Returns by Age?’, preliminary draft, 21 June 2017.

18 P. Gluckman, *Improving the Transition Reducing Social and Psychological Morbidity During Adolescence: A Report from the Prime Minister’s Chief Science Advisor*, May 2011, www.pmcsa.org.nz/wp-content/uploads/Improving-the-Transition-report.pdf (accessed 4 August 2017).

19 S. Setia et al., ‘Frequency and Causes of Vaccine Wastage’, *Vaccine*, 20, 7–8 (2002), pp.1148–56.

20 World Health Organization, *The Case for Investing in Public Health.*

21 V. Jacobsen et al., *Investing in Well-being: An Analytical Framework*, New Zealand Treasury Working Paper 02/23, Wellington, December 2002.

22 Type I and type II errors are statistical concepts that describe ‘false positives’ (where a problem or risk is identified even though it is not there) and ‘false negatives’ (where there is a failure to detect a problem or a risk that is actually there). These occur when the ‘test’ does not perfectly identify cases it is intended to identify. For example, means-testing may not identify all cases of material hardship and may identify material hardship where it does not exist due to an over-reliance on income poverty as a proxy for material hardship.

23 Jacobsen et al., *Investing in Well-being.*

24 B. Hofmann, ‘New Diagnostic Tests: More Harm than Good’, *British Medical Journal*, 358 (2017), j3314.

25 Adopted in 1999 and subsequently published in the WONCA (World Organisation of National Colleges, Academies and Academic Associations of

General Practitioners/Family Physicians) *Dictionary for General Practice/ Family Practice.*

26 See the related discussion in Chapter 6 on where to invest, what to invest in, and how to invest.

Chapter 6
Challenges for the public management system

Derek Gill

INTRODUCTION

In Chapter 2 Killian Destremau and Peter Wilson explore the concept of social investment and what is distinctive about the New Zealand approach.1 Their chapter identifies three distinct features:

1. **client segmentation** – using administrative data to identify groups and individuals with very specific needs
2. **intervention innovation** – tailoring interventions to better address the specific needs identified through client segmentation
3. **new mode of governance** – one that 'will generate the best possible information and ensure the state has enough information to justify taking risks in undertaking social investments'.

This chapter focuses primarily on the third of these pillars: the governance challenges raised by the client segmentation and the intervention innovation necessary for the full implementation of the social investment approach in New Zealand. It is organised around two research questions:

- What are the differences to date in the New Zealand public management system as a result of the introduction of the social investment approach?
- What needs to be changed in the New Zealand public management system for the social investment approach to be successful?

The chapter is concerned with the systems and the structures that shape the operation of agencies within the state sector. The focus is on the public management system itself rather than the individual agencies operating within the system.

The research looked for changes in the formal system to date, such as Cabinet Office circulars, system performance targets, refinement of Budget process design and new organisational forms as well as the behaviours of the central agencies (Treasury, State Services Commission, Department of Prime Minister and Cabinet) in order to give effect to the social investment approach.

In summary, I find that social investment is still in the initial phase of being rolled out. For example, an examination of the central agency websites elicited very limited material and no substantive research material or policy analysis exploring the concept and application of social investment in any detail. However, I did find some initial but potentially significant changes both within the formal public management system and in behaviours demonstrated by the central agencies to date. The creation of the Social Investment Unit in 2014, repositioned as the Social Investment Agency in 2017, along with the creation of a Minister Responsible for Social Investment, were significant starting steps.

The research then explored what might need to be changed in the public management system for the new approach to be successful. Achieving its full potential will require new capabilities and new ways of working. The precise attributes are still emerging, so the agencies at the centre of the system will need to experiment with new modes of governance and 'learn the way' forward. This will require adjustments in practitioner practices and the ways in which the formal public management system is applied to priority setting and analysis, organisational design, governance and accountability, monitoring and ensuring conformance. It will require the system to operate in multiple modes. The new modes will require giving up (the pretence of) control of outputs in order to achieve the outcomes sought from the successful operation of the social investment approach, including in some cases decentralising the locus of control.

The fundamental management challenge raised is a change management problem to enable new ways of working and governing to emerge.

BACKGROUND: CONTEXT, SCOPE AND FOCUS OF THIS CHAPTER

The National-led government in New Zealand, along with some counterparts in OECD countries in Europe, expressed a determination to take a *social investment approach* to social spending. But exactly what that meant – or what it could come to mean in the future – remains unclear. There is a lack of a shared understanding within the Wellington policy community about what the social investment approach New Zealand-style actually means. Deloitte and NZIER observed that 'Over the course of this research, and interviews with many stakeholders … we found there was no consensus on the definition of a social investment approach.'2

Dimension	In scope	Out of scope
Level	Formal public management system Public management system practices Required changes to	Agency level roles, systems and practices

	PMS	
Public management systems	Systems – budgeting, policy, accountability, organisational performance management, CE perf agreement and review etc.	Commissioning/contracting, data infrastructure (IDI, data exchange, SI analytical layer) Learning/evidence infrastructure
Public management instruments	Legislation, conventions, formal directions and guidance, strategic system levers, organisational forms	Individual agency strategies, rules and processes

Table 6.1: Defining scope. Source: The author.

DIFFERENCES MADE SO FAR TO THE PUBLIC MANAGEMENT SYSTEM

The analysis presented in this section is based on a review of the available public documents on the social investment approach on the central agency websites and semi-structured interviews with five staff at Treasury, along with staff at the Social Investment Unit and the State Services Commission.

The research looked for changes in the formal system – the legislation, conventions, written directions (such as Cabinet Office circulars), strategic system levers (system performance targets, Budget process design) and organisational forms. It also looked for examples of changes in the behaviours of the central agencies in order to give effect to the investment approach. In brief, while the approach extends/builds on the general thrust of the Better Public Services reforms (2011–13) to try to support more results/citizen-centric system governance, there were no direct changes in legislation or in conventions, no new Ministerial Groupings, no new Cabinet Office circulars nor changes in the systems for performance measurement. This is not altogether surprising, as the former National-led government adopted an incremental rollout and the approach has only been applied to two public agencies to date.

Instead there have been a handful of initial system changes that can be identified in structures and systems.

Structure

There were three main system-wide structural changes – the creation of the Social Investment Unit (SIU), which from July 2017 became the Social Investment Agency (SIA); piloting three place-based initiatives; and creating a Minister Responsible for Social Investment. In addition, there were a number of structural changes within individual agencies such as the establishment of Treasury's Analytics and Insights Team; repurposing Superu as a specialist evaluation agency;[3]

internal agency governance mechanisms such as the Treasury Investment Approach Programme Board; and inter-agency coordination mechanisms such as the Social Sector Board (which from July 2017 became the Social Investment Board).

The SIU was established in April 2016 with funding initially approved through to 2016–17. Its role was to develop the data infrastructure for social investment including tools such as data exchange, common data definitions, coding standards and a social investment analytical layer for other public agencies to use. This was an assist rather than assess role and the focus was on tools and analysis rather than translation into action on the ground.4

The SIA builds on the SIU's functions by adding three new roles:

- providing policy advice on cross-sector investment priorities for the government (where to invest);
- monitoring the progress of social investment across the social sector; and
- testing new approaches for targeted populations.

One of the pillars of the social investment approach is the development of innovative interventions for vulnerable populations. While the SIA data infrastructure is developing a set of tools, and now has a policy advice role on where to invest, a key gap discussed further below is that it is not clear where responsibility lies for developing the capability required to analyse and advise on what to invest in (intervention selection), and how to invest.

While the SIA could trial new approaches for targeted populations, it is not a commissioning agency (an issue discussed in the report of the Working Group on Accountability), so responsibility for directly contracting with NGOs remains with the individual public agencies. The SIA's role is advisory by demonstrating new approaches, and providing guidance on how to do better commissioning.

The new agency is hosted by the State Services Commission and reported first to the Minister Responsible for Social Investment (and since the change of government, to the Minister of Social Development). It also provides advice to the Social Investment Board (with an independent chair), which oversees progress with the social investment programme. The Institute for Government identified the role of a 'disruptive agent' and the 'creation of an institution' to lead the change as two of the critical factors required if long-term government policies are to stick.5 The SIA has a key role as change agent if the social investment approach is to have a sustained impact. This impact will require the mandate, resources, leadership and active support from the central agencies.

Political leadership is key to achieving sustained long-term political change.6 The Cabinet reshuffle in December 2016 led to the creation of the role of Minister Responsible for Social Investment. Following the change of government in October 2017, social investment was included under the Social Development portfolio with no separate ministerial responsibility. The new Prime Minister has indicated that the social investment programme will be reviewed. Hence, the implications for political commitment to social investment remain unclear.

There are three place-based initiatives under way with each region determining how their initiative will operate, the governance structure and what capability needs to be developed:

- the South Auckland Investment Board – an inter-agency group focused on 0–5-year-olds;
- the Tairawhiti Social Impact Collective, focused on hard-to-reach families;
- Kainga Ora (Northland), focused on 0–24-year-olds.

These new structures are still in their start-up phase but all appear to involve reasonably conventional governance structures that have been accommodated within the current machinery of government. This is interesting because the principles on which the initiatives are based include:

- supporting collective decision-making to improve service coordination and quality
- joint ownership of results and outcomes
- flexibility to fit services to local circumstances
- tight-loose-tight accountability:[7]
    - tight: clear outcomes set
    - loose: how they are achieved
    - tight: close monitoring and accountability for achieving results.

The tight-loose-tight approach to accountability is in marked contrast to the current dominant approach to public organisational performance management, which is based on 'outputs, compliance and control'.[8] We return to this when we discuss accountability in the later section, 'The operation of the accountability system'.

Systems

The main system change has been altering the Budget process to incorporate the social investment approach. This is important, as allocating dedicated sustained resourcing to support a function is one of the key factors identified by the Institute for Government in making long-term policies stick.[9]

The first tentative start was in the 2015 Budget, which included a Request for Information (essentially crowd-sourcing) on how the government could improve results for vulnerable children and their families. This resulted in a summary of the responses but no direct changes in the allocation of fiscal resources. The 2016 Budget included an investment panel – drawing particularly on science advisers – to provide an independent assessment of new initiative proposals. While the panel had an important signalling effect about the desire to improve the evidence base to support new initiatives, there was limited direct effect on the allocation of new resources. The 2017 Budget was more ambitious, building on the role of the panel and including a two-track process for new initiatives with a special fast track for social investment bids (that are outside the new initiative allocations). While 14 new social investment initiatives did get funding (with a total cost of $321 million), the overall Budget allocations reflect the traditional emphasis on health and education along with assistance for low-income earners.[10]

Standing back, budgeting performance can be evaluated at a number of levels:

- micro – resources targeted within existing programmes (e.g., matching clients to programmes based on the expected effectiveness);
- meso – portfolio-related resources allocated across a set of programmes within an agency;
- sectoral – resources allocated across vote agencies, and cross-portfolio, multi-dimensional investment strategies encouraged, especially for assisting citizens with complex and multiple needs;
- macro whole-of-government – tax/spending debt rebalanced.

The direct impact of the social investment approach has been confined to the micro and meso levels of budgeting within a handful of agencies such as the Ministry of Social Development (MSD). To date the rollout of the approach has had no material impact on the overall sector or allocations of overall Budget resources at the macro level. The focus has been on new initiatives – the marginal new resources apportioned during the Budget rounds. There has been no impact on baselines, on the mix of spending between department and departmental output expenses, or on changes in the performance reporting requirements.

That is not to imply that there has been no overall impact of the adjustment from the tinkering with the Budget process to incorporate the social investment approach. Innovations such as the investment panel, along with new tools like CBAx,[11] signal the need to raise the bar on the quality of Budget proposals by improving the evidence base to support new initiative proposals. Other initiatives like the Justice Sector Fund (which predates the government's endorsement of the social investment approach) provide working models of different ways of achieving sector-level reallocation. This is a long game and no doubt further refinement and experimentation will occur with the Budget process in future years.[12]

Assessment of systems and structures changes

The previous sections discussed how there have been limited adjustments to date to public management systems and structures to accommodate the social investment approach. On reflection, this finding is not altogether surprising. The rollout of the approach has been incremental[13] – the first major application starting with the Accident Compensation Corporation (ACC) in the 2000s, and it has been applied by MSD (formerly Work and Income) since 2012 (see Chapter 18 by Simon Chapple). The approach is being extended to other social policy domains, in particular the new Ministry for Vulnerable Children and social housing, and exploration is under way for its application to the justice, education and health sectors.14 Essentially, we are at the beginning of a policy change process which (to use the Institute for Government phrasing) is focused on 'rising salience' and 'putting in place the building blocks' – but 'embedding the change' has yet to occur. We turn in the next section to the implications for the public management system of systematic adoption of a social investment approach.

Dimension	Conventional approach emphasises:	Social investment approach will focus more on:
Focus of decision-making	Programmes supplied by public agencies or private providers	People-centred problem-solving
Locus of decision-making	Ministers or public agency	Devolved decision-making
Target group	Broad populations	People with complex needs, poor outcomes and associated high costs
Focus of analysis	Define problem(s) and select intervention(s)	Use data to identify target group
Commissioning	Outputs	Dynamically evolving outputs informed by outcomes
Interventions	Standardised solutions	Tailored heterogeneous solutions
Monitoring	Output delivery and standards conformance	Iterative framework including outputs and impacts
Learning	'Set and forget'	Iterative/recursive
Conformance	Contract escalation strategy	Joint problem-solving
Accountability	Vertical and hierarchical	Horizontal and mutual
Control	Approval through rules, policies and contracts coupled with internal and external audit	Approval of broad approaches to tailored heterogeneous solutions, ongoing professional checks

Table 6.2: Conventional and social investment ideal types compared. Source: The author.

WHAT NEEDS TO CHANGE?

Table 1.1 in Chapter 1 shows how the social investment approach in New Zealand is still evolving and morphing, so this discussion is necessarily speculative. Table 6.2 above highlights possible future directions,[15] rather than focusing on the current practice of the approach in MSD and ACC (model 1 in Table 1.1 of the introductory chapter).[16] The potential shape of the approach is contrasted with the stylised features of an ideal type of the current conventional approach to policy programmes in New Zealand.

Table 6.2 highlights how the shift in the focus from an ideal-type 'programme-centred' approach to a 'people-centred' one requires a shift in the mode of governance from a top-down hierarchical model to a more devolved and polycentric approach. That raises questions about whether the public management system can support these new ways of working.

At the outset, it is important to distinguish limitations specific to the New Zealand public management system, as opposed to constraints such as those imposed by the political authorising environment, and constraints faced by any conceivable public management system (for instance, organisational silos per se are not unique to the New Zealand public sector). In particular, there may be constraints regardless of the system in operation because of issues inherent in:

- politics, especially the authorising environment in Westminster democracies;
- individual people's limited and bounded rationality;
- public services' inherent characteristics, including limited comparability and measurability.

Enablers in the public management system

The system was founded on five mutually reinforcing principles: clarity of objectives, freedom to manage, accountability, effective assessment of performance, and adequate information.[17] While worded differently, these are very similar to the principles underpinning the place-based initiatives discussed earlier in the chapter. Several design features of the system support and enable long-term change programmes[18] such as the social investment approach, including:

- decentralised decision-making[19] – New Zealand has one of the most decentralised systems in the OECD, with high delegation of decision rights to the chief executives of individual public agencies;[20]
- shifting from input to output controls – which shifted the focus to management of capability and delivery of outputs linked to intended outcomes;
- range of organisational forms – New Zealand makes extensive use of arm's-length government and has a range of public legal structures that can be used to support new ways of working (the recent Better Public Services reforms re-

sulted in two more – departmental agencies and PFA companies);
- flexible budget format – appropriations for current expenses on real resources are organised using ministerial portfolios, departmental and non-departmental supply but with allowance for multi-category appropriations (MCAs) and multi-year appropriations; and
- performance reporting – organised around what was delivered and what it was intended to achieve but with very little prescription about how performance is to be reported.

While the design of the formal public management system is permissive, how the system actually operates is much more restrictive. So, we turn in the next section to a discussion of public management barriers.

Barriers in the public management system

At least three potential barriers can be identified: the focus on outputs, the policy system, and the way the formal accountability system operates.

Focusing on outputs rather than results

One of the enduring features of the formal New Zealand system in the nearly 30 years since the reforms in the late 1980s has been the emphasis on outputs as the basis for budgets, accountability and contracting. By contrast, outcomes, despite periodic attempts at reform, have proved much more elusive.21

Features of services suited to payment based on results
Clear overall objectives, capable of being translated into a defined set of measurable outcomes
Well-defined, measurable outcomes make transparent the extent of the provider's success
Clearly identifiable cohort/population
Ability to clearly attribute outcomes to provider interventions
Data available to set baseline (to enable an appropriate counterfactual to be constructed)
Failure can be tolerated
Providers exist who are prepared to take the contract at the price and risk
Providers are likely to respond to financial incentives

Table 6.3: Conditions for payment for results. Source: National Audit Office, Outcome-Based Payment Schemes: Government Use of Payments by Results, report by the Comptroller and Auditor General, 15 June 2015, p.17.

The Treasury website suggests that one of the tenets of the social investment approach is shifting the focus from inputs to results. Despite the rhetoric about contracting for results or outcomes, there is no new technology or silver bullet that helps address problems whose remedies have eluded reformers such as New Zealand and Australia since the introduction of output budgeting nearly 30 years ago.

Recent UK experience with attempts at outcome-based contracting in the social sector are instructive. One meta-study of social contracting concluded: 'Outcome-based contracts developed so far have, however, struggled to create incentives to achieve the desired outcomes. The findings indicate that while outcome-based contracts increase the measures of outcome for which they pay, these measures do not always reflect the intention of the contract designers, or desirable outcomes for the end-client. Measures of outcome that were not related to payment did not improve and *sometimes worsened.*'[22] In a similar vein the UK National Audit Office undertook a review of payment for results.[23] This study identified ten conditions required for payment by results to be successful (see Table 6.3), including defining measurable outcomes, ability to clearly attribute outcomes to interventions, and a relatively short gap between interventions and evidence of outcomes.

The features in Table 6.3 are extremely demanding conditions that are unlikely to be met for almost any social investment proposals. This highlights that the continued focus on outputs reflects inherent measurement problems rather than being constrained by the design of the public management system. For example, much of the mental health system is managed on the basis of inputs. This reflects the severity of measurement problems inherent in mental health services rather than a rigidity of public contracting or the public management system. Table 6.3 highlights how measurement and attribution problems will hamper the implementation of the social investment approach.

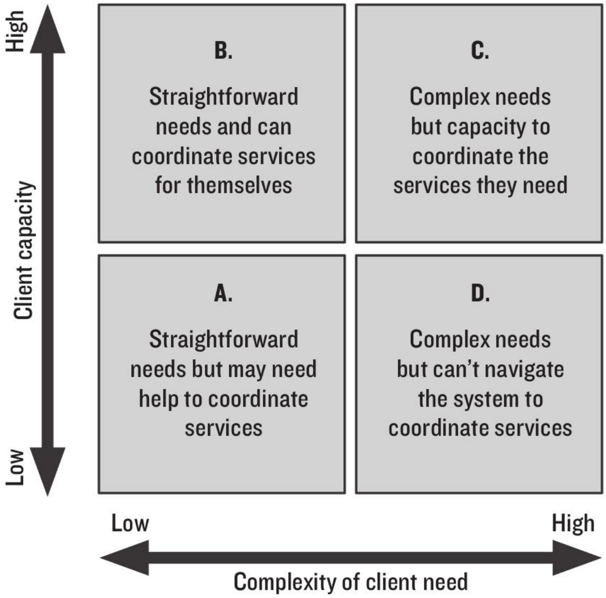


Figure 6.1: Social service clients. Source: Productivity Commission, More Effective Social Services, August 2015, Figure 0.1.

The operation of the policy system

While New Zealand's relatively high ranking on the human development index24 suggests that the welfare state deals tolerably effectively with most of the population through the traditional social programmes of providing universally for health, education and welfare (including retirement), there is now a set of social challenges which have not been adequately addressed through traditional mass delivery of standardised social services. The Productivity Commission in its recent report *More Effective Social Services* used the four quadrants in Figure 6.1 to highlight where traditional approaches to social service delivery are less effective.25 The report shows that while the bulk of people in quadrants A and B were able to get access to services, different ways of working are needed for some in quadrant C and particularly people in quadrant D (where complexity is high and agency is low). Quadrant D includes relatively few people but those with extremely high economic and social costs – the commission reports that the 10,000 highest-cost clients incur $500,000 per person or a cost over the life-course of $6.5 billion.26

Addressing the needs of the people in quadrant D requires developing interventions that will work at the individual level to overcome some pretty severe, often intergenerational, social pathologies. At a technical level the policy analysis must address three critical questions:

1. Where to invest?
2. What to invest in?
3. How to invest?

The analytical infrastructure, including client segmentation analysis, is intended to provide the tools to help identify 'where to invest'. What has been lacking to date has been an agency with the willingness, mandate, capability, resources and political backing to drive this analysis through into practical actions. The new SIA has been given the mandate to advise the government on where to invest but that leaves open the questions of what to invest in and how.

Understanding 'what to invest in' (intervention innovation) is less developed. This requires designing governance arrangements that enable the development of a greater understanding about what individual interventions will work. Local initiatives can assist with problems in quadrant A, like the fractures and falls initiative led by an alliance of providers sponsored by the ACC. However, local solutions are less likely to get traction on more complex problems (quadrant D) that will also require expert knowledge and judgment.

Addressing the 'how to invest' question requires a mindset change that allows the emergence of alternate governance structures operating in parallel with mainstream services. The new SIA is not a commissioning agency so responsibility for contracting with NGOs remains with the individual public agencies.

The governance of the social investment approach is a complex area, as there are lots of permutations and design choices: there is no gold standard, best practice or one best way. For example, governance of joint inter-agency working can be based on shared participant governance, a lead organisation or an external network administration organisation.27

It is not clear where responsibility lies for improving the commissioning of social services. The Productivity Commission report made a number of recommendations to the government around commissioning, purchasing and contracting, including the appointment of a lead commissioning agency. In its response to the recommendations, the government neither declined that recommendation (R6.10) nor acted to adopt it.28

The discussion above on principles on which the place-based initiatives were founded (including tight-loose-tight accountability) suggests that more experimental governance arrangements can emerge. Such arrangements need to consider issues at a number of levels:

1. choice of organisational form (macro);
2. design of governance arrangements (meso) that allow for accountability and control while devolving decision rights to lowest possible level; and
3. design of resources, positions and selection of staff (micro) that enables the

right people with sufficient discretion to make binding decisions.

There is nothing inherent in the rules of the policy game that precludes policy analysis on questions 1–3 from occurring. What is required is a change in how the game is played, as shown in Table 6.4.

	Conventional policy approach	Social investment approach
Focus starts with:	Problem definition, as the solution sets are shaped by the way the problem is framed	Identify target sub-population using data
Intervention selection	Top-down usually by ministers, informed by official advice based on selection criteria	Bottom-up devolved decision-making within a defined portfolio of options
Target group	Broad populations	People with complex needs, poor outcomes and associated high costs
Provider	Default is state sector agencies, although alternative providers may be an option considered	Select the organisation or network that will be given responsibility for dynamically evolving outputs to achieve improved end state

Table 6.4: Rules of the policy game for social investment. Source: The authors, based on D. Bouget, H. Frazer, E. Marlier, S. Sabato and B. Vanhercke, Social Investment in Europe, Publications Office of the European Union, Luxembourg, 2015. pp.6–8.

Changes in the ways policy analysis is undertaken to support the social investment approach, while necessary, are not sufficient on their own. In addition, strong senior political leadership will be required to sustain initiatives that cut across the boundaries of ministerial portfolios and public agencies' domains. Firm support will be needed from the central agencies to ensure the traditional hierarchical ways of working are not applied to the alternative governance structures. The risk is that hierarchal control will grind the reforms out of the system.

The operation of the accountability system

Strengthening accountability was one of the founding principles driving the New Zealand public management reforms, and formal accountability is hard-wired into the system. Figure 6.2 shows how the accountability system operates at two levels: the meta system, and how it is applied within individual organisations. The figure also distinguishes between the formal system (the rules of the game) and the real system that is in use (how the game is played).

Hitchiner and Gill discuss how at the system level the operation of accountability has moved from a harder-edged 'making the managers manage' approach in the early 1990s to a more permissive 'letting the manager manage' approach.29 The Better Public Services reforms (2011–13), while leaving the basic architecture intact, have overlaid a stronger emphasis on cross-agency processes.

Despite the shift at the system level, at the level of individual public agencies (quadrants 3 and 4 in Figure 6.2), the dominant operating model involves 'outputs compliance and control'.30 While the formal system (quadrants 1 and 2) has become more permissive, individual public agencies have recreated the iron cage of control (quadrant 3).

The focus of the dominant operating model on 'outputs compliance and control' reflects a number of factors including the nature of the authorising environment (discussed in more detail by John Yeabsley in Chapter 13) and the nature of their core business. Some aspects of the authorising environment such as the treatment of political risk are inherent and not amenable to change.

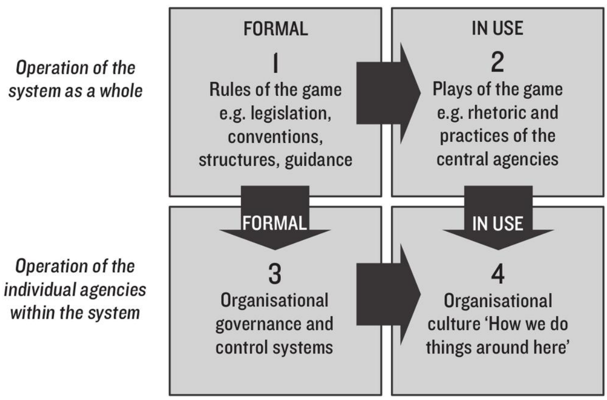


Figure 6.2: Elements of the accountability system. Source: The author.

It is important to explore the dominant mode of operating in public sector agencies. That mode is staff working within their individual organisations to deliver their core business services. That is not to say cross-agency working does not occur – indeed, some outstanding things are done31 – but this is an exception to the rule.32 There is a perennial risk that despite active political leadership, cross-agency co-operation will get buried by the strength of the traditional operating mode through vertical hierarchies.

Table 6.5 shows three different states of the world, each of which require different ways of working. Column 1 ('Known') is the world of standard operating procedures which is the standard default model for public sector organisations. Most public servants work in this way most of the time. These 'default' modes appear to most of them as the normal and natural way of conducting the business of the public sector. Column 2 ('Knowable') is a world of experts. Some public organisations predominantly work in this way and some do it some of the time. Column 3 ('Complex') is the world of networks in which staff work across organisational boundaries, joining up to try to address wicked problems.

The application of the social investment approach raises some difficult challenges for the default way of working (Column 1). Moving to a person-centred model rather than an agency service-centred model requires different ways of working – moving from Column 1 to a mix of columns 2 or 3. These different modes will in turn require different ways of exercising accountability.33 It is instructive, for example, that the local place-based initiatives explicitly adopted a tight-loose-tight accountability.

Alternative governance models such as experimental governance or collective impact have distinctive mechanisms for accountability, monitoring and ensuring conformance.34 The challenge for the system is to enable the move to multiple modes of operating with different styles of governance for different tasks.

Known	Knowable	Complex
Following a recipe	Sending a rocket to the moon	Breaking the cycle of disadvantage
Recipes are tested	Formulae are critical	Formulae are useful but limited
Recipes produce standard results	Expertise in specialised field	Expertise is needed but not sufficient
Similar results every time	Rockets are similar in critical ways	Each situation is unique
Cause and effect is predicatable	Cause and effect separate in time	Cause and effect clear only in retrospect

Table 6.5: Different modes for different states of the world. Source: Brenda Zimmerman, Schulich School of Business, York University. Cited by Tamarack Institute, Exploring the Collective Impact Opportunity, 2015, p.5.

The problem is not that the system's formal design does not permit these different styles of governance. Rather, the challenge is one of mental models. Staff working in the current system rely heavily on a default range of practices. These practices are efficient in the sense that they have served the organisation well in the past and helped to protect it from challenges from the authorising environment. The public management system (quadrants 1 and 2 in Figure 6.2) can accommodate different ways of working, including cross-agency work when it is required. The challenge will come for the central agencies to support and champion alternative ways of working and guide individual agencies to unlock the iron cage of control (quadrant 3) and adopt a wider range of default practices (quadrant 4).

We turn now to a discussion of the change management challenges raised by how the public management system operates at the individual agency level.

Change management

Embedding the social investment approach, like any long-term policy change, is a long march. It will require the government to identify which clients to focus on and to experiment with different approaches to address previously unmet needs. It will call for different programme offerings and require public agencies to govern differently by working alongside service providers and communities. It will require investment in resources now, with long lags before demonstrable improvements in social outcomes can be identified. These big technical challenges are discussed further in Chapter 9.

In additional to these technical challenges, there are the standard organisational change problems that can block or derail any new programme. Patch protection, resistance to changing standard operating procedures, risk aversion and reluctance to reallocate budgets can all occur in organisations in both the public and private sectors. One of the striking findings from the research for this chapter was the lack of progress in conceptualising and operationalising the social investment approach, despite having a senior minister as champion and advocate for more than a decade.

The Institute for Government identifies a number of risk factors that contribute to the failure of long-term government policy programmes:35

- government changes leading to shifts in priorities
- ministerial turnover leading to a loss of political leadership
- underpowered bureaucratic leadership
- restructuring of the lead agency
- resource diversion and reprioritisation
- shifting goals with competing priorities taking precedence.

The study identified three distinct phases for long-term change programmes: ‘raising salience’, ‘building blocks’ and ‘embedding’, with different critical success factors for each phase. Applying those criteria to the social investment approach, a number of the critical success factors are in place for the raising salience and building blocks phases:

- a personal comment from a senior political figure
- an issue that can be used for party strategic positioning
- creating an institution charged with performing the activities required
- pre-existing institutions that are not seen as fit for purpose
- dedicated resources for the function.

However, some key factors are missing:

- the creation of a baseline by which future progress can be judged
- putting in place principles or a framework that governs future work
- an active effort to learn from previous attempts to solve the problem.

Looking ahead, we are still some way away from facing the Phase 3 embedding phase 'where an issue has risen up the agenda, the government has established a framework for responding, and the level of political energy and attention frequently dissipates'.36

Having a political champion to sponsor the change is critical for the success of long-term policies but without sustained leadership from the bureaucracy, change cannot be successively embedded. Social investment is still in the initial phase of being rolled out and this is reflected in the limited nature of the changes to date and the lack of substantive research material or policy analysis available from the central agencies on how to apply the approach. Central agencies along with the SIA have a key role in influencing how the game is played (quadrant 2 in Figure 6.2), which in turn will enable change to be driven in quadrant 4. This role extends beyond influencing to include leading the analysis on the key questions listed earlier. To date there has been no detailed focus on these questions.

CONCLUSION

The foundation chapter for this book identified three distinct pillars of the social investment approach: client segmentation, innovation in intervention and governance.37 The first, using data to segment the targets, is the most advanced: we know with some granularity that there are groups of people with certain characteristics in certain areas, and in many cases an agency will know who they are at the individual level.

The middle pillar – intervention innovation – is the least developed. This requires developing interventions that will work at the individual level to overcome social pathologies. While the SIA data infrastructure and analytical layers are developing a set of tools, the system currently lacks the capability to address the 'what to invest in (intervention selection)' and 'how to invest' 'questions.

For the third pillar – governance – the public management system already has most of the flexibility and tools required to enable the social investment approach to be rolled out. What is needed is the sustained commitment to use these tools to full effect. Making progress on intervention innovation will depend on addressing how social investment is governed. The public management system will have to operate in multiple modes that require giving up (the pretence of) control of outputs in order to achieve the outcomes sought, and in some cases decentralising the locus of control.

This chapter has not identified any limitations inherent in the design of the formal public management system to the rollout of the social investment approach. Some of the constraints – such as the holy grail of contracting for outcomes – are inherent in social services. Other constraints – the authorising environment being hostile to experimentation – are inherent in the political system.

The main barriers relate to 'how' the formal system is operated rather than 'what' the formal design requires. Fundamentally embedding the new approach is a change management challenge to break down the iron cage of control and enable new ways of working and governing to emerge. Using the Institute for Government framework, social investment is still in the 'rising salience' phase, with the 'building blocks' starting to be put in place and 'embedding change' yet to occur.38 The extent of this challenge needs emphasis. Despite have a senior minister as champion and advocate for the new approach for more than a decade, one of the striking research findings was the lack of progress in conceptualising and operationalising the social investment approach. Embedding it will require continued commitment from the political leadership, more sustained and focused bureaucratic leadership, and resources to invest in new and enhanced technical capabilities. But central government cannot to do this on its own. Buy-in and support from the private service providers and local communities are required to co-produce the changes desired.

References

Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016

Destremau, Killian, and Peter Wilson, *Defining Social Investment, Kiwi-style*, New Zealand Institute for Economic Research Working Paper 2016/5, NZIER, Wellington, 2016

Eppel, E., D. Gill, M. Lips and B. Ryan, *Better Connected Services for Kiwis*, Institute of Policy Studies, Wellington, 2008

Gill, Derek, 'Managing for Performance in New Zealand: The Search for the Holy Grail?', in *Holy Grail or Achievable Quest: International Perspectives on Public Sector Performance Management*, KPMG International, 2008

Gill, Derek, 'Breaking Open the Iron Cage: Improving the Performance of State Sector Organisations', in Derek Gill (ed.), *The Iron Cage Recreated: The Performance Management of State Organisation in New Zealand*, Institute of Policy Studies, Wellington, 2011

Gill, Derek, L. Kengmana and R. Laking, 'Information that Managers Use: Results from the Managing for Organisational Performance survey', in Derek Gill (ed.), *The Iron Cage Recreated: The Performance Management of State Organisation in New Zealand*, Institute of Policy Studies, Wellington, 2011

Hitchiner, Susan and Derek Gill, 'The Formal System as Designed' , in Derek Gill (ed.), *The Iron Cage Recreated: The Performance Management of State Organisation in*

New Zealand, Institute of Policy Studies, Wellington, 2011

Ilott, Oliver, Joe Randall, Alex Bleasdale and Emma Norris, *Making Policy Stick: Tackling Long-Term Challenges in Government*, Institute for Government, London, 2016

Kania, J., and Mark Kramer, 'Collective Impact', *Stanford Social Innovation Review* (Winter 2011)

National Audit Office, *Outcome-Based Payment Schemes: Government Use of Payment by Results*, report by the Comptroller and Auditor General, ordered by the House of Commons, London, 15 June 2015

New Zealand Government, *Better Public Services Advisory Group Report*, 2011

New Zealand Government, *Government Response to the Productivity Commission Report on More Effective Social Services*, May 2017, www.treasury.govt.nz/statesector/nzpcsocser (accessed 5 September 2017)

New Zealand Productivity Commission, 'Social Services', presentation to the New Zealand Economists Association Conference, 2015

New Zealand Productivity Commission, *More Effective Social Services*, final report, August 2015

Sabel, Charles, and Jonathan Zeitlin, 'Experimentalist Governance', in David Levi-Faur (ed.), *The Oxford Handbook of Governance*, Oxford University Press, Oxford, 2011

Scott, G. et al., 'Governance and Accountability in Social Investment', report prepared by the Social Investment Working Group to respond and build on the proposals from Matt Burgess and Denise Cosgrove, November 2016

Tomkinson, Emma, 'Outcome-Based Contracting for Human Services', *Evidence Base*, 1, (2016)

Treasury, *The Benefits of Improved Social Sector Performance*, background paper for He Tirohanga Mokopuna: 2016 Statement on the Long-Term Fiscal Position, Wellington, November 2016

Treasury, 'Copies of the Cosgrove/Burgess Report and Related Documents', 18 May 2017, www.treasury.govt.nz/downloads/pdfs/oia/oia-20170071.pdf (accessed 5 September 2017)

Notes

1 I would like to express appreciation to staff at Treasury, the Social Investment Unit and the State Services Commission for making their time available to assist with this project. The opinions expressed in this chapter are the sole responsibility of the author and do not reflect the views of the IGPS or NZIER.

2 Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016, p.15.

3 Superu is the trading name for Families Commission, which was repurposed in 2014 to focus as a specialist evaluation agency across the social sector. Decisions on the future of Superu are being prepared for Cabinet as this chapter was being finalised.

4 See Simon Wakeman and Diane Garrett in this volume for a longer discus-

sion of the capabilities required to implement the social investment approach including data architectures and infrastructure, analytics and insights, investment advice, evaluation and learning.

5 Oliver Ilott et al., *Making Policy Stick: Tackling Long-Term Challenges in Government*, Institute for Government, London, 2016, p.13. Apart from resourcing, which we discuss next, three other building blocks were identified:
1) the creation of a baseline by which future progress can be judged;
2) putting in place principles or framework that governs future work;
3) an active effort to learn from previous attempts to solve the problem.

6 Ilott et al., *Making Policy Stick*, p.9.

7 Social Investment Unit, 'Fact Sheet 2016: Place-Based Approach', https://siu.govt.nz/assets/Uploads/Place-based-approach.pdf

8 Derek Gill, 'Breaking Open the Iron Cage: Improving the Performance of State Sector Organisations', in Derek Gill (ed.), *The Iron Cage Recreated: The Performance Management of State Organisation in New Zealand*, Institute of Policy Studies, Wellington, 2011, p.404.

9 Ilott et al., *Making Policy Stick.*

10 'Budget 2017 Analysis of Real Per Person Spending Shows Real Winners and Losers', press release, Victoria University of Wellington, www.victoria.ac.nz/news/2017/05/budget-2017-analysis-of-real-per-person-spending-shows-real-winners-and-loser (accessed 5 September 2017).

11 CBAx is a decision support tool to help agencies monetise impact and calculate return on spending: 'The Treasury's CBAx Tool', Treasury, 1 September 2017, www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis/cbax (accessed 5 September 2017).

12 The '2016 Long-Term Fiscal Position', Treasury's 40-year fiscal projections, included for the first time an analysis of social investment as a background paper. The scenarios suggested that the fiscal impact could be of a similar order of magnitude to increasing the age of entitlement for New Zealand superannuation by two years.

13 Dating the origins of the SIA is problematic: one reviewer has noted that New Zealand-style social investment is a kind of movement rather than a unique, clearly defined policy initiative.

14 See Warren Young's discussion of the SIA in the justice sector (Chapter 14) and Gary Hawke for the education sector (Chapter 15).

15 Drawn in part from Charles Sabel and Jonathan Zeitlin, 'Experimentalist Governance', in David Levi-Faur (ed.), *The Oxford Handbook of Governance*, Oxford University Press, Oxford, 2011.

16 Table 1.1 in Chapter 1 contrasts Model 1 of social investment as applied to social welfare, with Model 2 the approach emerging in 2015.

17 Hitchiner and Gill, in Gill (ed.), *The Iron Cage Recreated*, p.47.

18 To illustrate this enabling design, Eppel et al. discuss seven case studies of

inter-agency workings, which operate, with varying degree of ease, within the existing public management system: E. Eppel, D. Gill, M. Lips and B. Ryan, *Better Connected Services for Kiwis*, Institute of Policy Studies, Wellington, 2008.

19 Somewhat paradoxically New Zealand is the most centralised jurisdiction in the OECD in the sense of the wide range of function undertaken by central government relative to local government. Simultaneously it is also the most decentralised in the sense of the range of decision rights that have been delegated to individual public agencies.

20 The section of this chapter, 'The operation of the accountability system', discusses how this decentralisation generally does not then flow down within the individual agencies themselves.

21 For a discussion of New Zealand's search for the 'holy grail' of outcome-based budget management, see Derek Gill, 'Managing for Performance in New Zealand: The Search for the *Holy* Grail?', in Holy *Grail or Achievable Quest: International Perspectives on Public Sector Performance Management*, KPMG International, 2008. The amendments to the Public Finance Act in 2011, which removed the statutory prescriptions for outcome reporting, can be interpreted as the abandonment of outcome-based budgeting in New Zealand.

22 Emma Tomkinson, 'Outcome-Based Contracting for Human Services', *Evidence Base*, 1, (2016), p.1, emphasis added.

23 National Audit Office, *Outcome-Based Payment Schemes: Government Use of Payment by Results*, report by the Comptroller and Auditor General, ordered by the House of Commons, London, 15 June 2015, p.17.

24 13th on the HDI in 2015: 'Human Development Indicators', United Nations Development Programme, Human Development Reports, http://hdr.undp.org/en/countries/profiles/NZL (accessed 5 September 2017).

25 New Zealand Productivity Commission, *More Effective Social Services*, final report, August 2015, Fig.0.1.

26 New Zealand Productivity Commission, 'Social Services', presentation to the New Zealand Economists Association Conference, 2015.

27 An example of an external network administration organisation is ICANN, which coordinates maintenance of the databases of name-spaces for the internet.

28 New Zealand Government, *Government Responses to Recommendations from the Productivity Commission on More Effective Social Services*, May 2017, www.treasury.govt.nz/statesector/nzpcsocser/rec-response-nzpc-may17.pdf (accessed 5 September 2017).

29 In Gill (ed.), *The Iron Cage Recreated*, Part 2.

30 Gill, 'Breaking Open the Iron Cage', p.404.

31 For work on New Zealand, see Eppel et al., *Better Connected Services for*

Kiwis, 2008.

32 Empirical work (Gill, Kengmana and Laking, in Gill (ed.), *The Iron Cage Recreated*, p.397) showed that the dominant activities in state sector organisations were direct delivery of services to the public or delivery of regulatory enforcement function. Inter-agency work was more akin to policy advice to ministers, a small but still significant activity.

33 For an alternative critique of why a top-down vertical model of accountability would not be effective for the social investment approach, see G. Scott et al., 'Governance and Accountability in Social Investment', report prepared by the Social Investment Working Group to respond and build on the proposals from Matt Burgess and Denise Cosgrove, November 2016.

34 Sabel and Zeitlin, 'Experimentalist Governance'; J. Kania and Mark Kramer, 'Collective Impact', *Stanford Social Innovation Review* (Winter 2011).

35 Ilott et al., *Making Policy Stick*, p.9.

36 Ibid., p.13.

37 Killian Destremau and Peter Wilson, *Defining Social Investment, Kiwi-style*, New Zealand Institute for Economic Research Working Paper 2016/5, NZIER, Wellington, 2016.

38 Ilott et al., *Making Policy Stick.*

Part 2

The Design and Application of the Social Investment Approach

Chapter 7
Prediction and social investment

Tim Hughes

INTRODUCTION

Aggregate and individual predictions

As discussed by Jonathan Boston in Chapter 4, social investment involves a temporal gap between the initial investment and the future returns.1 At the point of investment, the investor is faced with the need to predict those returns. For example, when considering an opportunity to invest in parenting programmes for families of young children on the basis that this will improve later educational achievement and tax returns, an investor would want to predict the likelihood that these returns will be realised.

Investment decisions can be considered at the level of a programme, service or policy, and also at the level of an individual person. For example, a policy person might consider in a general way whether increasing funding for a particular parenting programme is likely to improve outcomes. Should this programme be funded, frontline practitioners then need to decide in each case whether to refer specific families to it. This is also a predictive task, as the person referring the family is predicting that their circumstances will be improved, or at least not worsened, through participation in the programme.

Professional judgment versus predictive risk modelling

Predictions can be made in different ways. A useful distinction is between professional judgment and predictive risk modelling. Professional judgment is exercised by experts in the field, supported by experience, training and guidelines, using whatever information is available and deemed relevant. For example, when a school principal decides to suspend a student, they will do so in part based on their own assessment of the likelihood of the student harming themselves or others if allowed to stay in school.

Predictive risk modelling, in contrast, is ‘an automated algorithm which harvests data from a variety of sources’.2 For example, each offender managed by the Department of Corrections has an automatically generated risk score known as RoC*RoI that represents their estimated probability of being reimprisoned for a new offence, based on characteristics such as their age, offence type and number of previous offences.3 The information used in a predictive risk model may or may not be known by those subsequently using the model.

A predictive risk model does not necessarily dictate what course of action ought to be taken. In a social context, its results will usually be considered by a human decision-maker alongside other factors unrelated to the prediction.

Use of professional judgment and predictive risk modelling prior to social investment

Risk prediction was already widespread across government before social investment. At an aggregate level, most policy and funding decisions are supported by implicit predictions by policy advisers and others that the proposed policy or investment will resolve some problem. At an individual level, many decisions that government officials make about people are based on predictions about future behaviour. As noted in Table 7.1, there are many coercive state powers that may be exercised only where justified on the basis of assessed risk, across the areas of health, justice, education and welfare.

In some cases these predictions are supported by predictive risk models, such as with the RoC*RoI tool. In other cases they are made by professional judgment, such as when judges decide whether to remand or grant bail to a person accused of a crime.

Many of the considerations relating to predictive risk modelling apply equally to professional judgment. And when considering the merits of predictive risk modelling, the counterfactual in many cases will be the status quo of risk assessment based on professional judgment.

Expanding use of predictive risk modelling as part of social investment

Social investment is leading to greater use of prediction in general, as well as predictive risk modelling specifically. Prediction is being used to support investment decisions at both an aggregate and individual level, under the assumption that this will improve general and individual well-being, and reduce fiscal cost.

For example, the investment approach to welfare uses an actuarial model to identify high-liability groups of clients for investment in at an aggregate level, such as through funding of an intensive case management service. The same model is also used to support the referral of specific individuals to that service.

Similar models have been built or are being built for Social Housing, Justice and Oranga Tamariki.

Organisation of this chapter

This chapter is organised around the theme of predictive accuracy. Where predictions are mandated (such as in the examples from Table 7.1) or recommended (as by ministers with social investment), there is an assumption that sufficiently accurate prediction is possible.

In this chapter I consider three questions at both the aggregate and individual level:

1. What makes predictions more or less accurate?
2. What problems are associated with imperfect prediction and how can these be managed?
3. In what circumstances are predictions sufficiently accurate to be appropriately used by decision-makers?

Legislation	Provision
Bail Act 2000	8(1) In considering whether there is just cause for continued detention, the court must take into account (a) whether there is a risk that iii) the defendant may offend while on bail.
Sentencing Act 2002	7(1): The purposes for which a court may sentence or otherwise deal with an offender are: …(g) 'to protect the community from the offender'.
Parole Act 2002	7(1) When making decisions about, or in any way relating to, the release of an offender, the paramount consideration for the Board in every case is the safety of the community. 7(3) When any person is required under this Part to assess whether an offender poses an undue risk, the person must consider both (a) The likelihood of further offending (b) The nature and seriousness of any likely subsequent offending.
Solicitor-General's prosecution guidelines	(In determining whether prosecution is in the public interest a consideration is): 5.8.1 Where there are grounds for believing that the offence is likely to be continued or repeated, for example, where there is a history of recurring conduct.
CYPF Act 1989	s(39)(3) Any person authorised by warrant under this section to search for any child or young person may … (b) if that person believes, on reasonable grounds, that the child or young person has suffered, or is likely to suffer, ill-treatment, serious neglect, abuse, serious deprivation, or serious harm, (i) remove or detain, by force if necessary, the child or young person and place the child or young person in the custody of the chief executive.

Education Act 1989	s14(1) The principal of a State school may stand-down or suspend a student if satisfied on reasonable grounds that (a) the student's gross misconduct or continual disobedience is a harmful or dangerous example to other students at the school; or (b) because of the student's behaviour, it is likely that the student, or other students at the school, will be seriously harmed if the student is not stood-down or suspended.
Social Security Act 1964	40A(1) The purpose of the supported living payment is to provide income support to people because they are people who fall within any one of the following 3 categories: (a) people who have, and are likely to have in the future, a severely restricted capacity to support themselves through open employment because of sickness, injury, or disability.
Health Act 1956	79(1) If the medical officer of health or any health protection officer has reason to believe or suspect that any person, whether suffering from an infectious disease or not, is likely to cause the spread of any infectious disease, he may make an order for the removal of that person to a hospital or other suitable place where he can be effectively isolated.

Table 7.1: Examples of mandated prediction in New Zealand. Source: The author.

Examples are drawn primarily from the field of criminology and criminal justice, reflecting my area of comparative expertise.

ACCURACY OF PREDICTION

This section of the chapter discusses some of the major factors that affect the accuracy of a prediction. The ethical implications of accuracy are discussed later when I consider what makes a prediction 'sufficiently accurate'.

Measuring accuracy: sensitivity and specificity

The accuracy of a prediction is commonly measured by its sensitivity and specificity. In a medical context, the sensitivity of a test is the ability to correctly identify those people who have a disease (the true positive rate) and the specificity is the ability of the test to correctly identify those people who do not have the disease (the true negative rate).

The same concepts can be used to assess the power of a method to predict any binary outcome. For example, one can measure the sensitivity and specificity of a method used to distinguish those who offend in future from those who do not, or to distinguish the positive versus null impact of a policy initiative.

Different statistics are available to assess the power of methods to predict non-binary outcomes, such as the number of offences predicted to be committed.

Accuracy can in principle be calculated for both predictive risk models and for professional judgment, though it is uncommon for the latter to be assessed in this way, except to compare it with a predictive risk model.

Comparative accuracy of predictive risk modelling and professional judgment

An extensive research history consistently shows that while professional judgment typically performs better than chance (random prediction), predictive risk models consistently perform better than either when judged by sensitivity and specificity.4

In some cases predictive risk models perform very well. For example, a recent study in *Nature Human Behaviour* used childhood developmental factors to predict adult problem behaviours with an AUC2 of 0.87 – this is a high degree of accuracy.5

At the same time, predictive risk modelling is often far from perfectly accurate. A typical result for tools predicting crime is an AUC of about 0.75. This means that for two individuals chosen at random, one from the population of recidivists and the other from the population of non-recidivists, there is a 75 per cent chance that the tool will assign a higher risk score to the individual from the recidivist population.6

It is not always possible or feasible to construct a predictive risk model to support a prediction. In some cases, for example with firefighters, the dynamics of a situation mean that intuitive decision-making is the only option. Research by Gary Klein has demonstrated how the mental models constructed through individual experience can yield useful and highly relevant insights.7

Other modes of professional judgment can also yield impressive results, as demonstrated in a recent study by Philip Tetlock and Dan Gardner.8 For example, when asked to predict unique, non-repeatable events such as the probability that ‘Serbia be officially granted European Union candidacy by 31 December 2011’ people made more accurate predictions where they considered multiple sources of information, examined base rate information from analogous situations, regularly updated their predictions as new information became available, and so on.

These examples show that in some policy and practice contexts, particularly those where the available data is sparse or only loosely connected to the outcome in question, non-quantitative modes of prediction may yield superior results.

So at both the aggregate and individual level, predictive risk modelling and professional judgment will often improve on random guessing and achieve a certain level of accuracy. At the same time, these predictions will often be made with a substantial amount of error, with many false positives, false negatives or both. These errors are fundamental to the ethical challenges of using any kind of prediction to support social investment.

The counterfactual

When predicting the return on an investment, there is an implicit comparison with the counterfactual of no investment. For example, when deciding whether to grant an offender bail or to remand them, a prediction is needed about the likelihood of offending under both options. In both cases, that likelihood is subject to change in response to evolving features such as bail management procedures, services offered to remanded prisoners, their social context and individual preferences and so on. The relative effectiveness of each option is therefore subject to uncertainty under both conditions.

Risk versus uncertainty

A distinction is often made between risk, which is quantifiable, and uncertainty, which is not. Both affect predictive accuracy. Predictive risk modelling reflects only quantifiable factors, and implicitly assumes that predictive correlations in the past will be maintained in the future. The sensitivity and specificity of a prediction can be estimated *ex ante* using historical data, but can only be truly known *ex post*.

The concept of the black swan event entered common usage following the global financial crisis of 2008.9 A black swan event is one that deviates beyond what is normally expected and is extremely difficult to predict. The concept reinforces that social systems are complex, dynamic and sensitive to rare events that can disrupt previously stable patterns of association. Social behaviours such as crime, as part of this social system, are not fully stable, so past associations will not always be a reliable guide to future behaviour.

Uncertainty does not always relate to extreme shocks. In many cases more prosaic changes can affect predictive accuracy. For example, assume that a predictive risk model to predict fraud were fitted to the available data in the 1990s. The model may initially have performed well, but once EFTPOS was introduced, fraud reduced substantially because of the steep decline in cheque fraud. The same risk model would now perform poorly because of an exogenous change in the environment.

Prediction of rare events

Certain crimes, such as rape and murder, are much more serious than the typical crime, and much more salient when it comes to predictions of dangerousness. To falsely identify someone as likely or unlikely to commit a murder can have devastating consequences.

Unfortunately, the relative rarity of these most serious crimes makes them much harder to predict. Predictability depends crucially on base rates. We know, for example, that 87 per cent of four-year-olds are enrolled in some kind of formal early childhood education – this is the base rate.[10] So if we merely predict that every four-year-old is enrolled, we will be correct 87 per cent of the time. For technical reasons it might be hard to improve upon this estimate, but the high base rate is very informative, partly due to the large numbers involved.

If the base rate were 50 per cent, then predictions that every four-year-old was enrolled, or that none of them were enrolled, or flipping a coin for each, would all be 50 per cent accurate. This provides some information, but less than if the base rate were 87 per cent. But thankfully, statistically speaking it is relatively easy to improve upon the base rate in these middle cases – the difficulty of predicting events of interest increases as the base rate differs from 0.50.[11] With a base rate of about 50 per cent for reimprisonment for released prisoners, it is perhaps then no surprise that tools for measuring the risk of reimprisonment are able to improve substantially on the base rate.

The greatest challenge is where the base rate is low. A low one is both not very informative, and difficult to improve upon. For example, since computerised records began in 1980, only one person in New Zealand convicted of murder has murdered again after being released on parole. Identifying this case out of all the others where there was no subsequent murder is very much a needle in a haystack problem. And it would be difficult to improve upon this situation using statistics, as the sample size would be 1.

In a low base-rate context, even a statistical tool that improves substantially on the base rate can still have limited practical value. For example, a predictive risk model was developed to support parole officers in Pennsylvania by predicting murder.[12] A fairly staggering 1 per cent of parolees in Pennsylvania are charged with murder within two years of release. The risk model is able to improve upon this base rate, but among those classified 'high-risk', only 7 per cent were actually charged with murder – a false positive rate of 93 per cent. And more murder charges (185) were laid against people in the 'low-risk' group than in the 'high-risk' group (137).

Reliance on accurate information

Prediction can only be as good as the underlying information. This point applies to predictions made using professional judgment as well as to predictive risk modelling.

In the case of professional judgments, these can often be inconsistent and prone to influence by extraneous factors, reflecting subjective differences in the way information is interpreted. For example, recent studies both internationally and in New Zealand of decision-making in child protection found that professionals' attitudes towards child welfare affected their risk assessments and recommendations, above and beyond the objective characteristics of a given case.13

As another example, an Israeli study made headlines by providing evidence for Alexander Pope's observation that 'hungry judges soon the sentence sign', showing that the longer a judge has been working without a break, the less likely they are to release a prisoner on parole.14 In New Zealand there is evidence of variation in sentencing practice across regions that is not explainable by changes in the characteristics of offenders and offences across regions.15

Consistency is an important consideration, particularly in a judicial context. Inconsistent use of discretion can potentially undermine the rule of law, a principle of which is that 'the laws are … applied evenly' (World Justice Project).

Professional judgment can also involve bias. There is evidence that for any given offence, and after controlling for factors such as age and offence history, Māori are somewhat more likely to be apprehended, prosecuted and so on.16 Patterns in the use of discretion by practitioners are likely to be a contributing factor to this.

Predictive risk modelling has the potential to provide more consistent assessments of risk that are not subject to individual bias. However, the data that support predictive risk models can themselves be biased, inaccurate or misleading.17

In government administrative datasets, even basic pieces of data like date of birth can be inaccurately reported, particularly to justice sector agencies, and errors in data recording can multiply when various datasets are connected with behind-the-scenes algorithmic matching.

Another important limitation is that government datasets capture variables that may only be loosely related to the outcome of interest. For example, two of the factors most predictive of offending are anti-social attitudes and anti-social peer groups.18 Neither is likely to be captured reliably and comprehensively in any government database. Correlations with variables like age and service use will often be statistically significant, but in many cases will be a crude proxy for more detailed psychological and social data.

Relatedly, the definition of the outcome variable is limited by the available data. In the case of crime, only police-recorded crime figures are available for predictive purposes, thus yielding a potentially biased result in comparison to the true level of crime, which may be distributed across the population in a different fashion. Similarly, the emphasis on fiscal modelling may in part reflect the fact that the fiscal costs of social ills are generally easier to observe than the broader economic costs.

There may also be no relevant information about the relationship between the predictor and the outcome variable if the relevant outcome is never allowed to materialise. For example, it is difficult to assess the risk level of sex offenders on a preventive detention sentence, if only because they are so rarely released.

Because of these limitations, it seems reasonable to assume that analysis of government databases under social investment will explain less of the variance in crime than the most advanced social science research, which captures a much richer set of data. In particular, longitudinal studies such as the Christchurch Health and Development Study are much better placed to explore how and why individuals develop into and out of the sort of harmful patterns of behaviour that concern policy-makers.

In general, we can also expect government datasets to suffer from systematic measurement error, because the data is collected for administrative, not research, purposes. We only capture data on people we have to transact with, and only at the points where we transact with them. This means that government datasets are imperfect representations of reality. In the justice system, it is often observed that our data reflects more what we do to people than what they do to each other.

We know, for example, that most crimes are not reported.[19] So if there is any systematic differential in crime reporting by factors such as location, gender, ethnicity and so on, any success in predicting crime may to some extent be success in predicting patterns of reporting rather than actual crime. Similarly, because there is evidence that sentencing practice for driving offences varies substantially across court districts,[20] risk differentials for offenders throughout the country will to some extent reflect differences in court practice.

And because only some crime is recorded, both professional judgments and predictive risk models may appear to be more accurate than they are on the basis of measured sensitivity and specificity, if the models are more successful at predicting recorded crime than they are unrecorded crime.

Static versus dynamic risk modelling

Predictive risk modelling is often focused on individual people, and assigns a non-contextual risk score based on observed characteristics. For example, the RoC*RoI tool provides a simple probability that an individual will be reimprisoned. For a young male burglar, the tool might say they have an 80 per cent chance of being reimprisoned. This is a static risk assessment that locates the likelihood of offending in the characteristics of the individual.

This implicitly reflects a theoretical perspective that crime is solely determined by differences between people in the propensity to commit crime. Further, it is often asserted that these differences are fixed in childhood and endure over time. This ‘population heterogeneity’ perspective is typified by the self-control theory of Gottfredson and Hirschi, who hypothesise that differences in self-control solely determine patterns of crime.[21] Another influential theory, of the ‘life-course persistent offender’ as a distinct type of criminal, also reflects this trait-based perspective.22

Empirical tests of self-control theory show it accurately represents an important part of the crime picture. However, individual-level differences are just a partial explanation, and are far from providing the full picture.23 In practice, whether a child who fails to develop effective self-control (traits) goes on to offend as an adult depends on a whole host of contingencies (states).

In a review and detailed empirical test of key theories in life-course criminology, Ezell and Cohen identify that in addition to population heterogeneity processes, state dependence processes also affect patterns of offending.24 By state dependence, they mean that the likelihood of offending is not fixed over time, but varies in each time period depending on what has occurred in prior periods.

In other words, from any one point in time looking forward, the likelihood that someone will offend at some future date is not fixed: it depends on what has happened in their lives to date, but also on various events that will happen between now and that future point. A static predictive model will not reflect this.

So in the example of the children exposed to risk factors during early childhood, whether or not those factors feed into offending later in life depends on a host of contingencies, such as the child’s degree of success in education, the peers they associate with during adolescence, whether they develop a substance abuse problem, whether they succeed in finding a job, which community they end up living in, and so forth.25

It can be difficult to fully model these contingencies, dynamics and situational effects because most government data is organised around the individual. This could lead us to assume that individual-level policy prescriptions are the most relevant, when situational or dynamic interventions may be more effective.

For example, Heilbrun et al., in summarising the violence risk assessment literature, note that ‘location is a very important parameter in risk assessment; it contributes to the situational influences on violent behaviour that have been investigated less extensively than have personal variables’.26 In other words, assessment of the risk of violence for an offender or patient in an institution may give limited information about their likelihood of offending in various community settings.

Predictive erosion

Social processes and predictive associations change over time in ways that can erode the accuracy of a predictive method unless it is recalibrated to reflect the new reality. This applies to both predictive risk models and professional judgment.

For example, police practice has substantially changed in recent years to make greater use of alternative resolutions. For many low-level offenders, this will have changed the probability of conviction, sentencing and possibly re-offending as well. Tools and methods to predict outcomes calibrated under a previous pattern of police practice will no longer be as valid.

This is not a fatal flaw of prediction, but it underlines the fact that risk-based practice requires a substantial ongoing investment to maintain tools and methods, with the implicit opportunity cost of analytical resource not devoted elsewhere. Where this maintenance is deferred, it is easy to assume that 'risk assessments' are objective and valid, when they may no longer hold as much value as is assumed.

Accuracy in practice

The accuracy of a predictive method can be assessed 'objectively' using measures of sensitivity and specificity, but its true accuracy depends on how it is used by the decision-makers, who may selectively adopt the predictions. International evidence suggests that decision-making is often not based on a risk tool's result, even when the risk tool is filled out accurately.27

This may be in part because risk assessments are not always easy to understand. Slovic et al. summarise a body of research showing that risk judgments are in practice often dominated by emotional considerations, particularly a generic impression of 'goodness' or 'badness' associated with the object.28 For example, feelings of dread associated with the worst-case scenario can often lead people to overestimate the likelihood of it occurring.

This reliance on the affective qualities of risk can in some cases lead even sophisticated decision-makers to interpret risk tools in odd ways. For example, Slovic et al. found that clinical psychologists, when asked to assess the dangerousness of mental health patients and recommend whether to release them, are more likely to evaluate their risk as high when their risk score is presented as a frequency (e.g., three out of ten released patients similar to Mr Jones commit an act of violence within several months of discharge) rather than a probability (i.e., 30 per cent) format.29 This finding is perhaps best explained by the fact that a single concrete case is much more likely to elicit an affective response than an aggregation of cases in the abstract.30

It is not immediately clear which format is more appropriate. Whether it is better for practitioners to consistently over- or under-estimate risk will depend on this application. And this is only one example of how seemingly objective predictive tools can lead to different subjective interpretations. More generally, the question of how a predictive instrument is to be used appears to be worthy of detailed consideration, as much so as the more technical questions of its design.

CONSEQUENCES OF USING FALLIBLE PREDICTIONS

No prediction is perfectly accurate, but many predictions are better than random. The case for using imperfect ones depends in large part on the consequences of those imperfections.

Positive impacts and false negatives

The simplest consequence of inaccurate prediction is a reduction in the benefits of prediction.

At an aggregate level, greater uncertainty in prediction will reduce our ability to distinguish high-return from low-return investments, reducing investment decisions in the extreme case to a pure lottery. In circumstances of very low predictive accuracy, our ability to achieve the social investment goal of investing now in those services that will deliver the greatest long-term benefit will be correspondingly limited.

At an individual level, failure to identify someone as at risk of a particular outcome will mean a lost opportunity to intervene and prevent that outcome.

Negative impacts and false positives

Much of the concern about the ethics of prediction focuses on the negative impacts of intervention on people falsely identified as being at risk of a poor outcome. In an ethical review of predictive risk modelling for MSD, Tim Dare considers the ‘burdens’ of such misidentification.[31] In a medical context, burdens will often come in the form of iatrogenic (harm-causing) side-effects associated with a treatment. The same is true in a social context.

For example, there may be immediate stigmatising effects associated with wrongly identifying someone as being at risk of a negative outcome. In general, there is some evidence for the Pygmalion and Gollum effects, showing that people can be sensitive to the expectations placed upon them.[32] If people are identified as being at risk of a negative outcome, this in itself may make that outcome more likely.

There may also be secondary consequences associated with being falsely identified as high-risk. Where false positives are targeted for intervention, at a minimum this will waste the state’s resources and the individual’s time. There may also be further consequences if the treatment creates detrimental effects. For example, there is evidence that taking young offenders through a formal process tends to increase reoffending through reinforcing an anti-social identity, in comparison to a simple warning.[33] Given that risk is a factor influencing police decisions about whether to prosecute, those falsely identified as at risk of further offending may be more likely to experience the criminogenic consequences of formal processing.

In some cases, being wrongly identified as at risk may lead to a limitation of human rights. Most of the examples in Table 7.1 entail such limitations. For example, school principals may expel a student if they are considered at risk of hurting themselves or another student. If such an assessment used the fact that males are more likely to offend, it would be a *prima facie* breach of the right to freedom from discrimination (s19(1) NZBORA and s57(1) HRA).

The most substantial limitation of rights occurs in relation to imprisonment, which limits the rights to freedom of movement and freedom of association among others (s17, s18 NZBORA). In the cases of parole, bail and sentences such as preventive detention, the decision to imprison is made primarily or solely because of a prediction that any other option would likely lead to further offending.

In some cases a limitation of rights can be justified under section 5 of the New Zealand Bill of Rights Act 1990: 'Subject to section 4, the rights and freedoms contained in this Bill of Rights may be subject only to such reasonable limits prescribed by law as can be demonstrably justified in a free and democratic society.' When rights are limited on the basis of a prediction of future behaviour, whether this limitation is 'reasonable' in turn depends partly on the accuracy of the prediction. There are various tests used to assess the 'reasonableness' of a limitation, such as that introduced in the seminal Canadian judgment *R v Oakes*. Among other things, to be reasonable a limitation must, as per the Oakes test:

- be fair and non-arbitrary
- be carefully designed to achieve the objective in question
- be rationally connected to that objective.

The less accurate a prediction is, the closer it is to purely random prediction, then the more arbitrary it is and the more difficult it is to meet this test, particularly when the associated limitation of rights is more substantial.

Endogeneity: loss of predictive power over time

Social processes, including crime, do not operate in a closed system. For example, crime leads to reactions by government agencies that can themselves affect crime, both for good and bad. Where these reactions are based on a predictive method (professional judgment or predictive risk model), they can in turn change the pattern of crime, thus undermining the method's accuracy.

This kind of entanglement – known as simultaneity or endogeneity – is common in criminal justice because 'Data used in the formal risk assessments in the criminal justice and criminology literature are generated by processes of informal risk assessment and treatment assignment.'34 For example, the dominant paradigm for offender rehabilitation dictates that greater resource be assigned to high-risk offenders. Rehabilitation programmes are often shown to be more effective for such people.35 In general, this would be expected to reduce the risk of 'high-risk' groups closer to that of lower-risk groups over time.

A corollary of this is that it becomes harder to distinguish between the risk level of different offenders. The extreme example is when it becomes impossible to differentiate between the baseline risk levels posed by different individuals. For example, the perfect parole system would be one where there was a specific threshold of dangerousness, and prisoners were all kept inside long enough for the gradual reduction in risk that occurs over time to take them to that threshold, at which point they would be released.36

In this situation, everyone released on parole would pose exactly the same amount of risk, so would be indistinguishable by statistical analysis. In this sense, Bushway and Smith argue that an inability to discriminate between risk levels can be a measure of successful performance, as it indicates that all available information is being used efficiently.37

Endogeneity: the ratchet effect

Endogeneity causes a particular problem when risk assessment leads to a response that further increases risk, creating a loop known as the ratchet effect.

For example, there is some evidence that this can occur in the context of prisoner security classification systems, which assign prisoners to differing levels of security based on an implicit prediction of misconduct. Some studies suggest that harsher prison conditions can further increase the risk posed by prisoners.38

The problem with this is that when we come to recalibrate the security classification system, the characteristics of those who have previously been assigned to high security will now show a stronger association with misconduct, leading to a higher weighting. The recalibrated system will now show the previously 'high-risk' group as even higher in risk than before the risk tool was introduced. Iterated through several generations of a risk tool, this can lead to what Harcourt refers to as a 'ratchet effect' – where initial small differences in risk are inflated over time by the way the state responds to those risks.39

While the ratchet effect might be most powerful with predictive risk modelling, it can equally apply to professional judgment. When it is operating, at least part of what we identify as 'risk' associated with a particular group is likely to be risk modified or caused by the state. In these cases, to some extent we are predicting state intervention rather than the behaviour of individuals. This point is related to the earlier one about static versus dynamic prediction. A static risk tool can be unbiased, well-validated and accurate but still misleading if the risks it identifies are really the result of earlier dynamic processes that created that risk.

The quiet danger of the ratchet effect is that it is largely invisible – with a well-calibrated tool, those identified as high risk will indeed offend at a higher rate, thus providing clear justification for the tool. But because of the simultaneity between risk assessment and intervention, it is very difficult to separate out the 'baseline' or 'natural' risk of the individual from the 'state-generated' risk arising from responses to that risk.

MANAGING THE USE OF PREDICTION IN SOCIAL INVESTMENT

If prediction is to be used more widely in public policy and practice, there are several courses of action that can help manage the consequences of any prediction's inevitable imperfections.

Managing inputs

The first layer of management concerns the information used to support predictions, be it data in a predictive risk model or personal observations used in a professional judgment.

Given that many predictions are used explicitly to discriminate between individuals or groups in terms of access to services, then a first recommendation is for full transparency in the factors being used to make the prediction. This is particularly true if any of those factors are prohibited grounds for discrimination in the Human Rights Act, such as age or gender, but is important generally because any variable used to predict an outcome such as crime that is concentrated among certain groups (the young, men and Māori in this case) will indirectly capture these factors in any case.

Transparency of factors can help the individuals concerned to challenge the basis upon which decisions are being taken about them if they consider those decisions to be unwarranted. Model design can add to transparency here – one big disadvantage of machine-learning approaches in this context is that the resulting models are often highly complex and take on a black box aspect, whereas a simple additive model may achieve similar predictive accuracy with more transparency about how the prediction is being made. For example, by assigning a risk 'score' of 1 point if below 25, or 1 point if they have a prior criminal history.

A second recommendation is for agencies to provide explicit public guidance about which factors are permissible when predicting certain behaviours, particularly if these predictions are used to support decisions that limit people's rights. When providing guidance, agencies would do well to consider whether certain factors are measured or perceived with bias, the strength of association between any given factor and the behaviour in question, and interaction effects between factors.

A third recommendation is for agencies to support their predictions with information they already collect on a regular basis. For example, it is possible to predict criminal behaviour to a certain level of accuracy by using information collected for other purposes, such as a history of CYF contact. However, the strongest predictors of crime, such as personality disorders and anti-social peer associations, are not currently collected. Collecting this information would likely allow for more accurate predictions, thus reducing false positives and helping avoid some of the other consequences of inaccurate prediction outlined in the previous section of this chapter ‘Consequences of using fallible predictions’. At the same time, accessing this data would entail a greater risk of privacy breaches, potentially reduce trust and confidence in the system, and potentially make it more difficult for health professionals to perform their role.

Managing accuracy

A further layer of management concerns the predictive methods themselves and their accuracy.

The first recommendation is to measure and publish the accuracy of predictions, their sensitivity and specificity. The accuracy of a predictive risk model is typically published at the time of design, but it may be reduced in practice and erode over time, so regularly publishing the accuracy of a tool in action would be useful.

It is less common for the predictions made by professional judgment to be explicitly measured for accuracy, but no less important from a natural justice perspective. If such judgments are unwittingly biased or only weakly accurate, then the individuals’ concerned arguably have a right to know, particularly if the judgment is being preferred over a demonstrably more accurate, more consistent and less biased algorithmic alternative.

The counterfactual cannot be known at an individual level, but the outcomes in general from varying patterns of individual-level decision-making can often be tracked to understand if certain professionals are achieving greater accuracy or better outcomes than others.

When measuring their accuracy, predictions need to be recorded in enough detail to be falsifiable. For example, it would be insufficient for a police prosecutor to predict that an individual is ‘likely to abscond if granted bail’. To truly measure accuracy, this prediction would need to be made in a form such as ‘70 per cent likely to abscond within three months’. Over multiple predictions of this form, the predictive accuracy related to individual cases can be judged using a method developed by Tetlock and Gardner.40 Only if predictions are recorded in this form can the relative predictive performance of professional judgment be fairly compared with that of predictive risk models.

This recommendation applies equally to policy advice. All policy advisers are forecasters, whether they know it or not. When they recommend a course of action in response to a problem, they are making a prediction of positive change. If the learning loop were taken seriously, policy advisers could be required to make reputational bets at the time of their advice, by being asked to be sufficiently precise in their predictions that they could be falsified. Such a system would create incentives for more accurate advice, less vulnerable to optimism bias.

A second recommendation is to regularly recalibrate predictive methods to reflect changes in the social structure and new learning (while being sensitive to the risk of the ratchet effect). For predictive risk models this can be managed centrally, although those using the tool need to be sufficiently skilled to understand the strengths and weaknesses of the model.

For professional judgment, the learning loop needs to occur at the level of the individual decision-maker. One reason for specifically recording the accuracy of professional predictions is to give the individual regular feedback on where their accuracy is falling short, or if they are regularly over- or under-predicting in certain cases. Similar to the requirement for anaesthetists to follow up with patients to identify any side-effects and help them develop a good intuition for risk, intuitive decision-making is most likely to become accurate over time with repeated exposure to its consequences.[41]

A final recommendation is to be explicit about how a prediction should be acted upon. In the case of a binary prediction, a cut point can be set at a certain risk score, above which one treatment or course of action is taken. For example, a parole cut point might be set at 60 per cent; those people with more than a 60 per cent chance of reoffending might be denied parole as a matter of course.

The cut point can be set to minimise either false positives or false negatives. The appropriate point will depend on the context. Where a decision entails a substantial limitation of rights, for example, it may be appropriate to minimise the number of false positives with a very high cut point (say, 90 per cent), even at the cost of accepting many false negatives.

Conversely, where the burden placed on false positives is minimal and the goal is to reach as many people as possible, then setting the cut point low will minimise the number of false negatives at the cost of increasing the number of false positives. For example, social marketing with road safety messages is provided to most people in the population through mass television campaigns, even if many or most people are not likely to drive dangerously anyway.

Managing impacts

The impacts of a prediction also depend on how the prediction is used. For example, in a medical context the ethics of an invasive diagnostic procedure that carries risk of harm depend in part on the availability of an effective treatment for the condition being diagnosed.

The first recommendation is to be vigilant in assessing the effects of a treatment or course of action that will be taken in response to a prediction, both *ex ante* and *ex post*. For example, if a prediction is used to determine eligibility for parole, then the criminogenic impacts of denying parole are an important consideration, both because of the burden placed on those falsely identified as likely to offend, and because of the potential for the ratchet effect to be triggered.

Equally, understanding the positive impacts of a treatment or course of action is necessary to properly evaluate the value of using a prediction and whether any limitation of rights is justifiable.

The second recommendation is to design predictive instruments in a way that is sensitive to contingencies, to support a focus on changeable factors rather than fixed traits. For example, a predictive instrument showing someone has a 40 per cent chance of reoffending if they gain employment and avoid the use of drugs, or 80 per cent if the reverse is true, is more useful and instructive than one that says merely that someone has a 60 per cent chance of reoffending on average.

CONCLUSION

Social investment aims to make greater use of prediction in general, and predictive risk modelling specifically. In this chapter I have highlighted some of the factors that can affect the accuracy of a prediction, some of the negative consequences of imperfect prediction, and some methods to limit those negative consequences. In conclusion I consider the general question of when a prediction is sufficiently accurate to be used at all.

How accurate is sufficiently accurate?

Prediction will never be perfect, and in some cases will only be marginally better than a random guess. In certain circumstances, using prediction of any type may be unjustified, even if it is conceptually desirable under the assumption of perfect prediction. Sociologist Bernard Harcourt argues in his book *Against Prediction* (2007) that the imperfections and negative consequences of prediction in the criminal justice sphere are such that its use cannot be justified, and that policies such as indeterminate sentencing should be abolished.[42]

Without assessing the merits of that particular argument, there is a general question about the circumstances in which prediction is justifiable. The point at which a predictive risk model or professional judgment is accurate enough to be justifiable will of course depend on the precise context in which it is being used. The Oakes test for whether limiting a right is justifiable provides a useful starting point here.

Adding to that list, I would suggest that whether a prediction is sufficiently accurate to justify being used depends – at a minimum – on answers to the following questions:

- How important is the policy objective that the prediction is designed to support? How well can it be achieved without the use of prediction – what is the counterfactual?
- What treatment or course of action does the prediction relate to and, given the level of accuracy of the prediction:
  - What predicted benefits does the treatment create, and how uncertain are they?
  - What burdens does the treatment place on those subject to the prediction, through iatrogenic effects of treatment, stigmatisation or financial or time costs to the individuals in question?
  - Does use of the prediction limit people's human rights, particularly the right to freedom of discrimination?
  - If so, does the prediction use prohibited grounds for discrimination?
- Is use of the prediction being managed in a way to minimise potential harms, and to identify if negative impacts are increasing through erosion in predictive accuracy, growing inconsistency or growing bias?

References

Aegosdottir, S., M. White, P. Spengler, L. Maugherman, R. Cook, C. Nichols, G. Lampropoulos, B. Walker, G. Cohen and J. Rush, 'The Meta-Analysis of Clinical Judgement Project: Fifty-six Years of Accumulated Research on Clinical versus Statistical Prediction', *Counselling Psychologist*, 34 (2006)

Andrews, D., and J. Bonta, *The Psychology of Criminal Conduct*, Anderson, Cincinatti, 1998

Bakker, L., J. O'Malley and D. Riley, *Storm Warning: Statistical Models for Predicting Violence*, Department of Corrections, Wellington, 1998

Benbenishty, R., B. Davidson-Arad, M. López, J. Devaney, T. Spratt, C. Koopmans, E. J. Knorth, C. L. M. Witteman, J. F. Del Valle and D. Hayes, 'Decision Making in Child Protection: An International Comparative Study on Maltreatment Substantiation, Risk Assessment and Interventions Recommendations, and the Role of Professionals' Child Welfare Attitudes', *Child Abuse & Neglect*, 49 (2016)

Berk, R., L. Sherman, G. Barnes, E. Kurtz and L. Ahlman, 'Forecasting Murder Within a Population of Probationers and Parolees: A High Stakes Application of Statistical Learning', *Journal of the Royal Statistical Society*, 172, 1 (2009)

Boston, Jonathan, 'Social Investment: The Intertemporal Dimension', draft working paper for roundtable discussion on Social Investment, 2016

Bushway, S., and J. Smith, 'Sentencing Using Statistical Treatment Rules: What We Don't Know Can Hurt Us', *Journal of Quantitative Criminology*, 23 (2007)

Caspi, Avshalom, Renate Houts, Daniel Delsky, Honalee Harrington, Sean Hogan, Sandhya Ramrakha, Richie Poulton and Terrie Moffitt, 'Childhood Forecasting of a Small

Segment of the Population with Large Economic Burden', *Nature Human Behaviour*, 1 (2016)
Chen, M., and J. Shapiro, 'Do Harsher Prison Conditions Reduce Recidivism? A Discontinuity-Based Approach', *American Law and Economic Review*, 9 (2007)
Danziger, S., J. Levav and L. Avnaim-Pesso, 'Extraneous Factors in Judicial Decisions', *Proceedings of the National Academy of Sciences of the United States of America*, 108, 17 (2011)
Dare, Tim, *Predictive Risk Modelling and Child Maltreatment: An Ethical Review*, Department of Philosophy, University of Auckland, 2013
Department of Corrections, *Over-Representation of Maori in the Criminal Justice System*, Wellington, 2007
Ezell, M., and L. Cohen, *Desisting from Crime: Continuity and Change in Long-Term Crime Patterns of Serious Chronic Offenders*, Oxford University Press, Oxford, 2005
Farrington, D., and B. Welsh, *Saving Children from a Life of Crime*, Oxford University Press, New York, 2007
Goodall, W., and R. Durrant, 'Regional Variation in Sentencing: The Incarceration of Aggravated Drink Drivers in the New Zealand District Courts', *Australian and New Zealand Journal of Criminology*, 46 (2013)
Gottfredson, M., and T. Hirschi, *A General Theory of Crime*, Stanford University Press, Stanford, 1990
Gottfredson, S., and L. Moriarty, 'Statistical Risk Assessment: Old Problems and New Applications', *Crime and Delinquency*, 52 (2006)
Grove, W., D. Zald, B. Lebow, B. Snitz and C. Nelson, 'Clinical versus Mechanical Prediction: A Meta-Analysis', *Psychological Assessment*, 12 (2000)
Harcourt, B., *Against Prediction: Profiling, Policing and Punishing in an Actuarial Age*, University of Chicago Press, 2007
Heckman, J., and D. Masterov, 'The Productivity Argument for Investing in Young Children', University of Chicago, 2007, http://jenni.uchicago.edu/human-inequality/papers/Heckman_final_all_wp_2007-03-22c_jsb.pdf (accessed 6 September 2017)
Heilbrun, K., K. Yasuhara and S. Shah, 'Violence Risk Assessment Tools: Overview and Critical Analysis', in R. Otto and K. Douglas (eds), *Handbook of Violence Risk Assessment*, Routledge, New York, 2010
Jonson, C., 'The Impact of Imprisonment on Reoffending: A Meta-Analysis', PhD dissertation, University of Cincinnati, 2010
Keddell, E., 'Current Debates on Variability in Child Welfare Decision-Making: A Selected Literature Review', *Social Sciences*, 3, 4 (2014)
Keddell, E., 'Substantiation, Decision-Making and Risk Prediction in Child Protection Systems', *Policy Quarterly*, 12, 2 (2016)
Klein, G., *Sources of Power: How People Make Decisions*, MIT Press, Cambridge MA, 1998
McNatt, D., 'Ancient Pygmalion Joins Contemporary Management: A Meta-Analysis of the Result', *Journal of Applied Psychology*, 85, 2 (2000)
Miller, J., and C. Maloney, 'Practitioner Compliance with Risk/Needs Assessment Tools: A Theoretical and Empirical Assessment', *Criminal Justice and Behavior*, 40, 7 (2013)
Ministry of Justice, *2014 New Zealand Crime and Safety Survey: Main Findings*, Welling-

ton, 2016
Moffit, T., 'Life-Course Persistent Versus Adolescence-Limited Antisocial Behavior', in F. Cullen, J. Wright and K. Blevins (eds), *Taking Stock: The Status of Criminological Theory*, Transaction Publishers, New Brunswick, 2006
Petrosino, A., C. Turpin-Petrosino and S. Guckenburg, *Formal System Processing of Juveniles: Effects on Delinquency*, Campbell Systematic Reviews 1, 2010
Pratt, T., and F. Cullen, 'The Empirical Status of Gottfredson and Hirschi's General Theory of Crime: A Meta-Analysis', *Criminology*, 38, 3 (2000)
Slobogin, C., *Proving the Unprovable: The Role of Law, Science and Speculation in Adjudicating Culpability and Dangerousness*, Oxford University Press, New York, 2007
Slovic, P., M. Finucane, E. Peters and D. MacGregor, 'Risk as Analysis and Risk as Feelings', in P. Slovic (ed.), *The Feeling of Risk*, Earthscan, New York, 2010
Slovic, P., J. Monahan and D. MacGregor, 'Violence Risk Assessment and Risk Communication: The Effects Using Actual Cases, Providing Instruction, and Employing Probability versus Frequency Formats', *Law and Human Behavior*, 24, 3 (2000)
Small, D., G. Loewenstein and P. Slovic, 'Sympathy and Callousness: The Impact of Deliberative Thought on Donations to Identifiable and Statistical Victims', in P. Slovic (ed.), *The Feeling of Risk*, Earthscan, New York, 2010
Statistics New Zealand, *New Zealand Childcare Survey: 2009 (revised)*, Wellington, 2010
Taleb, Nassim, *The Black Swan: The Impact of the Highly Improbable*, Random House, New York, 2007
Tetlock, Philip, and Dan Gardner, *Superforecasting: The Art and Science of Prediction*, Crown, New York, 2015
Vaithianathan, Rhema, Tim Maloney, Nan Jiang, Irene De Haan, Claire Dale, Emily Putnam-Hornstein and Tim Dare, *Vulnerable Children: Can Administrative Data be Used to Identify Children at Risk of Adverse Outcomes?*, Centre for Applied Research in Economics (CARE), Department of Economics, University of Auckland, September 2012, www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/research/vulnerable-children/auckland-university-can-administrative-data-be-used-to-identify-children-at-risk-of-adverse-outcome.pdf (accessed 6 September 2017)

Notes

1 The views in this chapter are those of the author, not the Ministry of Justice. This chapter is adapted from my article 'Predictive Analytics for Policy and Practice: Reflections from the Criminal Justice System', *Policy Quarterly* 11, 2 (2015), pp.37–44. My thanks to Michael Slyuzberg, Peter Johnston, Tony Burton, Nick Carroll, Ross McKay, Emily Keddell and Elliot Lawes for comments on this version of that earlier paper.

2 Rhema Vaithianathan et al., *Vulnerable Children: Can Administrative Data be Used to Identify Children at Risk of Adverse Outcomes?*, Centre for Applied Research in Economics (CARE), Department of Economics, University of Auckland, September 2012, www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/research/vulnerable-children/

auckland-university-can-administrative-data-be-used-to-identify-children-at-risk-of-adverse-outcome.pdf (accessed 6 September 2017).

3 L. Bakker, J. O'Malley and D. Riley, *Storm Warning: Statistical Models for Predicting Violence*, Department of Corrections, Wellington, 1998.

4 See, for example, the meta-analyses of: S. Aegosdottir et al., 'The Meta-Analysis of Clinical Judgement Project: Fifty-six Years of Accumulated Research on Clinical versus Statistical Prediction', *Counselling Psychologist*, 34 (2006), pp.341–82; and W. Grove et al., 'Clinical versus Mechanical Prediction: A Meta-Analysis', *Psychological Assessment*, 12 (2000), pp.19–30.

5 Avshalom Caspi et al., 'Childhood Forecasting of a Small Segment of the Population with Large Economic Burden', *Nature Human Behaviour*, 1 (2016).

6 C. Slobogin, *Proving the Unprovable: The Role of Law, Science and Speculation in Adjudicating Culpability and Dangerousness*, Oxford University Press, New York, 2007.

7 G. Klein, *Sources of Power: How People Make Decisions*, MIT Press, Cambridge MA, 1998.

8 Philip Tetlock and Dan Gardner, *Superforecasting: The Art and Science of Prediction*, Crown, New York, 2015.

9 Nassim Taleb, *The Black Swan: The Impact of the Highly Improbable*, Random House, New York, 2007.

10 Statistics New Zealand, *New Zealand Childcare Survey: 2009 (revised)*, Wellington, 2010.

11 S. Gottfredson and L. Moriarty, 'Statistical Risk Assessment: Old Problems and New Applications', *Crime and Delinquency*, 52 (2006), pp.178–200.

12 R. Berk et al., 'Forecasting Murder Within a Population of Probationers and Parolees: A High Stakes Application of Statistical Learning', *Journal of the Royal Statistical Society*, 172, 1 (2009), pp.191–211.

13 R. Benbenishty et al., 'Decision Making in Child Protection: An International Comparative Study on Maltreatment Substantiation, Risk Assessment and Interventions Recommendations, and the Role of Professionals' Child Welfare Attitudes', *Child Abuse & Neglect*, 49 (2016), pp.63–75; and E. Keddell, 'Current Debates on Variability in Child Welfare Decision-Making: A Selected Literature Review', *Social Sciences*, 3, 4 (2014), pp.916–40.

14 S. Danziger, J. Levav and L. Avnaim-Pesso, 'Extraneous Factors in Judicial Decisions', *Proceedings of the National Academy of Sciences of the United States of America*, 108, 17 (2011), pp.6889–92.

15 W. Goodall and R. Durrant, 'Regional Variation in Sentencing: The Incarceration of Aggravated Drink Drivers in the New Zealand District Courts', *Australian and New Zealand Journal of Criminology*, 46 (2013), pp.422–47.

16 Department of Corrections, *Over-Representation of Maori in the Criminal Justice System*, Wellington, 2007.

17 See, for example, E. Keddell, 'Substantiation, Decision-Making and Risk Prediction in Child Protection Systems', *Policy Quarterly*, 12, 2 (2016), pp.46–56.
18 D. Andrews and J. Bonta, *The Psychology of Criminal Conduct*, Anderson, Cincinatti, 1998.
19 Ministry of Justice, *2014 New Zealand Crime and Safety Survey: Main Findings*, Wellington, 2016.
20 Goodall and Durrant, 'Regional Variation in Sentencing'.
21 M. Gottfredson and T. Hirschi, *A General Theory of Crime*, Stanford University Press, Stanford, 1990.
22 T. Moffit, 'Life-Course Persistent Versus Adolescence-Limited Antisocial Behavior', in F. Cullen, J. Wright and K. Blevins (eds), *Taking Stock: The Status of Criminological Theory*, Transaction Publishers, New Brunswick, 2006.
23 T. Pratt and F. Cullen, 'The Empirical Status of Gottfredson and Hirschi's General Theory of Crime: A Meta-Analysis', *Criminology*, 38, 3 (2000), pp.931–64.
24 M. Ezell and L. Cohen, *Desisting from Crime: Continuity and Change in Long-Term Crime Patterns of Serious Chronic Offenders*, Oxford University Press, Oxford, 2005.
25 D. Farrington and B. Welsh, *Saving Children from a Life of Crime*, Oxford University Press, New York, 2007; Pratt and Cullen, 'The Empirical Status of Gottfredson and Hirschi's General Theory of Crime'.
26 K. Heilbrun, K. Yasuhara and S. Shah, 'Violence Risk Assessment Tools: Overview and Critical Analysis', in R. Otto and K. Douglas (eds), *Handbook of Violence Risk Assessment*, Routledge, New York, 2010, p.4.
27 J. Miller and C. Maloney, 'Practitioner Compliance with Risk/Needs Assessment Tools: A Theoretical and Empirical Assessment', *Criminal Justice and Behavior*, 40, 7 (2013), pp.735–55.
28 P. Slovic et al., 'Risk as Analysis and Risk as Feelings', in P. Slovic (ed.), *The Feeling of Risk*, Earthscan, New York, 2010.
29 P. Slovic, J. Monahan and D. MacGregor, 'Violence Risk Assessment and Risk Communication: The Effects Using Actual Cases, Providing Instruction, and Employing Probability versus Frequency Formats', *Law and Human Behavior*, 24, 3 (2000), pp.271–96.
30 D. Small, G. Loewenstein and P. Slovic, 'Sympathy and Callousness: The Impact of Deliberative Thought on Donations to Identifiable and Statistical Victims', in P. Slovic (ed.), *The Feeling of Risk*, Earthscan, New York, 2010.
31 Tim Dare, *Predictive Risk Modelling and Child Maltreatment: An Ethical Review*, Department of Philosophy, University of Auckland, 2013.
32 D. McNatt, 'Ancient Pygmalion Joins Contemporary Management: A Meta-Analysis of the Result', *Journal of Applied Psychology*, 85, 2 (2000),

pp.314–22.

33 A. Petrosino, C. Turpin-Petrosino and S. Guckenburg, *Formal System Processing of Juveniles: Effects on Delinquency*, Campbell Systematic Reviews 1, 2010.

34 S. Bushway and J. Smith, 'Sentencing Using Statistical Treatment Rules: What We Don't Know Can Hurt Us', *Journal of Quantitative Criminology*, 23 (2007), p.378.

35 Andrews and Bonta, *The Psychology of Criminal Conduct.*

36 Ezell and Cohen, *Desisting from Crime.*

37 Bushway and Smith, 'Sentencing Using Statistical Treatment Rules'.

38 For example: M. Chen and J. Shapiro, 'Do Harsher Prison Conditions Reduce Recidivism? A Discontinuity-Based Approach', *American Law and Economic Review*, 9 (2007), pp.1–29; C. Jonson, 'The Impact of Imprisonment on Reoffending: A Meta-Analysis', PhD dissertation, University of Cincinnati, 2010.

39 B. Harcourt, *Against Prediction: Profiling, Policing and Punishing in an Actuarial Age*, University of Chicago Press, 2007.

40 Tetlock and Gardner, *Superforecasting.*

41 Klein, *Sources of Power.*

42 Harcourt, *Against Prediction.*

Chapter 8
Evidence for social investment
What is it and how might we collectively learn to inform decision-making?

Gail Kelly and Isabelle Collins

At its core, social investment is a *more rigorous and evidence-based feedback loop* linking service delivery to a better understanding of people's needs and indicators of social services. There will also be more systematic *measurement of the effectiveness of services* people are currently receiving. This information can then be used to do more of what works – and stop things that don't. Understanding the effectiveness of spending and doing what works are two principles with relevance to all public spending.[1]

INTRODUCTION

At the heart of the social investment approach in New Zealand is the need to understand what interventions[2] are working, for whom, and under what circumstances.[3] Central government spends around $34 billion (11 per cent of GDP) on social services and another $31 billion on transfer payments such as New Zealand superannuation and welfare benefits. What impact is this having on people's lives? Are the 'right' people benefiting from this investment of the tax take? Is it good value for money? These types of questions speak to the need to understand the effectiveness of interventions – that is, are we 'doing the right things'?

The funding available for investment in social programmes is finite, and so too is the funding for evaluating them. However, we also need to invest in a learning system to capture what is known – that is, we must also focus on 'doing things right'.

There is a wide literature in psychology on the way people learn and how they make decisions. People draw on 'evidence' from a wide range of sources; decisions can be based on previous experiences, intuition or 'gut instinct', as well as facts and figures. New Zealand's social investment approach relies heavily on 'evidence' to inform decision-making, but what counts as evidence in this context? It's a contested term.

The focus of this chapter is on learning about the effectiveness of interventions for social investment. We concentrate on three key processes:

1. the nature of the evidence needed to produce effective interventions (which prevent the need for further and ongoing higher levels of spending);
2. the barriers to monitoring and evaluation in the real world; and
3. a case for more and better use of evidence by developing capability for system learning (to help offset fragmentation of service delivery) as well as individual programme learning.

We begin with a discussion about what constitutes evidence. Continual monitoring with feedback loops is critical to building this knowledge, as are well-designed developmental, process and outcome evaluations – we briefly outline key initiatives from overseas and in New Zealand in this regard. At face value, evaluating to learn about effectiveness sounds straightforward. However, as presented in this chapter, there are barriers to generating evidence about interventions, and to making sense of it and then using it appropriately to make social investment decisions.

The focus on individual interventions has led to the fragmentation of service delivery and knowledge about what works. The child/family/whānau is at the centre of the social investment approach, and questions such as 'How do cross-sector policies and interventions interact?' and 'How might we configure the delivery and funding system for maximum benefit for those who need it?' require new thinking about how we accumulate knowledge within the system. We briefly discuss learning about effectiveness at the system level.

WHAT CONSTITUTES EVIDENCE?

Evidence in this context refers to information that helps to turn strategic priorities and other objectives into something concrete, manageable and achievable.4 This definition emphasises the importance of the processes whereby a mass of information becomes an evidence base on which defendable judgments can be made. Evidence may be qualitative or quantitative and may come from various sources including performance monitoring, research, evaluation, statistics and information from experts or stakeholders.

Evidence must account for the complexities of the real world – especially in a people-centred approach – which include issues of attribution, identifying a counterfactual and accounting for deadweight, displacement and substitution, but also multiplier and indirect effects where success is contingent on the interaction between a range of initiatives.

Timing is crucial – good evidence too late is not used or useful. Partial evidence at the right time, if used intelligently, can provide insights that would otherwise be missed. Frequently, due to the nature of research and evaluation, evidence becomes available just after it was needed – meaning that policy-makers and programme designers are generally working with the previous generation of evidence.

Figure 8.1 shows a standard research and evaluation approach to using evidence for programme development and implementation. Evidence is needed in all phases of the process from issue/problem identification, to designing and implementing interventions, through to understanding a programme's impact. However, the evidence cycle is embedded in a context or system that is continually changing – this means we must focus on *what works for whom, when, and under what circumstances.* In addition to a changing context, the evidence base is also dynamic – new research is produced, and existing data can be subject to new analysis or interpretation in the light of changed circumstances or political priorities.

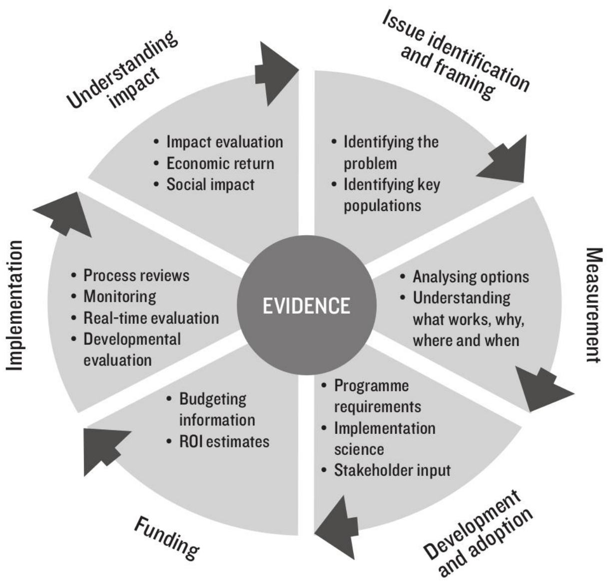


Figure 8.1: Evidence. Source: The authors.

Robustness and fitness for purpose are crucial elements of evidence – indeed, they are arguably part of what turns information into evidence. However, this often also produces tensions between ideal research designs and what is achievable within time-scales and budgets.

Different bodies, sectors, worldviews and research traditions have their own understandings of what constitutes 'robust' evidence. In some instances, the rigour required relates to specific risks, such as potential life-threatening consequences, as may be found in the health sector, or risks involving major financial investment. In contrast, a much lower standard may be the norm for lower financial or social risk initiatives or innovative/pilot implementations.

The National-led government's social investment approach had a strong focus on data. But data is not evidence. Neither are assertions, aspirations or anecdotes. Data is a crucial component, but it needs evaluative thinking, analysis and sense-making to make informed choices. A key element of that is making explicit the assumptions behind those choices.

The producers of evidence – those analysing the data – do so for different purposes and to different time imperatives. Researchers may be more concerned with longer-term analysis, system-level effects and what might be considered a degree of abstraction from the 'real world'. At the same time policy-makers and service providers are more concerned with pragmatic and shorter-term issues. Here the risk is that a results-driven culture could crowd out more reflective practice.

We also need to distinguish between the quality of individual pieces of evidence, and the overall strength of a body of evidence. Many frameworks have been developed to judge the quality of research and evaluation. What many of them have in common, when looking at individual pieces of evidence, is an assessment of reliability, robustness, transparency, validity and rigour – expressed in a variety of forms, and subject to much debate on interpretation.

Examples include:

- Quality in Qualitative Evaluation: A framework for assessing research evidence from the UK Government Chief Social Researcher's Office5 (in turn based on a review of 29 qualitative assessment frameworks).
- OECD-DAC Quality Standards for Development Evaluation.6
- Guidance and Protocols from the Campbell and Cochrane collaboration7 (geared more towards systematic reviews than evaluation).

Different audiences have different concerns regarding 'quality evidence'. At the point of design of policies or interventions, the emphasis is on the accumulated body of knowledge, and the extent to which it can be considered useful and reliable for the problem/challenge it is trying to address.

Approaches such as those mentioned above refer to a hierarchy of evidence ranging from the most robust (generally systematic reviews or randomised control trials) to the least reliable (anecdotal case studies or other unstructured qualitative approaches). Unfortunately, what all these approaches have in common is a focus on the method, and not on its appropriateness or feasibility. By this we mean whether the approach is appropriate for the population of focus – are cultural norms addressed, has it been undertaken in a culturally appropriate way, does it address what matters in the context for which the analysis is being used? Feasibility goes beyond the technical to include issues such as the impact on providers, and indeed on the person to whom the data relates.

The purpose of these hierarchies is to give confidence in the findings by minimising the risk of, or susceptibility to, bias. However, this is not an automatic guarantee of quality. In reality, the challenge is often how to prove that poor or partial evidence is being used well, rather than that good evidence is being used.

What seems clear is that there is a capacity gap when it comes to understanding what data is useful for both policy development and frontline service delivery organisations. It should not be forgotten that data can be qualitative as well as quantitative – especially when attempting to measure changes in behaviour or well-being.

In the case of evaluation, practitioners and commissioners may be more interested in technical aspects of how evidence was collected, whereas policymakers or funders may want to understand the quality of the programme, or deepen their understanding of the problem, by considering the strength and credibility of the evidence base. However, factors such as the extent to which the evidence is applicable to the local context or directly addresses the specific policy problem should also be considered, as should clarity on what the evidence can and cannot say and, indeed, how it will be viewed by stakeholders.

In assessing the effectiveness of interventions, there is also often an assumption that the administrative/financial convenience of a programme or funding stream is the unit of assessment that matters to service providers and end users, when in fact they are often providing or receiving a range of different, often interlocking services that together contribute to the desired outcome. New approaches, such as collective impact or user/person-centred evaluation, are beginning to take a broader view of contributions to impact, drawing on a range of methodologies.

EVIDENCE OF EFFECTIVENESS OF INTERVENTIONS

A recent paper by Rotheroe and Joy for New Philanthropy Capital (NPC) collated what has been learned about measuring the impact of charity sector investments aimed at improving people's outcomes.[8] The authors argue that impact measurement has two key purposes: first, to use data to learn, improve and hone the performance of the organisation delivering the services; and second, to demonstrate to a wider audience the impact the interventions are having on their targeted population. We focus on the second purpose.

Social systems are complex, people are adaptable and the contexts within which they are embedded are dynamic – combinations of policy, people, economic and social conditions are generally non-repeatable.[9] Complex systems theory tells us that we will only ever have partial knowledge, and a cause and effect relationship is only knowable in retrospect. Importantly, each player in the system will frame the system in their own way based on their perspective and partial knowledge. Some will see complexity in simple problems, while others frame complex issues in simple linear ways. Drawing on multiple perspectives can help us to 'know', but there will always be limits to what can be known about what works in social systems.

Accepting that knowledge will always be imperfect, we still need to learn as much as possible about the impact of interventions, and under what conditions they work best. The findings should then be shared in an open and transparent manner so that learning can accumulate. It is also important to know why any impact is or is not occurring in order to know whether replication or scaling up of interventions is possible in other settings.

This is not as straightforward as it seems. The National-led government targeted social sector spending on those most in need (mostly quadrant D in the Productivity Commission's Better Public Services report).10 The life circumstances of many of New Zealand's most vulnerable are relatively complex. For example, it is common for them to have combinations of mental health issues, drug addiction, contact with the justice system, family violence and poverty, and they are often participating in a range of programmes or interventions. This challenges not only the fragmented way in which interventions are designed and delivered, but also the ways in which we make sense of evidence about those interventions.

Kurtz and Snowden's 'sense-making' Cynefin framework challenges some of the basic assumptions of order, rational choice and intentional capability underpinning the evaluation and use of evidence.11 It is important not to assume that everything can become known; that cause and effect relationships are repeatable; and that predictable-meaning interventions can be evaluated and scaled.

This issue of scale is important, as it highlights a tension between social sector programme design and funding. Programme design is increasingly person-centric, whereas funding is increasingly reliant on population-level analysis that has identified target audiences. Large data do not necessarily tell the same story or have the same time-frames as small data, as much of the richness and detail has been stripped from the community from which it is drawn. The question of what inferences can and can't be drawn from data without extensive context is key to assessing the relevance and robustness of evidence.

Overseas experience

In a period of global austerity, the assessment of social programmes has been ramped up. New Zealand is not the only nation grappling with generating evidence about what works to make good social investment decisions. It is beyond the scope of this chapter to systematically assess the state of knowledge across multiple jurisdictions, but three significant initiatives from the United States and the United Kingdom are briefly discussed below.

US initiatives

Haskins and Baron provide an overview of the US social intervention programmes commonly called the Obama initiatives.[12] The approach has been to select an important social problem, identify evidence-based interventions that could address it, seek funding, and then set in place continuous monitoring and evaluation to ensure projects are faithfully implemented.

The authors concluded that federal and state governments annually spend billions of dollars on programmes that show little or no positive impact. In addition, billions are spent on programmes that have never been robustly evaluated. Haskins and Baron also point out the gap still exists when it comes to acting on the evidence. Since 1990, nine in ten well-designed evaluations of large-scale federal social programmes found modest or no impact for their participants, and yet few changes were made to the programmes.

The push to implement what came to be called the Obama initiatives began in 2006 when a review of 115 evaluations of federal government spending of over $3 billion on 105 science, technology, engineering and maths (STEM) programmes was conducted.[13] Using the randomised controlled trial method (RCT), the review found only ten (9 per cent) of the evaluations were ‘robust enough’ to demonstrate impact, six (5 per cent) had weak or no effects on educational outcomes, only four (3 per cent) were effective and the rest were unknown. To put this in perspective, only 3 per cent of a $3 billion spend on STEM programmes could be shown to be having a positive outcome for the participants. This review led to the establishment of six initiatives and the inclusion of funding in the 2011 budget for ‘about 20 rigorous evaluations’ of the most promising new programmes.

These initiatives are significant: they increase our understanding about what works, and whether programmes are good value for money. However, in their reliance on the RCT method and quantitative data as the only source of ‘robust’ evidence, they do take a narrow view of what constitutes evidence.

Washington State

The Washington State Institute for Public Policy (WSIPP) is an independent research faculty. Its goal is to provide Washington policy-makers and budget writers with a list of well-researched public policies that can lead to better statewide outcomes coupled with more efficient use of taxpayer dollars.[14] It uses a cost-benefit methodology that includes meta-analyses to quantify outcomes. The selection of programmes has been directed by the Washington state legislature since the 1990s, with the results publicly available.

The WSIPP cost-benefit method has been adopted in other jurisdictions. For instance, Investing in Children, a UK initiative run by the Dartington Social Research Unit,[15] uses it to help inform evidence about what works for children. Dartington tested and adapted the method for UK conditions. Increasingly, a 'value for money' component is being included in impact evaluations, something a social investment approach would consider necessary for decision-making.

The publicly available outputs from both Dartington and WSIPP (whose work is described at greater length in Chapter 3) provide a starting point about what works for a broad range of social interventions. This type of evidence can be used to underpin the design of new interventions, or the selection of existing programmes for implementation in other countries and conditions. Process evaluations help identify critical factors enabling the intervention to be 'implemented with fidelity'. This speaks to the need to better understand what works for whom within different contexts; it is common for international social programmes to be adapted for different cultural conditions.

United Kingdom

The UK government has made considerable investment in the What Works Network, more commonly known as the 'what works centres'. The goal is to better use evidence to make decisions to improve public services. There are seven centres (health, education, crime reduction, early intervention, ageing better, well-being, local economic growth) which cover policy areas receiving over £200 billion of public spending. The function of the network is to collate existing evidence, produce synthesis reports and systematic reviews, and assess policies and programmes against their agreed outcomes. The findings are publicly available and are aimed at policy-makers, commissioners and practitioners. Similar to the US experience, the UK government considered this investment necessary, as very little was known about the effectiveness of the programmes being delivered.

In summary, both governments recognised about 20 years ago that they knew little about the effectiveness of public spending on social programmes. There has been increasing pressure to better target interventions due to global economic downturns. So, what is the New Zealand situation?

New Zealand's situation

It's fair to say that New Zealand's understanding of what works is starting from a low base. For instance, a review of Cabinet papers by the State Services Commission (SSC) found only 7 per cent included a proposal for a formal evaluation or review and very few were clear about the theory of change to enable a review to be commissioned.[16] More recently, the then Minister for Social Development's comment in relation to intervention in the social sector made it clear that there is a dearth of evidence about whether we are doing the right things – that is, we don't know a lot about what works.

> Well, I'm very focused on the fact that we put $331 million out into communities. And we really don't know whether we're meeting the needs of that particular community and whether we're making a difference to the lives of the people that we're supposed to be changing.[17]

The National-led government conducted reviews of some interventions for a range of challenging social issues. For example, a stocktake of family and sexual violence found the government spends an estimated $1.4 billion each year in response to this social issue.[18] The review highlighted that there is fragmentation and duplication of services and that there are few published evaluations on the effectiveness of interventions. A similar stocktake has been undertaken on the parenting programmes delivered and/or funded by the government.[19] In both these cases, it is unclear if any action has been taken to improve or cut back on programmes that do not have evidence of effectiveness.

The lack of consistency in the quality of assessments is problematic here. Academia has long debated methods of data collection (traditionally the debate has been about quantitative versus qualitative methods).[20] As discussed by Amanda Wolf in the next chapter, the social investment approach in New Zealand is making considerable use of linked secondary (administrative) data to assess interventions, which raises issues of timing and data availability. However, new evaluation approaches are beginning to tackle some of these, and data is becoming more nimble. Approaches gaining increasing traction include implementation science, rapid impact assessment, and developmental and realist evaluation.

There has been considerable debate about developing consistent standards of evidence of effectiveness. A recent publication by the Social Policy Evaluation and Research Unit reviews hierarchies or standards of evidence developed and used internationally and discusses their implications for New Zealand.[21] Further detail about this can be found in Appendix 1.

As the lack of evidence about what works has become more visible, there has been a push on the supply side of evidence, in particular on making the findings about effectiveness accessible and in a useful form. Examples include embedding science advisers in agencies to improve the connection between policy and academia;[22] linking data via the Integrated Data Infrastructure (IDI) and then increasing its accessibility for research; beginning to link administrative and practitioner (NGO) data; the production of easily digestible evidence briefs;[23] and tapping into the explosion of websites and tools for use by practitioners and others (many government-funded).

Rutter argues, however, that there needs to be a focus on overcoming the barriers for the still lagging demand for evidence.[24] That said, there are signs in New Zealand of this being addressed. For example, Treasury (as part of the Budget process) is ‘demanding’ that new initiatives be underpinned by evidence of good practice and include a robust evaluation plan. As discussed above, ministerial demands for reviews of specific social sector programmes (e.g., family violence interventions and parenting programmes) will increase the understanding of what works, and the recently established Social Investment Agency may also help drive greater demand for evidence. A key challenge is having greater transparency around what evidence is already in existence and then having the capacity to use it to best effect.

In summary, however, New Zealand like many of its OECD counterparts is uncertain about the effectiveness of a large proportion of the country’s spend on social interventions.

CHALLENGES AND OPPORTUNITIES

A review of evaluation in New Zealand found no tradition of embedded evaluation in policy, regulation and interventions.25 The authors argued this denotes a lack of a culture of inquiry and capability to use evaluative findings, resulting in low overall evaluative effort. It is well accepted that monitoring and evaluation are critical to provide feedback loops about effectiveness to help inform social investment decisions. So why are they not embedded in programmes to any great degree?

Barriers to evaluation of interventions

The literature on barriers to conducting evaluations is scattered and not particularly coherent. One exception is a summary based on an Australian study by the Sax Institute. The study drew on the perspectives of both policy-makers and researchers to identify the barriers and facilitators to the evaluation of health policies and programmes.26 The authors identified six consistently raised barriers as to why quality evaluations are not conducted in Australia, and some of these are supported in other literature. The key barriers they identify are: time-frames, funding, political influence, caution over anticipated outcomes, skills and ability of policy agency staff, and lack of an evaluation culture. It is worth noting that many of these barriers are interconnected and operate at either the intervention or system level. And there are others.

Time-frames. Evaluators have long lamented that evaluations are usually an afterthought and frequently initiated late in the process. The failure to include them in the design of interventions from the outset leads to the non-establishment of data needs up front, making it difficult to form feedback loops.27 All too often there is no funding left for an evaluation, and there is inadequate time to conduct a robust one, resulting in small evaluations (usually process and not impact) that are limited in scope.28 It is also an inescapable fact that outcomes and longer-term impacts are generally measurable too late to inform decisions on next-generation programmes.

Funding. The initial budget for an intervention seldom covers an evaluation. A recent review of Canada's evaluation policy found the average cost of one to be $400,000 – the cost of evaluations is trending downwards and is inversely correlated with the number undertaken (more=less cost).29 In the New Zealand context, Gill and Frankel estimated the full cost of a formative (process) evaluation at $50,000–$100,000, and a full-blown double-blind summative (outcome) evaluation at $10 million.30 Evaluation design and associated costs need to be proportional to the size and value of the intervention; that is, fit for purpose. This aside, we do know that no or inadequate funding compromises both the scope and robustness of monitoring and evaluation, including its commissioning to an independent external evaluator or whether it is done in-house.31

Political influence. Motivations about desired outcomes also influence what evidence we choose to focus on, and what we choose to ignore. Evidence, for instance, is not the only input into policy decision-making. Prebble provides an excellent description of the relationship between politicians and public servants, highlighting their different motivations in using evidence.32 Both desire to make a difference, but while a minister wishes to use it to defend and explain policy, she/he also has an underlying motivation to build the majority to retain power. This means that our politicians will at times be selective about what evidence they use (and if they use it at all).

There can also be pressure from above for a programme to succeed. For instance, Haskins and Baron identified political constraints on the demand for evidence in decision-making, saying 'politicians focus on costs, the needs and desires of their constituents, the position of their party leaders, public opinion, their own political philosophy, pressure from lobbyists, the position favoured by people and groups that finance their campaigns, and a host of other factors in making decisions about how to vote on program proposals'.33 Political pressure influences the availability of funding, whether an evaluation goes ahead, and even the focus of the evaluation. Timeliness, in particular incompatibility between election cycles and the time needed for an intervention to demonstrate outcomes, further interferes with the number of robust evaluations conducted.34

Caution over anticipated outcomes. Set within a culture of not being able to fail, there is often a fear that should an evaluation produce negative results (i.e., no impact, harmful), it will affect the future funding of the intervention. This was emphasised at a recent workshop discussion about impact measurement, where a number of non-government organisations (NGOs) expressed reluctance to monitor and evaluate due to an expected punitive response from the funding agencies – withdrawal of funds. Fear of the findings also leads to evaluation briefs being written to imply expectation of results, and critically many reviews and evaluations are not published. Not only is this a waste of limited funding, it prevents the sharing of knowledge to inform social investment decisions.[35]

Skills and ability of policy agency staff. This has been identified as a significant barrier both to evaluations being conducted and to the ability to engage with the findings. Schneider et al. found lack of capability resulted in an inability to prepare well to commission an evaluation and an underestimation of the time needed to plan and conduct one; it also influenced the overall evaluation culture and the consistency of practice.[36] A lack of skills has also been found to block an openness to feedback (e.g., new ways of doing things such as interactive or co-design approaches).[37] This can stifle innovation, prevent learning about effectiveness and hamper further demand for evidence for decision-making.

Culture of evaluation. When a culture of inquiry is lacking, it impacts on the value placed on generating evidence of effectiveness at all stages of an intervention from design to delivery. It also undermines the motivation to monitor and evaluate, and interferes with opportunities to share positive and negative experiences.[38]

Personal communication with evaluators highlights the need not to underestimate the impact that political influence and caution about outcomes has on whether and when an evaluation is conducted. Most evaluators can refer to an evaluation that was never published because the results were not the desired outcome, or one that was tightly directed and managed (from design to communication) to avoid unpalatable results occurring or being released. Political interference in the generation and sharing of evidence about effectiveness of social interventions is common across most jurisdictions and impacts on transparency and learning about what works. These challenges are discussed further in relation to system-level learning.

Even where there is a culture of evaluating in some form, a culture of sharing is often lacking (commonly imposed by agencies), both of methods and of findings.

Defining the problem. One final barrier concerns the different assumptions people hold about 'the problem' and what is needed to solve it. People's experiences, role in the system, values and partial knowledge lead to disagreements about making sense of the evidence and designing and implementing new approaches. New ways for different actors to work together need to be found.

Ways of helping monitoring and evaluation include standardising or partly regulating approaches to build a culture of evaluation over time; providing tools and checklists for policy staff; and having champions or leadership at high levels in government agencies to increase the likelihood of quality feedback loops being included in all aspects of programmes from design to delivery.[39]

New directions

When he was the Minister of Finance, Bill English began using the social investment approach to try and bring about a change in our public institutions. National government ministers, via Treasury and the Budget process, demanded that evaluations be included in any bids for new initiatives and required their ministries to take a holistic approach in designing interventions. This is described as having the child/person/family at the centre of the intervention. The most well-known of these include Whānau Ora, the Social Sector Trials, the Children's Teams and more recently the place-based initiatives (the brainchild of three different ministers: Bennett – South Auckland, Tolley – Tairāwhiti East Coast, and Parata – Te Tai Tokerau Northland).

These interventions represent a more complex approach to investing in social interventions and this has implications for learning about what works. Let's use the Children's Teams as an example:

> The Children's Teams recognise that no single agency alone can protect vulnerable children. Children's needs are multi-faceted. Under this model, agencies work together, share information and provide services in a co-ordinated way together with families/whānau and the community to keep children safe. This approach requires accountability at every level – from the chief executives of government agencies in Wellington to the frontline workers interacting directly with the children and their families/whānau.[40]

This programme description implies that any impact will come about through collective input, with causation not being attributable to any one service or agency in isolation. This means that evaluating what is working, and why, is also more complex, and that the standard pre-post evaluation of one programme is insufficient to inform the impact of these types of programmes. Evaluators are responding and a number of 'new' methods and approaches have emerged, four of which are discussed below.

Evaluating for collective impact

Kania and Kramer state that any large-scale social change requires broad cross-sector coordination.[41] Collective impact is a relatively recent collaborative approach to resolving or mitigating social issues. It is defined as occurring when 'a group of actors from different sectors commit to a common agenda to solve a complex social (or environmental) issue'.[42] It is easy to see the similarity in this definition and the Children's Teams description where no one agency or service can claim the attribution of impact – any impact is reliant on the input of all actors. Inherent in collective impact is a common agenda that provides a shared vision for change. Measuring the success or failure of this requires a shared system to measure progress and impact over time, with impacts attributed to the collective itself, not individual programmes or agencies.43 New Zealand has put considerable effort into data-sharing and it will be interesting to see how that helps the evaluation of collective impact in the future.

While collective impact will help overcome service delivery fragmentation and duplication, it challenges current funding, commissioning and reporting arrangements, which remain reliant on individual not-for-profit service providers demonstrating the attribution and impact of their interventions.

Developmental evaluation

Two of the main criticisms of evaluation are the lack of 'real time' assessment (see *Time-frames* above) and its perceived inability to deal with complex systems. Developmental evaluation has emerged in response to these criticisms.44 The approach has been designed specifically to 'guide adaptation to emergent and dynamic realities in complex environments'. Patton argues that it is particularly well suited for interventions for complex social issues where there is uncertainty about how to solve the problem and little agreement between the stakeholders on how to proceed. The main differences between developmental evaluation and traditional evaluation approaches include:

- the evaluator's role is an internal team function (not external and independent);
- evaluation results provide user-friendly 'real time' feedback in response to what is emerging (not formal reports at specified time intervals);
- the measures are developed quickly, and can change as the process unfolds and include multiple methods and sources (not measuring against predetermined goals); and
- evaluation is designed to nurture learning (and not engender a fear of failure).

Developmental evaluation appears well suited to new initiatives and can ensure evaluative thinking is embedded in programme design and implementation from the outset. An increase in evaluation capability and capacity should emerge from greater use of this approach. It does, however, challenge traditional notions of validity, generalisation, robustness and independence, which may slow its uptake.

Using big data to see impact across time

There is a focus on making better use of secondary data to understand what is working. In New Zealand, there has been considerable investment in the Integrated Data Infrastructure (IDI), which brings together administrative data from multiple government agencies. Access to the IDI is available to researchers in both the public and private sectors. One of the strengths in using big data of this nature is the opportunityto use quasi-experimental designs and follow matched cohorts over time to better understand the impacts (intended and unintended) of a combination/mix of services.[45] Analysis of big data has the potential to allow researchers to investigate change across generations. Jonathan Boston (Chapter 4) explores the intertemporal dimension of social investment and raises the challenges of impact not being realised for at least a generation. Research using big data can also support key intervention points in the life-course for maximum impact, and help assess who is receiving interventions – that is, is an intervention actually being received by the proposed target population? New Zealand is currently focused on the linkage of provider/frontline data with agency administrative data to provide a better understanding of what is working.

There are, however, limitations to relying solely on the analysis of secondary data – it may tell you that an intervention is working (or not) but will not tell you why. The use of big data alongside well-designed evaluations is still essential. This point is expanded on by Amanda Wolf (Chapter 9), who argues that data speaks to correlation, whereas investment decisions are still very much guesswork.

Social return on investment

The concept of social return on investment (SROI) has emerged in response to the growing interest in measuring the social impact of interventions. Described as 'stakeholder-driven evaluation blended with cost-benefit analysis tailored to social purposes',[46] it puts a monetary value on the reported impact of the intervention and compares it with the costs of achieving that impact. According to Rauscher, Schober and Millner, SROI is a form of cost-benefit analysis and thus a form of economic evaluation – 'the term investment is used instead of cost, and social return, in the sense of return on investment for society, is used instead of benefit'.[47]

This method of measuring the impact of social investment appears to be very relevant. The main criticism of it is that it monetises conditions that are not of monetary value. This issue is discussed by Destremau and Wilson in Chapter 2. However, SROI is starting to shift the debate away from the costs of social intervention and towards the benefits of investing in people's potential, and this is a positive trend.

LEARNING ABOUT EFFECTIVENESS AT THE SYSTEM LEVEL

The discussion to date has largely focused on learning about the effectiveness of individual interventions. This next section turns to the system level, and what is needed to learn about effectiveness for social investment.

Many social issues are considered complex (e.g., family violence), with general acceptance that no single answer or method will solve them. The context within which any social intervention is implemented is continually changing, that is, society is not static, it is constantly changing and transforming.48 Our people, organisations and institutions must become adept at adaptation and learning over time. There are multiple players in the system who can enable this. In the public sector, for instance, there are research and evaluation teams supplying evidence; agencies that fund the generation of evidence; suppliers of services who both use and are a source of evidence; policy- and decision-makers who demand evidence. We have ministers, academia, not-for-profit service providers, the charity and philanthropic sector, iwi, and private-sector research and evaluation providers (see Figure 8.2). Each will have some knowledge of the social system and a set of assumptions about how it works. Each may also want different types of evidence to fulfil the needs of their roles.

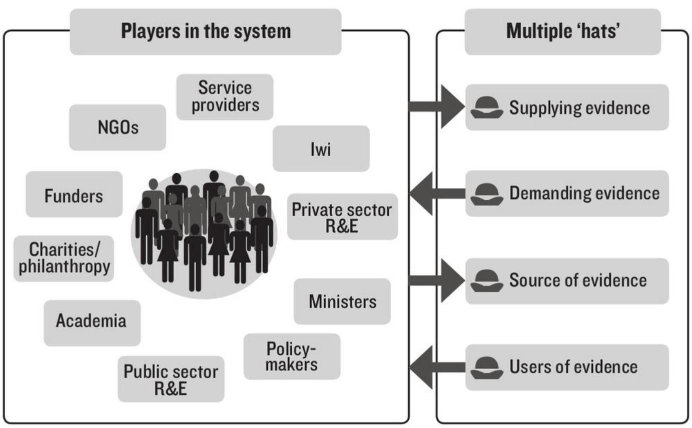


Figure 8.2: Many players and multiple roles. Source: Gail Kelly, based on 'A Learning System for Evidence Informed Social Policy', NZIER Insight 64, 2016, p.2.

The Productivity Commission's 2015 report on the social service delivery system argued that if we are to lift the effectiveness of interventions by using evidence to make better social investment decisions, it will require a system that learns over time.49 In their view, a core component of such a system (in addition to knowing about what works) is enabling new ideas and ways of doing things to enter the system.

This supports the findings of the New Philanthropy Capital review of what has been learned about impact measurement in the charity sector – it found using data to learn and improve is equally as important as knowing about what is working.[50] This level of learning is focused on the organisations delivering the initiatives or interventions. That is, investment leads to improvements in the structures within the organisations themselves, meaning there is an impact of the investment (funding) on the investee. Organisations or practitioners become more effective and efficient at what they are doing. This could manifest through better infrastructure to collect data, improved capability to use evidence, more and better relationships between practitioners, or new relationships with universities and others. If we extrapolate this thinking out beyond investment by philanthropy and into the system of social service delivery by government, it reminds us that the institutions (key players in the system such as the agencies and NGOs) must continue to streamline and change the way they do things. Measuring the impact of the investment at this level is seldom undertaken.

Perhaps an understated challenge here is the tension created through competition.

The system is set up in such a way that competition occurs at multiple levels, and while it can be argued that competition encourages innovation, in a funding/investment-limited system it can also create a culture of risk-averseness, support the need to present impact in the best possible light, and stifle learning.[51] In other words, competition can reinforce many of the barriers to monitoring and evaluation discussed earlier. There is also competition for political power between ministers, and non-evidence-informed ‘ideas’ are implemented so that portfolio holders are seen to be doing something. We see the negative impact of agencies competing for Budget funding, and of NGOs competing for funding to deliver social programmes.

New Zealand is not alone in trying to address these challenges at the system level, and different jurisdictions have chosen to focus on different aspects of the challenge.

Other countries’ practices

These range from producing evaluation guidelines, investing in infrastructure to capture evidence about what works, making programme evaluation mandatory, and building capacity for both the demand and use of evidence. The most promising approaches are discussed below.

Clearing-houses in the US

As discussed earlier in this chapter, the federal administration under Obama developed an evidence-based strategy (Results for America) focused on six areas of social intervention.[52] Administrative processes were used to influence the demand for evidence through funding mechanisms (institutionalising demand).

Simultaneously, the administration invested in building capacity to better engage and use evidence through budget funding allocations, and in building infrastructure (clearing-houses) to capture the evidence about how well interventions were working.

A recent review of 51 clearing-houses looked at how well this evidence 'market'53 is working – it found a long, fragmented supply chain with more information suppliers than expected, and on the demand side, several types of users with different needs but limited demand from decision-makers.54 The gaps identified by the review provided the evidence needed on how to strengthen the system. Interestingly, the review identified the emergence of a new player in the system – intermediaries who make sense of the evidence and provide support/advice on social investment decisions.

Canada's evaluation legislation

The Canadian government formally incorporated the need for programme evaluation in 1977 with a policy that was amended in 2009. As outlined by Gauthier and Kishchuk, the objectives of the policy were 'to create a comprehensive and reliable base of evaluation evidence that is used to support policy and program improvement, expenditure management, Cabinet decision-making, and public reporting'.55 A review in 2013 found the policy's purpose had oscillated through the years between accountability and reporting on the one hand, and programme improvement on the other.56 Government agencies are responsible for evaluating programmes, about 150 of which are conducted each year.

The review found that Canada is now in the position where 100 per cent of direct programme spending is evaluated every five years on a rotation cycle; there is movement towards evaluating portfolios or clusters of programmes as opposed to individual programmes; and there is increased use in decision-making and useful cross-evaluation insights by senior managers.57 Despite its top-down regulated approach, the policy has contributed to the increase in both the production (supply) and use (demand) of evidence and to embedding an evaluative culture (learning) in the Canadian public sector.

In 2016, the Policy on Evaluation was replaced by the Policy on Results, which aims to improve results across government, and enhance the understanding of the results achieved, and the resources used. Key changes include the introduction of departmental results frameworks focused on core responsibilities and progress towards results, and how these contribute to government priorities; more responsive evaluation (i.e., rather than every five years) driven by needs, risks and priorities; and clear assignment of responsibilities from the Treasury Board through to evaluation departments.

The UK's investment in capability

The What Works Network discussed earlier receives funding to create learning at the system level. For instance, in addition to collating existing evidence on policies, programmes and practices, producing synthesis reports and systematic reviews, and assessing programmes against agreed outcomes, the network also makes findings accessible, encourages their use for decision-making, runs advice panels that bring academia and government together, and promotes cross-agency learning.

Unfortunately, while the network provides evaluation guidelines for the civil service, unlike Canada, there is no requirement or incentive for departments to generate and use feedback, and few consequences for not doing so. At the time of writing, we are not aware of any review of the investment in the network.

Other approaches to building knowledge in the system

Several other jurisdictions have developed evaluation guidelines. For example, the New South Wales government has introduced a framework (2016) to 'guide the consistent and transparent evaluation of government programmes to inform decision-making on policy directions, programme design and implementation'.[58] This is very similar to a South African framework (2011) developed in response to the recognition that evaluation is applied sporadically in government and is not adequately informing planning, policy-making and budgeting.[59] The Australian Capital Territory (ACT) has a policy requiring agencies to provide an annual evaluation plan as part of their performance and accountability framework (2010).[60] While not specifically focused on building knowledge about what works for social interventions, it does include improving the performance of the programmes provided at community level. While the formal recognition of evaluation guidelines is an important first step, these initiatives are unlikely to achieve learning within the system if there is no real incentive to use them and no consequences if agencies do not.

The final approach worth mentioning relates to building incentives within the system to use evidence to underpin the design and delivery of social interventions. The Australian federal government has put in place funding incentives for interventions that have at least a basic level of evidence. The Communities for Children Facilitating Partners organisation (Commonwealth Department of Social Services) currently ensures that 30 per cent of its funding goes to service providers that at least have a theory of change in place; it is proposed to lift this to 50 per cent in the near future.[61]

CONCLUSION

When it comes to making good investment decisions about spending for social interventions, we need to know what works, for whom and under what circumstances. In addition, learning for effectiveness must include investment in infrastructure to capture what is known, and to build the capacity and skills of the public and community and voluntary sectors to engage and use evidence.

The National-led government made it clear that its social investment approach was focused on those in society who are our most vulnerable and at risk of not achieving their potential in life. Many of these families and whānau face complex challenges and conditions, rendering the traditional one-off intervention ineffective in bringing about positive change and breaking intergenerational cycles. This is leading to the design and implementation of complex social programmes that in turn require monitoring and evaluation to be embedded in programmes from the outset.

New Zealand has largely focused on the analysis of administrative data to underpin social investment decisions. It does not require the public sector to monitor and evaluate social programmes, either new or existing, and the choice to evaluate or not lies with individual agencies. Frequently this does not occur; the public sector's lack of capability to commission and use evaluation findings is well-documented, and the lack of an evaluative culture is a barrier to building knowledge across the system. Critically, there is no requirement for the monitoring and evaluation findings of government-funded interventions to be published, which hampers innovation, improvement and cross-sector learning.

In summary, we think the key areas to focus on for evidence for social investment are:

- making better use of the evidence we do have – this will put the focus on building capacity and capability to use evidence;
- building sense-making and interpretation capability which will require us to look at evidence in new ways, use new approaches to collecting evidence, and move to real-time feedback and evaluation. Importantly this will include building an understanding of the risks of using evidence in a dynamic and volatile world; and
- adapting funding, reporting and governance mechanisms so they can evolve in line with new ways of defining problems (including who is affected), designing and implementing interventions, and understanding their impact. This in turn will support the generation and sharing of useful evidence.

The government has a duty to demonstrate it is using citizens' dollars well. The 'flaws' in our system have been there for a long time; perhaps the social investment approach provides a window of opportunity to change the way we approach learning about effectiveness.

Appendix 1: A framework for assessing evidence – the Superu evidence rating scale

A framework or rating scale – potentially a standard – of evidence could be a helpful tool to contribute to the understanding of what works. It could be used by a range of actors:

- By policy-makers to understand what has worked before based on evidence from home or overseas, to design new interventions;
- By programme promoters wanting to know whether their interventions are effective, and how robust the evidence is to support that. This might be ministers, but could equally be some of our larger NGOs;
- By funders to make decisions on allocating funding between different programmes or providers within a specific policy or programme area;
- By service providers to understand how to demonstrate the effectiveness of their programmes and/or to support bids for funding.

In order to assess the validity of the evidence, rather than just the method, the framework needs to consider two dimensions – the effectiveness (or otherwise) of the intervention, and the strength of the evidence for that finding. The scales can be combined into a two-dimensional array, and assessments can inform decisions on whether an intervention operating in New Zealand should be continued, scaled-up or stopped, or whether interventions operating overseas could be considered for implementation in New Zealand. To access continuing support, New Zealand interventions should have, or be working towards, good evidence which benefits participants. Overseas interventions should have very good evidence on benefits and information about how they work so that we can judge how good a fit they are likely to be for New Zealand.62

The strength of evidence scale consists of five levels. The levels correspond not just to ascending rankings for strength of evidence, but also to expectations about the type of evidence that can and should be generated about an intervention as it matures and grows. Level 1 is appropriate for new interventions that are as-yet untested, but have a good theoretical basis and an evaluation plan. Level 4 is appropriate for mature, large scale interventions with a strong evidence base. Levels 2–3 guide an 'evidence journey', describing the intermediate steps between level 1 and level 4. There is also a level 0 which applies specifically to pilot initiatives, where there may be an appetite for higher risk, but also a requirement for robust evidence gathering as part of the intervention. This addresses the potential risk of stifling innovation, but reflects the fact that there needs to be evidence of robust logic and evaluation planning for such pilots.

Level 4 of the scale requires large-scale implementation and a very strong evidence base. Interventions that reach this level will be rare, especially among those that operate only in New Zealand, but we think it is reasonable to expect New Zealand-only interventions to develop their evidence base over time, reaching level 3 within three to ten years. Providers and funders of very large or high-risk New Zealand interventions might wish to put in extra effort to reach level 4.

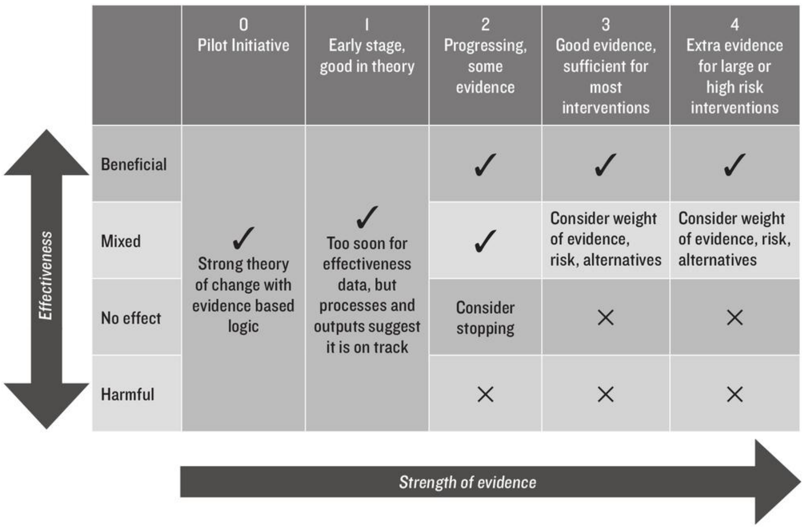


Figure 8.3: The Superu evidence rating scale. Source: http://superu.govt.nz/resources/evidence-rating-scale.

The strength of evidence scale has been designed to be inclusive of different evaluation traditions. It should be able to be used to judge the strength of evidence from any evaluation approach, so long as the evaluation has:

- addressed questions about efficiency, effectiveness, and impact;
- used recognised methods;
- been rigorously carried out. In particular, both western and Māori approaches to evaluation can be used to meet the criteria.

While the strength of evidence scale grades interventions according to the strength of their supporting evidence, it does not specify what the evidence says about the intervention. An intervention may be supported by evidence that meets level 2 to 4 criteria, but the evidence may show that the intervention has had beneficial effects on participants, or it may show no effect, mixed effects, or harmful effects. The effectiveness scale can be used to provide more information on interventions in levels 2 to 4, specifying whether they are beneficial, ineffective, harmful, or have mixed effects.

The effectiveness scale can only be used for interventions that have some evidence about effectiveness. Interventions at level 0 or 1 of the strength of evidence scale can only be assigned to the ‘not applicable’ category below. This includes interventions that are at level 1 because they do not yet have any evidence about effectiveness, or because they have evidence, but it does not meet level 2 criteria.

A combination of the two scales gives an indication of the fundability of an initiative – identifies that it could be funded, not that it should be funded.

A similar, but more stringent approach can be used to assess evidence from overseas, reflecting the higher risks in adapting something that has worked in a different social and political environment.

The framework looks at the body of evidence for an intervention, not at the quality of individual studies. It considers specific interventions rather than broad topics – other tools including systematic reviews are more suited to that type of analysis.

A fundamental aspect of the framework is that it is designed to be progressive, and to encourage the development of evidence and analytical capacity, and to be of value in a range of applications to a variety of stakeholders. It can be used as a self-assessment tool and may in future be developed further to enable external review and validation of programmes.

It represents a first step in the development of evidence standards for the social sector, which should enhance the availability and quality of evidence needed to support a social investment approach.

References

Ball, C., S. Crichton, R. Templeton, S. Tumen, R. Ota and C. MacCormick, *Characteristics of Children at Greater Risk of Poor Outcomes as Adults*, Analytical Paper 16/01, Treasury, February 2016

Bresciani, M., ‘Identifying Barriers in Implementing Outcomes-Based Assessment Program Review: A Grounded Theory Analysis’, *Research and Practice in Assessment*, 6 (Summer 2011)

Creswell, J. W., *Research Design: Qualitative and Quantitative Approaches*, Sage Publications, Thousand Oaks, 1994

English, B., ‘Speech to the Treasury Guest Lecture Series on Social Investment’, presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015

Gauthier, B., and N. Kishchuk, ‘Impacts of the 2009 Government of Canada Policy on Evaluation of the Federal Government Evaluation System’, presentation to the Australasian Evaluation Society Conference, Melbourne, 7 September 2015

Gill, D., and S. Frankel, ‘Learning the Way Forward’, in S. Frankel and J. Yeabsley (eds), *Framing the Commons*, Victoria University Press, Wellington, 2014

Gluckman, P., *The Role of Evidence in Policy Formation and Implementation*, Office of the Prime Minister's Science Advisory Committee, Wellington, 2013

Haskins, R., and J. Baron, *Building the Connection Between Policy and Evidence*, report commissioned by NESTA, United Kingdom, September 2011

Henwood, K., and N. Pidgeon, 'Qualitative Research and Psychological Theorizing', *British Journal of Psychology*, 83 (1992)

Hutchins, R. M., *The Learning Society*, Penguin, Harmondsworth, 1970

Kania, J., and M. Kramer, 'Collective Impact', *Stanford Social Innovation Review* (Winter 2011)

Kurtz, C. F., and D. J. Snowden, 'The New Dynamics of Strategy: Sense-Making in a Complex and Complicated World', *IBM Systems Journal*, 42, 3 (2003)

Neuhoff, A., S. Axworthy, S. Glazer and D. Berfond, *The What Works Marketplace: Helping Leaders Use Evidence to Make Smarter Choices*, The Bridgespan Group, April 2015

New Zealand Productivity Commission, *More Effective Social Services*, final report, August 2015

OECD/DAC Evaluation Network, *Quality Standards for Development Evaluation*, 2010, www.managingforimpact.org/resource/quality-standards-development-evaluation (accessed March 2017)

Patton, M. Q., 'Evaluation for the Way We Work', *The Nonprofit Quarterly*, 13, 1 (2006)

Patton, M. Q., *Developmental Evaluation: Applying Complexity Concepts to Enhance Innovation and Use*, Guilford Press, New York, 2010

Prebble, M., *With Respect*, Institute of Policy Studies, Victoria University of Wellington, 2010

Preskill, H., M. Parkhurst and J. Juster, 'Guide to Evaluating Collective Impact', Collective Impact Forum, 2014, https://collectiveimpactforum.org/what-collective-impact (accessed November 2016)

Rauscher, O., C. Schober and R. Millner, *Social Impact Measurement und Social Return on Investment (SROI)-Analysis: New Methods of Economic Evaluation?*, Working Paper, University of Economics and Business, Vienna, June 2012

Rotheroe, A., and I. Joy, *Smart Money: Understanding the Impact of Social Investment*, New Philanthropy Capital, London, September 2014

Rutter, J., *Evidence and Evaluation in Policy Making: A Problem of Supply and Demand?*, Institute for Government, London, 2012

Schneider, C., A. Milat and G. Moore, 'Barriers and Facilitators to Evaluation of Health Policies and Programs: Policymaker and Researcher Perspectives', discussion paper for the International Conference on Public Policy, Grenoble, 26–28 June 2013

Schön, D. A., *Beyond the Stable State: Public and Private Learning in a Changing Society*, Penguin, Harmondsworth, 1973

Shaxson, L., 'Is Your Evidence Robust Enough?: Questions for Policy Makers and Practitioners', *Evidence & Policy*, 1, 1 (2005)

Social Policy Evaluation and Research Unit, 'Effective Parenting Programmes', *What Works*, March 2015, www.superu.govt.nz/publication/what-works-effective-parenting-programmes (accessed November 2016)

Social Policy Evaluation and Research Unit, 'Standards of Evidence of Understanding What Works: International Experiences and Prospects for Aotearoa New Zealand', *In*

Focus, June 2016, www.superu.govt.nz/publication/in_focus_standards_of_evidence (accessed November 2016)

Social Ventures Australia, *Social Return on Investment: Lessons Learned in Australia*, prepared for Investing in Impact Partnership, February 2012, http://socialventures.com.au/assets/SROI-Lessons-learned-in-Australia.pdf (accessed November 2016)

Spencer, L., J. Ritchie, J. Lewis and L. Dillon, *Quality in Qualitative Evaluation: A Framework for Assessing Research Evidence*, Government Chief Social Researcher's Office, Cabinet Office, London, 2003, www.gov.uk/government/publications/government-social-research-framework-for-assessing-researchevidence (accessed March 2017)

State Services Commission, *Looping the Loop: Evaluating Outcomes and Other Risky Feats*, Occasional Paper 7, 1999, in S. Frankel and J. Yeabsley (eds), *Framing the Commons*, Victoria University Press, Wellington, 2014

The Social Research Unit at Dartington, 'Investing in Children: Cost Benefit', http://investinginchildren.eu/cost-benefit (accessed November 2016)

Tolley, A., 'Profit Making Companies and Social Services', press release, *Q+A*, TVNZ, 21 June 2015

Notes

1 B. English, 'Speech to the Treasury Guest Lecture Series on Social Investment', presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015, p.18, emphasis added.

2 'Interventions' refers to policies, programmes and practices.

3 The authors would like to express appreciation to Derek Gill for feedback on an earlier version of this chapter. The opinions expressed in this chapter are the sole responsibility of the authors and do not reflect the views of the IGPS or NZIER.

4 L. Shaxson, 'Is Your Evidence Robust Enough?: Questions for Policy Makers and Practitioners', *Evidence & Policy*, 1, 1 (2005), pp.101–11.

5 Cabinet Office/Government Social Research Profession, *Quality in Qualitative Evaluation: A Framework for Assessing Research Evidence*, London, 1 August 2003, www.gov.uk/government/publications/government-social-research-framework-for-assessing-research-evidence (accessed 7 September 2017).

6 OECD/DAC Evaluation Network, Quality Standards for Development Evaluation, 2010, www.managingforimpact.org/resource/quality-standards-development-evaluation (accessed March 2017).

7 The Campbell Collaboration, *Guidelines for Preparation of Review Protocols*, Policy Guideline Procedure, 1 January 2001, www.campbellcollaboration.org/images/pdf/plain-language/C2_Protocols_guidelines_v1.pdf (accessed 7 September 2017).

8 A. Rotheroe and I. Joy, *Smart Money: Understanding the Impact of Social*

Investment, New Philanthropy Capital, London, September 2014.

9 There is an old saying – you can never step into the same river twice.

10 New Zealand Productivity Commission, *More Effective Social Services*, final report, August 2015.

11 C. F. Kurtz and D. J. Snowden, 'The New Dynamics of Strategy: Sense-Making in a Complex and Complicated World', *IBM Systems Journal*, 42, 3 (2003), pp.462–83.

12 R. Haskins and J. Baron, *Building the Connection Between Policy and Evidence*, report commissioned by NESTA, United Kingdom, September 2011.

13 Ibid.

14 Washington State Institute for Public Policy, www.wsipp.wa.gov (accessed 7 September 2017).

15 Dartington Social Research Unit, www.dartington.org.uk/projects (accessed 7 September 2017).

16 State Services Commission, *Looping the Loop: Evaluating Outcomes and Other Risky Feats*, Occasional Paper 7, 1999, in S. Frankel and J. Yeabsley (eds), *Framing the Commons*, Victoria University Press, Wellington, 2014.

17 A. Tolley, 'Profit Making Companies and Social Services', press release, Q+A, TVNZ, 21 June 2015.

18 Amy Adams and Anne Tolley, 'Launch of New Family Violence Work Programme', press release, 29 July 2015, www.beehive.govt.nz/release/launch-new-family-violence-work-programme (accessed 7 September 2017).

19 Social Policy Evaluation and Research Unit, 'Effective Parenting Programmes', *What Works*, March 2015, www.superu.govt.nz/publication/what-works-effective-parenting-programmes (accessed November 2016).

20 See: J. W. Creswell, *Research Design: Qualitative and Quantitative Approaches*, Sage Publications, Thousand Oaks, 1994; and K. Henwood and N. Pidgeon, 'Qualitative Research and Psychological Theorizing', *British Journal of Psychology*, 83 (1992), pp.97–111.

21 Social Policy Evaluation and Research Unit, 'Standards of Evidence of Understanding What Works: International Experiences and Prospects for Aotearoa New Zealand', In Focus, June 2016, www.superu.govt.nz/publication/in_focus_standards_of_evidence (accessed November 2016).

22 P. Gluckman, *The Role of Evidence in Policy Formation and Implementation*, Office of the Prime Minister's Science Advisory Committee, Wellington, 2013.

23 Superu has produced easy-to-read reviews on a range of social sector issues to bring together what is known about what works: Superu, www.superu.govt.nz (accessed 7 September 2017).

24 J. Rutter, *Evidence and Evaluation in Policy Making: A Problem of Supply and Demand?*, Institute for Government, London, 2012.

25 State Services Commission in conjunction with the Treasury, 'Improving

Evaluative Activity in the New Zealand State Sector, 2003, in Frankel and Yeabsley (eds), *Framing the Commons: Cross-Cutting Issues in Regulation, 2005.*

26 C. Schneider, A. Milat and G. Moore, 'Barriers and Facilitators to Evaluation of Health Policies and Programs: Policymaker and Researcher Perspectives', discussion paper for the International Conference on Public Policy, Grenoble, 26–28 June 2013.

27 Rutter, *Evidence and Evaluation in Policy Making.*

28 M. Bresciani, 'Identifying Barriers in Implementing Outcomes-Based Assessment Program Review: A Grounded Theory Analysis', *Research and Practice in Assessment*, 6 (Summer 2011), pp.5–16.

29 B. Gauthier and N. Kishchuk, 'Impacts of the 2009 Government of Canada Policy on Evaluation of the Federal Government Evaluation System', presentation to the Australasian Evaluation Society Conference, Melbourne, 7 September 2015.

30 D. Gill and S. Frankel, 'Learning the Way Forward', in Frankel and Yeabsley (eds), *Framing the Commons.*

31 Schneider, Milat and Moore, 'Barriers and Facilitators to Evaluation of Health Policies and Programs'; Bresciani, 'Identifying Barriers in Implementing Outcomes-Based Assessment Program Review'.

32 M. Prebble, *With Respect*, Institute of Policy Studies, Victoria University of Wellington, 2010.

33 Haskins and Baron, *Building the Connection Between Policy and Evidence*, p.5.

34 Rutter, *Evidence and Evaluation in Policy Making.*

35 Schneider, Milat and Moore, 'Barriers and Facilitators to Evaluation of Health Policies and Programs'.

36 Ibid.

37 Rutter, *Evidence and Evaluation in Policy Making.*

38 Schneider, Milat and Moore, 'Barriers and Facilitators to Evaluation of Health Policies and Programs'.

39 Ibid.

40 Ministry for Vulnerable Children/Oranga Tamariki, 'Children's Teams', http://childrensactionplan.govt.nz/childrens-teams/model (accessed 7 September 2017).

41 J. Kania and M. Kramer, 'Collective Impact', Stanford Social Innovation Review (Winter 2011).

42 H. Preskill, M. Parkhurst and J. Juster, 'Guide to Evaluating Collective Impact', Collective Impact Forum, 2014, p.4, https://collectiveimpactforum.org/what-collective-impact (accessed November 2016).

43 Kania and Kramer, 'Collective Impact'.

44 See M. Q. Patton, *Developmental Evaluation: Applying Complexity Concepts to Enhance Innovation and Use*, Guilford Press, New York, 2010; M. Q. Patton, 'Evaluation for the Way We Work', The *Nonprofit Quarterly*, 13, 1 (2006), pp.28–33.

45 C. Ball et al., *Characteristics of Children at Greater Risk of Poor Outcomes as Adults*, Analytical Paper 16/01, Treasury, February 2016.

46 Social Ventures Australia, *Social Return on Investment: Lessons Learned in Australia*, prepared for Investing in Impact Partnership, February 2012, http://socialventures.com.au/assets/SROI-Lessons-learned-in-Australia.pdf (accessed November 2016).

47 O. Rauscher, C. Schober and R. Millner, *Social Impact Measurement und Social Return on Investment (SROI)-Analysis: New Methods of Economic Evaluation?*, Working Paper, University of Economics and Business, Vienna, June 2012, p.9.

48 See, for example, D. A. Schön, *Beyond the Stable State: Public and Private Learning in a Changing Society*, Penguin, Harmondsworth, 1973, and R. M. Hutchins, *The Learning Society*, Penguin, Harmondsworth, 1970, who coined the term 'learning society', where they argued that societies' institutions must become learning systems and drive their own adaptation and transformation.

49 New Zealand Productivity Commission, *More Effective Social Services.*

50 Rotheroe and Joy, *Smart Money.*

51 Ibid.

52 Haskins and Baron, *Building the Connection Between Policy and Evidence.*

53 The term 'market' is used to signal the objective of connecting and aligning creators of evidence (supply, e.g., clearing-houses, evaluators, non-profits) with decision-makers demanding evidence (e.g., policy-makers, practitioners, private and public funders). The purpose of the market is learning and continuous improvement.

54 A. Neuhoff et al., *The What Works Marketplace: Helping Leaders Use Evidence to Make Smarter Choices*, The Bridgespan Group, April 2015.

55 Gauthier and Kishchuk, 'Impacts of the 2009 Government of Canada Policy on Evaluation of the Federal Government Evaluation System'.

56 Ibid.

57 Ibid.

58 New South Wales Government, *NSW Program Evaluation Guidelines*, January 2016, www.dpc.nsw.gov.au/__data/assets/pdf_file/0009/155844/NSW_Government_Program_Evaluation_Guidelines.pdf (accessed 7 September 2017).

59 South African Government, *National Evaluation Policy Framework*, 23 November 2011, www.gov.za/documents/national-evaluation-policy-framework (accessed 7 September 2017).

60 ACT Government, *Evaluation Policy and Guidelines*, December 2010, www.cmd.act.gov.au/__data/assets/pdf_file/0004/175432/ACT-Evaluation-Policy-Guidelines.pdf (accessed 7 September 2017).

61 Department of Social Services, Australian Government, *Communities for Children Facilitating Partner: Operational Guidelines*, September 2014, www.dss.gov.au/our-responsibilities/families-and-children/programs-services/family-support-program/communities-for-children-facilitating-partner-operational-guidelines (accessed 7 September 2017).

62 For information on how this scale was arrived at, please see Social Policy Evaluation and Research Unit, 'Standards of Evidence of Understanding What Works'.

Chapter 9
Information requirements
Understanding in the social investment feedback loop

Amanda Wolf

INTRODUCTION

This chapter investigates the information required to make effective social investment decisions, with an emphasis on complementing data analysis with professionals' 'best guesses'.[1] As described by Treasury, the social investment approach means 'using information and technology to better understand the people who need public services and what works, and then adjusting services accordingly. What is learnt through this process informs the next set of investment decisions'.[2] Accordingly, those making social investment decisions use information about the characteristics of *recipients* of social interventions[3] and the attributes of those *interventions* in order to help people achieve better outcomes and to better manage the long-term costs to government.[4] The expected return on a service's effectiveness is the estimated difference between the likely outcomes in the absence of the service and those the service is predicted to actually achieve. Ideally, and non-controversially, these outcomes will be 'lives turned around, human potential realised, and a consequent reduction in future service use'.[5]

Information supporting the effectiveness of decisions can be considered 'better' if it meets key desiderata in each information domain, and if information from different domains is well-connected. With respect to the recipient, better information will more precisely and accurately delineate individuals' needs for social services – whether it be assistance with parenting, overcoming substance dependency, or support in dealing with disabilities. Information on other characteristics and circumstances, such as family, friends and community influences, and earlier experiences, may also be relevant for good decisions by drawing attention to enablers and barriers in a service-provision context.[6]

Decision-makers also need specific information about the ways social service interventions work, for whom, when and in what circumstances and at what cost in meeting recipients' needs. Thus, when considering the needs of a prospective recipient in anticipation of better future outcomes, information is also needed on the counterfactual situation in which future services must be provided for those whose desired outcomes have *not* been realised.

Recipient and intervention information is related in a feedback loop. As expressed by the then Minister of Finance, Bill English, ‘At core, social investment is a more rigorous and evidence-based feedback loop linking service delivery to a better understanding of people’s needs and indicators of the effectiveness of social services.’7 Information challenges concern matching a person’s need to a service.

At the point of a matching decision, two entirely separate streams of information must be brought together. In one stream, there is recipient-specific information, such as about the life experiences of a child classified as vulnerable. In the other stream, monitoring and evaluating interventions, such as Family Start, provide information based on different children who received the intervention from different providers, following different decision-making pathways. Both analytically and non-analytically derived information can help to bring the two streams closer together in deciding how to allocate services. Analytically, the information streams and their connections can be made more precise through improved data and modelling, thus decreasing the uncertainties in the differences between the two types of historical information. A decision-maker can also augment the available data and modelled indicators pointing to a specific intervention with judgments informed by non-analytic competencies.

The results of interventions take time to appear. In practice, the indicators available to decision-makers are only approximations of the ‘true’ state of affairs now and of future expectations. Those approximations, which describe the connections between recipients, intervention and their effectiveness, can be sharpened in numerous ways, from better specifying proxy variables, adding variables and more precisely measuring them, improving techniques of predictive modelling, and more. However, analytic efforts reach natural limits. Perfect information about the circumstances and futures of people and services is impossible. The question is rather to recognise both when the search for better information reaches significantly diminishing returns and what activities and efforts might provide complements in those situations.

To use an analogy from elite sports, a coach can improve performance only so far by using various analyses to fine-tune the athlete’s nutrition, body-conditioning and technique; from there, top performers are distinguished by other factors, based in essence on a coach’s judgment. Augmenting their technical expertise in physiology, for example, experienced coaches offer emotional support.8

Using analytic information for social investment decisions currently is far from the point of diminishing returns. Indeed, many would maintain that the possibilities are almost limitless. It is also widely accepted that there is under-investment in evaluation and other ‘evidence’-generating activities. Effort should not be diverted from current and developing data collection and analysis, which promise more effective and efficient decisions. Nevertheless, like a coach's appreciation that effective performance is achieved through maximising simultaneously the contributions from very different types of input to improvement, it is not premature to take seriously the potential of complementary information in social investment decision-making.

In the next section, the uses of information in the feedback loop are described. Developments in using data have vastly enriched the information environment, and will continue to do so. While there are any number of complications facing decision-makers, two particular challenges are highlighted in the section 'Challenges in the feedback loop'. First, individual pathways leading up to an investment and flowing from that decision are unique. Even in hindsight, available information is extraordinarily incomplete and what is available is almost certainly wrong to some extent. Second, strictly speaking, there is no evidence of the future. At the time of decision, future information (a person's needs and circumstances, the workings of the intervention over the duration it is in place, and outcomes that may eventuate from that intervention) must be *estimated*. These estimations are informed by evidence pertaining to the past – to the needs and social service experiences of other people in other places and times – notwithstanding that there may be significant similarities with features of the focal estimation.

The implication of these two challenges is that a social investment decision is best described as an *informed guess* comprising *both* analytic and non-analytic components. For example, deciding whether to offer a social housing place to an ex-prisoner can be informed by risk assessment tools designed to assist in the management of parolees in the community *and* a probation officer's experience.9 Accordingly, in the sections 'Rationale for augmenting information in the feedback loop' and 'Methods for generating and testing hunches', the chapter turns to the underlying rationale and methods for broadening, enriching and accelerating the feedback loop.

THE USE OF INFORMATION IN THE SOCIAL INVESTMENT APPROACH

According to the Social Investment Unit (since subsumed by the Social Investment Agency), there are four elements of social investment, three of which directly concern information: using data to understand people's needs; systematically measuring the effectiveness of services in meeting those needs; and measuring long-term outcomes for people over their lifetime to feed back into decision-making.10 Each element requires indicators to aid in the allocation of a specific intervention to a specific person for a specific desired outcome. The fourth element is the management of long-term costs. Decision-makers seek to allocate interventions in such a way as to ensure the greatest return on the investment taken over the life-course, or on the condition that benefits exceed costs. By reducing or eliminating the 'forward liability' – the cost that would be incurred to help a person should some need for that help manifest in the future – overall social outcomes can be achieved at a lower aggregate cost.

Much conceptual and methodological attention to the social investment feedback loop focuses on improving indicators of its components and knowledge of their interactions: the challenges and needs individuals have; the ways services work, for whom, when, and for how long; and the outcomes that eventuate from those services. Better information applied in calculations of available investment options means better actual allocations of services, and better outcomes for those in need. Better individual-level information can serve to better match a person to an available service, and to better calibrate the expected cost-effectiveness of providing that service. Feedback, as the term implies, appears in the context of ongoing learning from interventions in practice and 'feeding back' to the point of initial decision and intervention design.[11]

Because the future cannot be seen in advance, the data used to make investment decisions is iteratively updated as experience with prior investment–outcome indicators accrues. Long established in actuarial science, these practices are now being transferred to the social context.[12] Decisions are based on the assumptions and statistical indicators used in what are essentially (probabilistic) predictive models. If a person has indicators of risk factors associated with some probability of a poor outcome, and if there exists an intervention that has shown some success in reducing or eliminating poor outcomes for people with those risk indicators, a calculation can determine if the expected value of the investment is positive or negative. If the probability-weighted net improvement has greater value than the cost of the intervention, the investment should be made.[13] A simple scenario (uncomplicated by discounting, for example) illustrates:

> In the counterfactual case, suppose 80 per cent of people with a certain risk profile will experience a bad outcome that will cost a government \$10,000 in the absence of intervention. The expected value of the cost to government is thus \$–8,000 per person (0.8 x \$–10,000). So an intervention will be cost-effective if the expected value per person is higher than \$–8,000.
>
> Now, suppose an available intervention is successful for 50 per cent of people with the target risk profile, and profiling remains 80 per cent accurate, as in the counterfactual case. The expected value of the future liability avoided is now \$–4,000 (0.5 x 0.8 x \$–10,000). The expected value of the intervention is \$–4,000 less the cost of the intervention. Thus, any investment up to \$4,000 will save money compared with the counterfactual no-intervention scenario: Counterfactual case (\$–8,000) ≤ future liability

avoided ($–4,000) – cost of investment ($4,000).

In general, the current practices of data analysis using tools such as Treasury's CBAx,14 and the Social Investment Analysis Layer aid in making very complicated calculations based on the same logic as illustrated.15 Talented minds are actively looking at initiatives in the control of and access to data, analytic skills, specification of outcomes and so on. Wherever allocation decisions are made, various ethical considerations are triggered, such as potential stigmatising effects, or whether people with serious, but non-priority, needs may miss out of services. Both technical and ethical issues are, however, outside the focus of this chapter. In the next section, the implications of two feedback challenges are elaborated.

	Risk factors present	Risk factors absent
Intervention provided	Outcome positive (A) Outcome negative (B)	(no cases)
No intervention	Outcome positive (C) Outcome negative	Outcome positive Outcome negative (D)

Table 9.1: Results of outcomes in the presence or absence of risk factors and intervention. Source: The author.

CHALLENGES IN THE FEEDBACK LOOP

Information on 'matches' is imperfect and incomplete Social investment decisions focus on avoiding bad outcomes (an intervention 'success') among people deemed at risk. This result is located in the cell marked (A) in Table 9.1. There are three other results of interest, however. Continuing with the example in the previous section, if the success rate of an intervention is 50 per cent, the remaining 50 per cent of treated at-risk people could still have a bad outcome (B). There is a chance (20 per cent in the above example) that a person with identified risk factors will not have a bad outcome, even in the absence of the intervention (C). And there is also an unknown chance that a person without identified risk factors (who would by design not be considered for the intervention) will experience the targeted bad outcome (D).

As depicted in Table 9.1, at the time of a decision to provide the intervention, the decision-maker relies on screening people into two categories, those at risk and those not at risk. No cases fall in the top right cell, since no intervention would be provided without indications of risk. In addition, both the presence and absence of risks will be misidentified for some people. This familiar difficulty is illustrated in Table 9.2, which shows the trade-offs in any decision made in a context of information uncertainty. Because decisions are made on the basis of indicators of need and intervention effectiveness, the match is a statistical one. To some extent, it is imprecise at the point of decision and will later prove with some probability to have been wrong. This claim will not surprise anyone. However, the thrust of the social investment approach is to concentrate attention on just a portion of the individual-matching challenge.

Social investment decisions are a response to waste that occurs with poorly targeted interventions, and to interventions allowed to continue in the absence of good information on their results. The approach focuses on making more correct decisions, with a particular emphasis on choosing (*ex ante*) interventions that are well-matched to an expected effective result. Attention is drawn to the left column in Table 9.2, since it is assumed that there will be no application of interventions believed in advance to be ineffective. Information requirements centre on effectiveness indicators according to the risk characteristics of individuals to be helped and the success indicators of possible interventions.

	Ex ante expectation		
Ex post reality		Intervention expected to be effective and well-targeted	Intervention expected to be ineffective
	Intervention proves effective and well-targeted	Correct decision money spent on effective intervention	Opportunity missed outcome would have been achieved had money been spend
	Intervention proves ineffective or poorly targeted	Money wasted intended outcome not achieved with intervention	Opportunity missed outcome would have been achieved had money been spend

Table 9.2: Trade-offs in the context of information uncertainty. Source: The author.

Thus, the screening and decision-making process can tend to attenuate information potentially available for improved decision-making. First, only people tagged at risk – for failing to integrate into a community after prison, for example – are considered for an intervention. Second, each tagged person is allocated to the service that 'best' matches their risk profile (even if the match is the best of a number of rather ill-fitting services). Third, to continue the feedback loop, outcome indicators (reoffending, maintaining employment) need to be calibrated according to the same indicators that pertained to the original risk profile (for instance, chance of reoffending) and service effectiveness predictions (evaluations of other social housing programmes for ex-prisoners).

Evidence underdetermines decisions about the future

The first challenge draws attention to the potential for misjudging need and over- or under-prescribing services. The second challenge argues that, while better data and analysis may help with the first challenge, they cannot – even in theory – close the gap on their own between what is believed to be the best information and what is therefore the right decision. This challenge has two strands: data analysis relies on what is already known (evidence) and most evidence addresses 'what' and not 'why' questions. Although some writers seek to expand the definition of evidence,[16] according to Sir Peter Gluckman, evidence is properly restricted to what is 'scientific' – 'robust and verifiable knowledge' derived from formal processes that use standardised, systematic and internationally recognised methodologies to collect and analyse data and draw conclusions.[17] Accordingly, there is no evidence with respect to the future. Information about the future is either a projection (based on past trends), a prediction (based on theory) or a guess (based on expert judgment).[18]

The social investment approach centres on statistical analysis based on counterfactual modelling, which supplies associations but not *reasons*. Associations may be observed in a context, such as a randomised controlled trial, which allows a researcher to claim that an intervention caused a result. But knowing that the pill cured the disease does not qualify as an understanding of the way that the cure was achieved. Associations mask positive and negative impacts across different domains, and calculations of returns on investments are therefore only the first step in understanding why we see the results we do. An explanation requires a proposed reason, or a hypothesis: the pill cured the disease *because* of some molecular and physiological processes, in the absence of something else, and because the disease had not progressed further, and so on, without end. Even this version of explanation stops somewhat short of a claim that *understanding* has been achieved (although this hinges as much on philosophical distinctions as on semantics). If all that is available is observation (such as increased immunisation rates and early childhood enrolments in Family Start households), it is possible to express *what* happened and leave *why* essentially unexamined. It is therefore important to recognise the limitations of any claims of *causal understanding* or insight through data analysis, while also investing some effort in methods of understanding that can complement such analysis.

RATIONALE FOR AUGMENTING INFORMATION IN THE FEEDBACK LOOP

The discussion to this point identifies a key challenge for social investment decision-making: feedback from previous interventions and their subsequent outcomes is an imperfect basis for new decisions. The inherent uncertainties mean that at the point a would-be service recipient – a child or an ex-offender – is assessed, some mistakes will be made: the filtering for needs may be flawed, and the prescription and delivery of services may end up poorly fitted to the 'true' needs and circumstances. These mistakes will then ramify through subsequent information collection and application. Picking up potential mismatches, making correct decisions when evidence is in doubt, and learning from ongoing experiences of all sorts (especially those that are 'surprising' in that they don't conform to predictions or other expectations), can be assisted by non-analytically generated information. Several methodologies, which have promise to augment or complement other information, are considered in the next section. In this section, their rationale is examined in a discussion covering abductive inference, insight and phronesis.

Data analysis in the social investment approach is based on inductive inference: if something is observed to have occurred regularly in certain conditions, it can be expected to occur again in those same conditions. In the case of human behaviour, the assumption of regularity must be tempered with an acknowledgment of complexity and contingency. As Barnes, Matka and Sullivan note, 'There is now widespread acceptance that exclusively experimental models are inappropriate for the evaluation of complex policy initiatives that seek multi-level change within individuals, families, communities and systems.'19

Many factors can make inductive inferences fail. This is true even with a randomised controlled trial, as 'causal complexity' essentially ensures that all relevant factors cannot be controlled.20 In more realistic settings, there are numerous influences on a parent's decision to enrol a child in an Early Childhood Education (ECE) programme, of which nurse home visits is only one. And even in contexts in which home visits have had such positive influence, there is no certainty that they will continue to work in the same way.

Yet, while the ability to generalise from the past to the future is limited, humans have a natural capacity to make actionable inferences in complex, unpredictable and surprising situations. Briefly, abduction is a form of inference originally proposed by Aristotle but significantly developed by Charles Peirce.21 It can be applied to any bounded situation. Most situations that people experience are habitual, requiring no concerted attention. When attention is triggered by something out of the ordinary, people form a hypothesis in what Peirce describes as a 'flash of insight'. Everyday abductions occur when a parent draws on a mental repertoire of past events to 'guess' whether a crying child is hungry or hurt.

More generally, abduction integrates understanding and experience (data), as illustrated by well-known examples. Archimedes's 'Eureka!' was an abduction to a new idea altogether, a discovery which he somehow 'knew' to be a solution to his problem of proving the purity of a gold piece. The method of Sherlock Holmes (and that of other problem-solvers, such as doctors, social workers, coaches and indeed many social scientists) reveals abductions as *plausible* ideas according with common sense and descriptive knowledge, which may appear as surprising at first, but then as clear and straightforward once 'tested' in some way.

Once formed, a hypothesis is subject to experiment (such as seeing if food stops the child's crying) and logical analysis.22 McKaughan draws attention to the need for choosing among hypotheses: 'Abduction cannot be used to improve predictive modelling. But it can provide hunches and hypotheses worth pursuing.'23 Analogical reasoning can help in choosing a hypothesis to pursue. In analogical reasoning a comparison is made between *A* (source domain) and *B* (target domain) that highlights similarities and supports a hypothesis pertaining to something as yet unobserved in B, but observed in A.24

Alternatively, phronesis (another Aristotelian term, often translated as practical wisdom) can supply the grounds for applying knowledge to a new problem. Thomas, drawing on others, describes phronesis as involving a combination of 'knowledge, judgment and taste, together producing a discernment, through which we see links, discover patterns, make generalisations, create explanatory propositions … all the time emerging out of our experience'.25

Abductive insight can supplement probability estimates derived from causal models when making a specific decision. For example, a weather forecaster may say that there is a 50 per cent chance of rain today. But whether or not I take an umbrella will also be a function of how I interpret the clouds in my exact vicinity at the exact time I propose to go outside. Similarly, a soccer player with a multi-sensory awareness of the state of play need not calculate the chances of a goal with one kicking angle rather than another, but can draw on muscle memory developed from repetitive previous experiences.26

In the social services, with respect to the 'unique individual' challenge, social workers can read specific situations in the context of their experiences, which includes (but is not limited to) information that has been analytically processed. The social worker simultaneously *discovers* and *brings forward* salient aspects or combinations of aspects in the case at hand. For good reasons, society constrains social workers' ability to act immediately and on their own hunches alone – yet much could be learned from systematic study of these judgments.27 In the same way that performance statistics are fed back to an athlete, the results of professionals' decisions can assist others to improve on the modelled probability of the 'fit' of a client and a service in a specific case. Importantly, researchers can seek to learn more systematically from cases that do not conform to expected patterns (such as children in the Family Start programme who are not immunised or enrolled in ECE). Rather than conducting more extensive modelling of such 'failures', the observations and conclusions of home visitors can be collected and studied. With respect to the emergent nature of the future, people can make guesses abductively outside the reach of models, and then observe the outcomes of the guesses.

Insight happens when a researcher confronts some puzzling situation. For example, Ellwood recalled how the advent of longitudinal data on family income occasioned fresh hypotheses about the events that led people into and out of need by finding that only a small minority of new entrants, at any point in time, would become long-term recipients of assistance.28 In social systems, change is the norm. To get new ideas, researchers must selectively extract from their observations those facts about some phenomenon that are informative (in the sense that they seed plausible ideas). Getting ideas requires judgment, not only measurement or observation or interpretation. Once the initial ideas are in hand, researchers can pursue their ideas to reach more robust theories of change, using various methods.29

METHODS FOR GENERATING AND TESTING HUNCHES

Methods that can build on abductive insights and thereby complement other strategies in social investment decision-making have three main characteristics: they assume a person-centric realism,30 they make use of surprise or anomaly and they aid the search for patterns. Briefly, being person-centric entails focusing on a moment or moments in a vulnerable child's or ex-prisoner's life-stream, with attention to intertemporal, systemic, relational, aspirational and many other situationally relevant variables. The relationships themselves are not always linear and are rarely deterministic. The necessity of anomaly or surprise signals that the trigger for a new idea and for continued learning is not to be found in the midst of what is already, at least provisionally, 'settled knowledge'. Unexpected consequences are unavoidable limitations in policy interventions.31 Finding patterns augments the feedback loop, by helping to refine the needs–intervention match.

Thus, methods must be able to add value to one or both of the two streams of information that come together in a social investment decision: one about the needs of individuals and one about the workings of interventions. Some methods can retain the case connections across the need-to-services-to-outcomes vector, rather than relying on statistical patterns that are correlations of needs, services and outcomes. Methods can also make use of cases that don't fit those patterns well. The aim would be to better understand all outcome results as depicted in Tables 9.1 and 9.2 and to generate ideas for 'better' diagnoses and prescriptions (intervention plus duration) across the life-course.

Identifying target needs in the context of individual life-courses

Rather than approaching a 'life' as a bundle of attributes, present or absent at various times, a number of which may be of interest in the context of meeting more societal objectives, the whole person can be retained.32 A life can be conceived as a slowly changing choreography of mutually interacting systems: that is, the person in his/her milieu of family, school, church, work, time and so on. At some points in this vector of experiences, an individual's need for some form of 'investment' lights up; the need is assessed (by the individual and/or the state) and a 'prescription' is made to address the need (drawn from a menu that includes choices available to the individual as well as services that can be dispensed by the state); and, after some time and allowing for cycles within this chain, the need is addressed (more or less).

As outlined by the Productivity Commission and Heatley, people can be roughly grouped according to need for services and ability to manage the service interactions.33 Some have complex needs and are not themselves able to fully access and coordinate the services they need. These people are, on average, the primary expected beneficiaries of the social investment approach. Even here, however, although a service provider *could* operate entirely with observed and recorded data (with none from the person served), the assessment of needs and circumstances is typically a *joint effort* of the service recipient and the provider and is situation-specific.

Methods that can augment professionals' judgments based on experience when engaging with recipients work together with information that is additional to statistical indicators and can contribute to a richer feedback loop. There are two main strategies that professionals (and specialist researchers) can use. They can become more sensitive to the challenges in joint efforts of ascertaining recipients' circumstances, and search for patterns in judgmental information by using any of a number of well-known methods. Professionals can also use their observations of anomalies that may arise in narrative exchanges with recipients as an abductive trigger.

Finding patterns in needs assessments can involve simply being alert to, and developing a mental file of, typical discrepancies between provider-observed and recipient-reported data. Such practices characterise much of 'everyday' professional work, helping professionals to distinguish, for example, between a recipient who is unwilling to get their child immunised rather than unable to follow through on that intention due to practical constraints. More subtle challenges may also arise, which may not be detected immediately, but which can be re-examined later, allowing false conclusions to be corrected. For example, a provider may discount some self-reported data, but later come to see that their judgment was incorrect. Similarly, to some degree both the provider and the recipient may be misinformed about needs and circumstances. Providers also need to be alert to operationally influenced biases (and organisationally supported to mediate them). For example, true circumstances may be masked or distorted by incentives to fit needs to standard risk-profile categories, or by fear of being held accountable for decisions made on less objective grounds (for example, assigning only those services that are ranked highest for the given profile, even if there are other indications of a mismatch).

Professionals hear stories from those they serve. Would-be recipients can be savvy in conveying their circumstances, and this goes even for those in the most 'at-risk' groups with complex needs. Whether intentionally or not, people may seek to represent themselves in ways that adversely influence the provider's judgment of their needs. (This can work both ways: to make a person appear more needy or less, for example, when someone is unwilling to admit a need for help). But, perhaps more typically, the stories accurately portray a situation as it appears to the speaker. Schön's treatment of professionals' many forms of reflection in problem-solving can be extended to professionals who work with people's evolving and emerging stories to achieve improved well-being.34 Stories and reflections on what does and does not 'fit' provide occasions for abduction.35

One-off stories are limited, however: for the sake of efficient practice, professionals need ways to better detect and understand *patterns* of suitable investment matches. An analogy here is the protocols border-control agents follow in deciding what level of scrutiny to give an incoming person's 'story'. Several methods are designed to collect coherent, contextualised individual narrative cases of situated experience and meaning to achieve greater understanding and results across groups of people. Roughly, with regard to some situational challenge, these methods: (a) elicit or define diverse cases; (b) advance understanding or appreciation of the cases in their own terms; (c) use this understanding to find alignments and differences; and (d) interpret patterns and extract insights in view of making a positive contribution to policy debate and/or community learning and action.36 Specific methods include metanarrative,37 'communicative' dialogue undertaken in a participatory community setting,38 and Q methodology.39 With the latter, people use a sample of self-referent opinions on a given topic to provide holistic pictures of what is on their minds, which are then correlated and factor-analysed.

Such narrative or dialogic methods allow investigators to seek understanding of how people's aspirations for their future well-being connect with their experience and knowledge. They may also help in identifying unrecognised viewpoints, disaggregating recognised positions and analysing differences. Q methodology, for example, finds different (but often partly overlapping) ways in which people structure a matter from their own perspectives, based on underlying dispositions that predispose their beliefs and behaviours.

In a policy context, the greatest potential usefulness of Q methodology (and similar methods) may be for tailoring the design and delivery of services. In a social service domain, the method can show that human diversity, while infinitely variable, nevertheless settles into a few broader patterns, and that a great many people are likely to fit one or more of those patterns relatively closely. At the same time, however, correlation with demographic categories or alignment with one or a few objectively measured variables may be poor. This observation helps to explain why seemingly similarly placed people, such as ex-prisoners, can have vastly different experiences with the 'same' service (such as social housing). A researcher or a practitioner, especially one who is suitably theoretically and experientially informed, is in a good position to work with stories and perspectives that are conveyed in expressed attitudes and opinions.

Knowing what works

Having identified target needs (with all the inherent challenges just canvassed), services must then be allocated. Available information takes the form of a menu of services that could meet needs (singly or in combination and for shorter or longer durations). The social investment approach requires information on the expected effectiveness of the various options for the recipient's needs, thus enabling the 'best' match. When allocating a service to a new recipient, a provider must decide if the available information on the service is directly applicable, or if some adjustments are needed to estimate effectiveness in the new case, since information on an intervention's effectiveness is derived from the past and thus from other people's experiences, needs and circumstances.

However, information on what has worked and for whom can be rather thin, and interventions are evaluated singly, whereas people with complex needs may access multiple services simultaneously. The requirements for high-quality science in evaluating intervention effectiveness are difficult to meet in the first instance, and independent verification and replication is costly and time-consuming. A US study reveals just how high the bar may be set: 'high-quality economic evaluations are characterised by a clearly defined intervention and a well-specified counterfactual; a previously established perspective, time horizon, and baseline discount rate; accurate cost estimates of the resources needed to replicate the intervention; and consideration of the uncertainty associated with the evaluation findings.'[40] Evaluation cost considerations can weaken the research design.[41]

The problems may lie deeper. Starbuck claims there is an inherent problem in the 'assumptions of statistical methodology, which consistently demands random sampling. Random samples are difficult to obtain and rare in practice, so researchers ignore the requirement [and] use statistical procedures that assume random sampling.'[42] Byrne, making the claims of complexity scientists, argues that 'in complex systems the cause will seldom be the intervention – something done to the system – taken alone. What matters is how the intervention works in relation to all existing components of the system and to other systems and their sub-systems that intersect with the system of interest.'[43]

Answering 'why' questions is essential, as is evaluating the range of outcomes across the range of presenting risk profiles (as set out in Table 9.1).

The Productivity Commission, quoting a submission from Superu that implicitly recognises complexity, notes: 'To find out "why" a service has worked (or not) evaluators seek an understanding of the cultural and local context, the processes used during implementation – and the findings gained from data analytics … The nature of this type of evidence often reveals findings about local leadership, logistics, cultural appropriateness, and programme fidelity.'44 Put differently, information is needed that provides access to the 'human' parts of the workings of an intervention, and the relationships and 'other factors' essential to the evaluation objectives.

Building on the work of Charles Ragin, qualitative comparative analysis (QCA) offers a way to investigate multiple causal pathways in the workings of a policy intervention by using a few cases (at least three, but often fewer than 50).45 According to Ragin, 'causes combine in different and sometimes contradictory ways to produce the same outcome, revealing different paths'.46 QCA uses Boolean logic and the search for necessary and sufficient conditions in classes of 'configurations' of variables in cases. It seeks to explain why specific cases have particular outcomes.47

Ray Pawson and colleagues have elaborated protocols and methods for 'realist' evaluation and synthesis.48 This approach matches precisely the language adopted in New Zealand:

> Realist synthesis is a theory-driven method that … places particular emphasis on understanding causation and how causal mechanisms are shaped and constrained by social context … A realist research question contains some or all of the elements of *'What works, how, why, for whom, to what extent and in what circumstances, in what respect and over what duration*?' and applies realist logic to address the question. Above all realist research seeks to answer the 'why?' question. Realist synthesis … assumes that programme effectiveness will always be partial and conditional and seeks to improve understanding of the key contributions and caveats.49

Of note is that this strategy relies importantly on abduction (researchers' judgments and sensitivity to salient features in an intervention context); but it also has received favourable notice from proponents of evidence-based policy. Realist methods (for both synthesis and evaluation) emerged from the traditions of scholars who questioned the usefulness of much policy research and tried to make better sense of messy policy realities. Pawson argues that while there are infinitely many *cases* of policy interventions – certainly one for each person–policy pair – there are only a small number of mechanisms for change.50 Thus, researchers can assume some underlying mechanism of change is behind policy in large numbers of interventions – each of which is a case of the mechanism. That is, while each family served by a home visit is unique, there are only a few underlying ways in which the visit 'works' (or fails to work) to achieve a fully immunised child. A 'mechanism' comprises the combination of a 'resource' supplied by an intervention (such as information about immunisation) and the reasoning of the person affected by the resource. Researchers can extract the 'emerging propositions' in the form of 'middle-range theories' by reviewing cases, much like Sherlock Holmes seeks clues. The propositions are hypotheses that can be further explored empirically, but that can also directly inform policy development.

Finally, much can be learned from studying unusual cases, or 'positive deviations', such as communities that find very rapid routes to recovery following a disaster or, at the other end of the outcomes spectrum, communities that display extreme fragility. Baxter et al. note that 'problems can be overcome using solutions that already exist within communities. Despite facing the same constraints as others, "positive deviants" identify these solutions and succeed by demonstrating uncommon or different behaviours.'51 Klaiman et al., for instance, looked at local health departments whose maternal and child health outcomes were 'exceptional' when compared to their peers.52

CONCLUSION

It is essential that social investment analysts continue their efforts to improve the information base to allow ever more precise estimations, by more fine-grained updating of intervening indicators, by improving the data and assumptions in their actuarial models, and so on. However, there are natural limits to these efforts, and information will remain imperfect and incomplete. This chapter has suggested that while more data and more analysis are certainly valuable, different methodological strategies may also have a key role to play. The complementary methods discussed here bear consideration, since humans live lives with spatial and temporal wholeness, have ideas about their own welfare, and face unique opportunities and constraints, leading to diversity that can never be properly captured by statistical indicators.

For effective policy decision to be based on evidence, the evidence has to meet two conditions: it must capture and convey some understanding about the matter at hand, and it must support a plausible explanation that connects the understanding with the policy implication. Policy professionals steeped in statistics and modelling will prefer to learn about inherently complex situations from reasonably large-*n* counterfactual studies when available. However, in the absence of such studies and other robust evidence, and in order to address the inevitable gaps created by 'fuzzy realities', 'complex causality' and the lack of crystal-ball gazing, this chapter has argued for methods and ways of reasoning that can draw attention to new ideas that arise naturally to professionals in the context of their day-to-day practice. This requires starting in situ, with specific ‘cases’ and reasoning from there.

It might be claimed that the methods sketched in the preceding section are merited in principle but too fussy or expensive to be practically implemented. However, initially no more method is needed than attention to what falls outside expected patterns. Abduction as a mode of inquiry generates plausible ideas about what works and what may be the reasons for policy-relevant observations. From there, even a little further attention to the suggestions could dispel some of the concern that accompanies unfamiliar methods.

By way of a concluding comment, it is well to recall that in the context of working for future well-being, the way in which a recipient experiences services and the relationships involved is important. Just as clinicians treat a person, not just a body, methods that engage a person, not only track them from outside, are essential to realising the objectives motivating the social investment approach.

References

Barnes, Marian, Elizabeth Matka and Helen Sullivan, ‘Evidence, Understanding and Complexity’, *Evaluation*, 9, 3 (2003)

Bartha, Paul, ‘Analogy and Analogical Reasoning’, in E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, Fall edn, Center for the Study of Language and Information, Stanford University, Stanford, 2013, http://plato.stanford.edu/archives/fall2013/entries/reasoning-analogy (accessed 7 September 2017)

Baxter, Ruth, Natalie Taylor, Ian Kellar and Rebecca Lawton, ‘What Methods are Used to Apply Positive Deviance within Healthcare Organisations? A Systematic Review’, *British Medical Journal: Quality and Safety*, 25, 3 (2016)

Blackman, Tim, Jonathan Wistow and David Byrne, ‘A Qualitative Comparative Analysis of Factors Associated with Trends in Narrowing Health Inequalities in England’, *Social Science & Medicine*, 72 (2011)

Byrne, David, ‘Evaluating Complex Social Interventions in a Complex World’, *Evaluation*, 19, 3 (2013)

Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016

Douven, Igor, ‘Abduction’, in E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, Spring edn, Center for the Study of Language and Information, Stanford University, Stanford, 2011, http://plato.stanford.edu/archives/spr2011/entries/abduction (accessed 7 September 2017)

Dunn, William N., *Policy Analysis: An Introduction*, 5th edn, Pearson Education, Upper Saddle River, 2011

Ellwood, David T., ‘From Research to Social Policy and Back Again: Translating Scholarship into Practice Through the Starry Eyes of a Sometimes Scarred Veteran’, keynote address, Social Policy Research and Evaluation Conference, Wellington, April 2003

English, Bill, ‘Speech to the Treasury Guest Lecture Series on Social Investment’, presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015

English, Bill, ‘Social Investment Analytics Layer Launch’, speech, 28 September 2016, www.beehive.govt.nz/speech/social-investment-analytics-layer-launch (accessed 7 September 2017)

Fann, K. T., *Peirce’s Theory of Abduction*, Martinus Nijhoff, The Hague, 1970

Flecha, Ramon, and Marta Soler, ‘Communicative Methodology: Successful Actions and Dialogic Democracy’, *Current Sociology*, 62, 2 (2014)

Gluckman, Peter, *The Role of Evidence in Policy Formation and Implementation*, Office of the Prime Minister’s Science Advisory Committee, Wellington, 2013

Greenhalgh, Trisha, Glenn Robert, Fraser Macfarlane, Paul Bate, Olympia Kyriakidou and Richard Peacock, ‘Storylines of Research in Diffusion of Innovation: A Meta-Narrative Approach to Systematic Review’, *Social Science & Medicine*, 61 (2005)

Head, Brian W., ‘Three Lenses of Evidence-Based Policy’, *The Australian Journal of Public Administration*, 67, 1 (2008)

Heatley, Dave, ‘Making Social Services Work for Everyone: A Summary of the Recent Productivity Commission Inquiry’, *Policy Quarterly*, 12, 2 (2016)

Klaiman, Tamar, Athena Pantazis, Anjali Chainani and Betty Bekemeier, ‘Using a Positive Deviance Framework to Identify Local Health Departments in Communities with Exceptional Maternal and Child Health Outcomes: A Cross Sectional Study’, *BMC Public Health*, 16 (2016)

McKaughan, Daniel J., ‘From Ugly Duckling to Swan: C. S. Peirce, Abduction, and the Pursuit of Scientific Theories’, *Transactions of the Charles S. Peirce Society*, 44, 3 (2008)

Mansell, James, *Handing Back the Social Commons*, report to the New Zealand Productivity Commission as part of their inquiry into *More Effective Social Services*, April 2015, www.productivity.govt.nz/inquiry-content/social-services (accessed 7 September 2017)

Manzi, Jim, ‘What Social Science Does – and Doesn’t – Know’, *City Journal*, Summer 2010, www.city-journal.org/html/what-social-science-does—and-doesn’t—know-13297.html (accessed 7 September 2017)

National Academies of Sciences, Engineering and Medicine, *Advancing the Power of Economic Evidence to Inform Investments in Children, Youth and Families*, National Academies Press, Washington DC, 2016

New Zealand Productivity Commission, *More Effective Social Services*, final report, August 2015

New Zealand Treasury, ‘Social Investment’, 12 July 2017, www.treasury.govt.nz/statesector/socialinvestment (accessed 4 November 2016)

New Zealand Treasury, ‘The Treasury’s CBAx Tool’, 1 September 2017, www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis/cbax (accessed 4 November 2016)

Nuwer, Rachel, ‘Coaching Can Make or Break an Olympic Athlete: Competitors at the Most Elite Level Require More than Technical Support’, *Scientific American*, 5 August 2016, www.scientificamerican.com/article/coaching-can-make-or-break-an-olympic-athlete (accessed 7 November 2016)

Pawson, Ray, *Evidence-Based Policy: A Realist Perspective*, SAGE, London, 2006

Pawson, Ray, *The Science of Evaluation: A Realist Manifesto*, SAGE, London, 2013

Ragin, Charles C., *Fuzzy Set Social Science*, University of Chicago Press, Chicago, 2000

RAMESES Project, *Quality Standards for Research Synthesis*, 2014, www.ramesesproject.org/media/RS_qual_standards_researchers.pdf (accessed 7 September 2017)

Rihoux, Benoît, and Charles C. Ragin, ‘Qualitative Comparative Analysis (QCA): State of the Art and Prospects’, *Qualitative Methods: Newsletter of the American Political Science Association Organized Section on Qualitative Methods*, 2, 2 (2004)

Schön, Donald, *The Reflective Practitioner: How Professionals Think in Action*, Basic Books, New York, 1983

Sebeok, Thomas A., and Jean Umiker-Sebeok, ‘“You Know My Method”: A Juxtaposition of Charles S. Peirce and Sherlock Holmes’, in Umberto Eco and Thomas A. Sebeok (eds), *The Sign of Three: Dupin, Holmes, Peirce*, Indiana University Press, Bloomington, 1983

Social Investment Unit, ‘Evidence and Insights’, 2016, https://siu.govt.nz/about-us/evidence-and-insights (accessed 1 November 2016)

Social Investment Unit, ‘What is Social Investment?’, 2017, https://siu.govt.nz/about-us/what-is-social-investment (accessed 12 June 2017)

Starbuck, William, ‘60th Anniversary Essay’, *Administrative Science Quarterly*, 61, 2 (2016)

Stephenson, William, ‘Definition of Opinion, Attitude and Belief’, *Psychological Record*, 15, 2 (1965)

Tavory, Iddo, and Stefan Timmermans, *Abductive Analysis: Theorizing Qualitative Research*, University of Chicago Press, Chicago and London, 2014

Thomas, Gary, ‘Doing Case Study: Abduction not Induction, Phronesis not Theory’, *Qualitative Inquiry*, 16, 7 (2010)

Thomas, Gary, ‘The Case: Generalisation, Theory and Phronesis in Case Study’, *Oxford Review of Education*, 37, 1 (2011)

Tilley, Nick, ‘EMMIE and Engineering: What Works as Evidence to Improve Decisions?’, *Evaluation*, 22, 3 (2016)

Wolf, Amanda, ‘Between-Case Dialogue: Public Engagement in the Second-Person Voice’, *Journal of Environmental Studies and Sciences*, 6, 3 (2016)

Yesberg, Julia, and Devon L. L. Polaschek, ‘What Can the DRAOR Tell Us About High-Risk Offenders?: A Preliminary Examination’, *Practice: The New Zealand Corrections Journal*, 2, 1 (2014)

Notes

1 The author would like to express appreciation to workshop participants and organisers, and to Isabelle Collins and Simon Wakeman for their constructive comments.

2 New Zealand Treasury, ‘Social Investment’, 12 July 2017, www.treasury.govt.nz/statesector/socialinvestment (accessed 4 November 2016).

3 For simplicity, recipients are taken as individuals but, in principle, a recipient can be a community or all of society.

4 Social Investment Unit, ‘What is Social Investment?’, 2017,

https://siu.govt.nz/about-us/what-issocial-investment (accessed 12 June 2017).

5 Dave Heatley, 'Making Social Services Work for Everyone: A Summary of the Recent Productivity Commission Inquiry', *Policy Quarterly*, 12, 2 (2016), p.60.

6 New Zealand Productivity Commission, *More Effective Social Services*, final report, August 2015, p.4.

7 Bill English, 'Speech to the Treasury Guest Lecture Series on Social Investment', presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015.

8 Rachel Nuwer, 'Coaching Can Make or Break an Olympic Athlete: Competitors at the Most Elite Level Require More than Technical Support', *Scientific American*, 5 August 2016, www.scientificamerican.com/article/coaching-can-make-or-break-an-olympic-athlete (accessed 7 November 2016). It can be argued that such additional factors can be estimated quantitatively and combined with the more 'objective' data on nutrition, and so on, so that a coach would be able to gauge just how and when to offer emotional support to a given athlete. But it is far more persuasive to hold that the accumulated experience of the coach is what is 'doing the work'.

9 Julia Yesberg and Devon L. L. Polaschek, 'What Can the DRAOR Tell Us About High-Risk Offenders?: A Preliminary Examination', *Practice: The New Zealand Corrections Journal*, 2, 1 (2014), pp.13–19.

10 Social Investment Unit, 'What is Social Investment?'.

11 Ibid.

12 Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016.

13 And, in some cases, the investment will still be made if the net return is negative, if it represents a smaller loss than alternatives and if society accepts that the loss is justified.

14 New Zealand Treasury, 'The Treasury's CBAx Tool', 1 September 2017, www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis/cbax (accessed 4 November 2016).

15 Bill English, 'Social Investment Analytics Layer Launch', speech, 28 September 2016, www.beehive.govt.nz/speech/social-investment-analytics-layer-launch (accessed 7 September 2017).

16 For example, Brian W. Head, 'Three Lenses of Evidence-Based Policy', *The Australian Journal of Public Administration*, 67, 1 (2008).

17 Peter Gluckman, *The Role of Evidence in Policy Formation and Implementation*, Office of the Prime Minister's Science Advisory Committee, Wellington, 2013, p.7.

18 William N. Dunn, *Policy Analysis: An Introduction*, 5th edn, Pearson Education, Upper Saddle River, 2011.

19 Marian Barnes, Elizabeth Matka and Helen Sullivan, 'Evidence, Understanding and Complexity', *Evaluation*, 9, 3 (2003), p.265.

20 Jim Manzi, 'What Social Science Does – and Doesn't – Know', *City Journal*, Summer 2010, www.city-journal.org/html/what-social-science-does—and-doesn't—know-13297.html (accessed 7 September 2017); Nick Tilley, 'EMMIE and Engineering: What Works as Evidence to Improve Decisions?', *Evaluation*, 22, 3 (2016).

21 K. T. Fann, *Peirce's Theory of Abduction*, Martinus Nijhoff, The Hague, 1970. As Douven (Igor Douven, 'Abduction', in E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, Spring edn, Center for the Study of Language and Information, Stanford University, Stanford, 2011, http://plato.stanford.edu/archives/spr2011/entries/abduction [accessed 7 September 2017]) clarifies, in deductive inferences, the truth of the premises *guarantees* the truth of the conclusion; in induction there is *only* an appeal to observed frequencies or statistics; and in abduction there is additionally an implicit or explicit appeal to explanatory considerations.

22 Thomas A. Sebeok and Jean Umiker-Sebeok, '"You Know My Method": A Juxtaposition of Charles S. Peirce and Sherlock Holmes', in Umberto Eco and Thomas A. Sebeok (eds), *The Sign of Three: Dupin, Holmes, Peirce*, Indiana University Press, Bloomington, 1983, p.18.

23 Daniel J. McKaughan, 'From Ugly Duckling to Swan: C. S. Peirce, Abduction, and the Pursuit of Scientific Theories', *Transactions of the Charles S. Peirce Society*, 44, 3 (2008), p.458.

24 Paul Bartha, 'Analogy and Analogical Reasoning', in E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, Fall edn, Center for the Study of Language and Information, Stanford University, Stanford, 2013, http://plato.stanford.edu/archives/fall2013/entries/reasoning-analogy (accessed 7 September 2017).

25 Gary Thomas, 'The Case: Generalisation, Theory and Phronesis in Case Study', *Oxford Review of Education*, 37, 1 (2011), p.24.

26 It is possible to make the umbrella decision using the forecast, the observation or both. The soccer player cannot make direct use of a model of the chances of a goal. The outcomes of both decisions are also available straight away. Social investment decisions fall somewhere in between the umbrella and the goal but the outcome is not apparent immediately.

27 Indeed, qualitative information is already systematically collected in many social intervention decision contexts and intervention evaluations.

28 David T. Ellwood, 'From Research to Social Policy and Back Again: Translating Scholarship into Practice Through the Starry Eyes of a Sometimes Scarred Veteran', keynote address, Social Policy Research and Evaluation Conference, Wellington, April 2003, p.5.

29 Iddo Tavory and Stefan Timmermans, *Abductive Analysis: Theorizing Qual-*

itative Research, University of Chicago Press, Chicago and London, 2014.

30 Realism is a philosophical stance that essentially accepts that there is a 'real' and knowable world of social influences, but that knowledge of causal relationships leading to human behaviour will always be partial and unprovable.

31 Barnes, Matka and Sullivan, 'Evidence, Understanding and Complexity'.

32 David Byrne, 'Evaluating Complex Social Interventions in a Complex World', *Evaluation*, 19, 3 (2013), pp.217–28.

33 New Zealand Productivity Commission, *More Effective Social Services*; and Heatley, 'Making Social Services Work for Everyone'.

34 Donald Schön, *The Reflective Practitioner: How Professionals Think in Action*, Basic Books, New York, 1983.

35 Gary Thomas, 'Doing Case Study: Abduction not Induction, Phronesis not Theory', *Qualitative Inquiry*, 16, 7 (2010), pp.575–82.

36 Amanda Wolf, 'Between-Case Dialogue: Public Engagement in the Second-Person Voice', *Journal of Environmental Studies and Sciences*, 6, 3 (2016).

37 Trisha Greenhalgh et al., 'Storylines of Research in Diffusion of Innovation: A Meta-Narrative Approach to Systematic Review', *Social Science & Medicine*, 61 (2005), pp.417–60.

38 Ramon Flecha and Marta Soler, 'Communicative Methodology: Successful Actions and Dialogic Democracy', *Current Sociology*, 62, 2 (2014), pp.232–42.

39 William Stephenson, 'Definition of Opinion, Attitude and Belief', *Psychological Record*, 15, 2 (1965), pp.281–88.

40 National Academies of Sciences, Engineering and Medicine, *Advancing the Power of Economic Evidence to Inform Investments in Children, Youth and Families*, National Academies Press, Washington DC, 2016, p.3.

41 New Zealand Productivity Commission, *More Effective Social Services*, p.203.

42 William Starbuck, '60th Anniversary Essay', *Administrative Science Quarterly*, 61, 2 (2016), p.171.

43 Byrne, 'Evaluating Complex Social Interventions in a Complex World', p.219.

44 New Zealand Productivity Commission, *More Effective Social Services*, p.196.

45 Charles C. Ragin, *Fuzzy Set Social Science*, University of Chicago Press, Chicago, 2000; Benoît Rihoux and Charles C. Ragin, 'Qualitative Comparative Analysis (QCA): State of the Art and Prospects', *Qualitative Methods: Newsletter of the American Political Science Association Organized Section on Qualitative Methods*, 2, 2 (2004), pp.3–13.

46 Ragin, *Fuzzy Set Social Science*, p.15.

47 Tim Blackman, Jonathan Wistow and David Byrne, 'A Qualitative Comparative Analysis of Factors Associated with Trends in Narrowing Health

Inequalities in England', *Social Science & Medicine*, 72 (2011), p.1966.

48 Ray Pawson, *Evidence-Based Policy: A Realist Perspective*, SAGE, London, 2006; Ray Pawson, *The Science of Evaluation: A Realist Manifesto*, SAGE, London, 2013.

49 RAMESES Project, *Quality Standards for Research Synthesis*, 2014, www.ramesesproject.org/media/RS_qual_standards_researchers.pdf (accessed 7 September 2017), emphasis added.

50 Pawson, *Evidence-Based Policy*.

51 Ruth Baxter et al., 'What Methods are Used to Apply Positive Deviance within Healthcare Organisations? A Systematic Review', *British Medical Journal: Quality and Safety*, 25, 3 (2016), p.191.

52 Tamar Klaiman et al., 'Using a Positive Deviance Framework to Identify Local Health Departments in Communities with Exceptional Maternal and Child Health Outcomes: A Cross Sectional Study', *BMC Public Health*, 16 (2016).

Chapter 10
Data infrastructure and analytical capability

Simon Wakeman and Diane Garrett

INTRODUCTION

The introduction of the social investment approach has challenged the social sector to change the way it funds and delivers social services.1 In New Zealand the objective of the approach has been described as ensuring that the 'right help goes to the people who need it at the time it will make the most difference'.2 It aims to achieve this by government agencies and service providers making better use of data and analytics as they seek to meet the needs of people requiring additional support to achieve well-being.

The data infrastructure currently in place across the social sector was not designed to capture all the data necessary to meet the needs of a social investment approach, nor is the analytical capability yet in place to extract from that data the information necessary to build a comprehensive understanding of the interface between people, communities and society. Fully implementing the social investment approach requires investment in both the data infrastructure and the analytical capability to ensure it is able to support these objectives.

This chapter proposes several considerations for development of a data infrastructure and analytical capability that the authors consider necessary to implement the social investment approach. It then identifies some of the challenges yet to be overcome to enable successful implementation.

THE SYSTEM FOR SOCIAL INVESTMENT

The social investment approach

The concept of social investment is not new. It was first raised in its present form in 1997 at the Beyond Dependency Conference. Brown and Quilter (1997) suggested it involves acknowledging the 'fiscal, economic and social costs of long-term dependency' and hence concluded that '[policy] initiatives must be seen as investments against the future costs'.3 They considered welfare dependency needs to be conceptualised as a future contingent liability on the government, 'borrowing concepts from finance and accounting, to recognise that long-term dependency is a cost which will fall to future taxpayers'.

Across the globe there are different models of social investment in place, with the ideologies of governments and social and economic factors determining the meaning it takes in each context. There is also no single definitive understanding of social investment in New Zealand. There remain differences in the way it is defined, and the mechanisms required to implement and measure its effectiveness.4

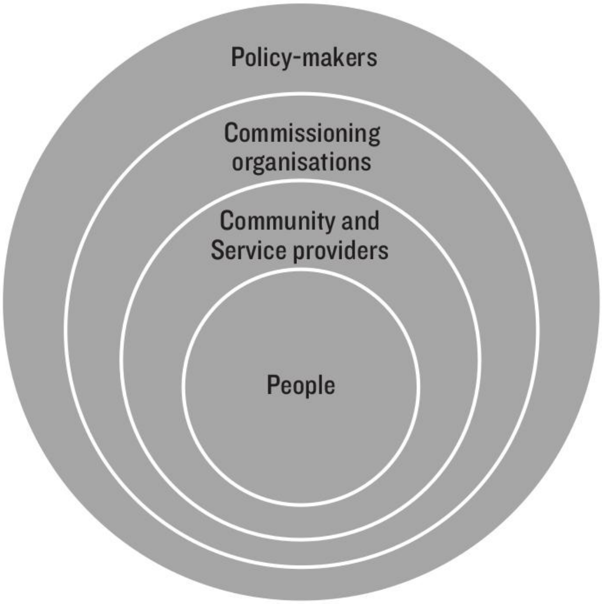


Figure 10.1: Major participants in the social investment approach. Source: The authors.

The Social Investment Working Group states that the most common definition comes from what was then the Social Investment Unit (SIU), now the Social Investment Agency (SIA):

> Social investment is about improving the lives of New Zealanders by applying rigorous and evidence-based investment practices to social services. It means using information and technology to identify those people for

whom additional early investment will improve long term outcomes, better understanding their needs and what works for them, and then adjusting services accordingly. What is learnt through this process informs the next set of investment decisions.5

This definition suggests an iterative process that may not be constrained by existing social sector funding models. Nor is it constrained by the recent focus on providing services only to those most at risk. It implies a cross-sector analysis and measurement of need and impact (i.e., collective impact).

Considerations and challenges

In discussing the data infrastructure and analytical capability required to support the social investment approach, it is helpful to consider the main participants of the system that underpins the approach. While data infrastructure and analytical capability requirements vary across the system depending on the objectives it is trying to fulfil, the system is reliant on all participants working together to achieve a common goal.

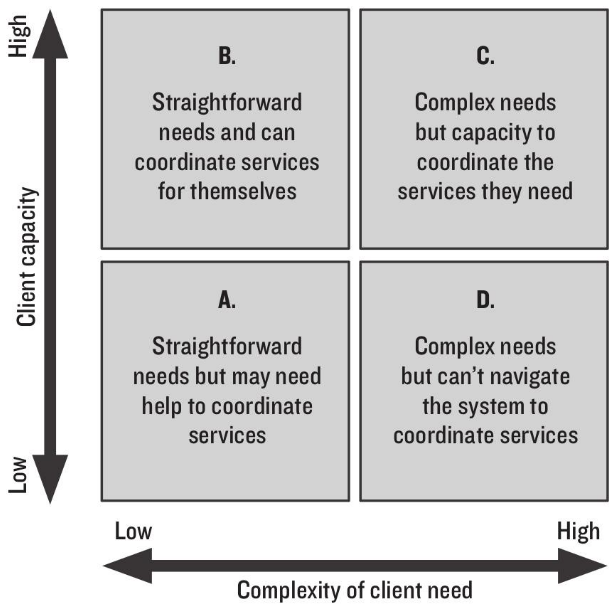


Figure 10.2: Characteristics of clients of the social investment system. Source: Productivity Commission, More Effective Social Services, August 2015, Figure 0.1.

Figure 10.1 depicts the major participants in the system. At the centre are the people with their individual needs and outcomes. The system is focused on addressing the holistic needs of these people, helping them to achieve the desired outcomes. The social investment approach has been focused on those least able to help themselves – specifically, those with complex needs and without the ability to navigate the system themselves (i.e., those in quadrant D of the Productivity Commission's matrix in Figure 10.2).

The first touchpoint for these people is often the frontline organisations that provide services designed to help them achieve better life outcomes. Frontline providers are focused on ensuring that their services are delivered effectively to their clients, as well as reporting information to commissioning organisations about the outcomes they are achieving. Providers need to be able to collect and record the data on the services they provide, the change in circumstances experienced by service users, and the outcomes observed linked to population-level indicators of change. Aspects of the information gained must be shared across different parts of the social investment system to ensure coordination and integration of services.

Commissioning organisations – typically government agencies – buy services on behalf of the government.6 It is their responsibility to select the service providers, and then monitor and evaluate their performance in achieving the desired outcomes. To do this they need information on the effectiveness of the services and the performance of the organisations that provide them.

Policy-makers – or, more specifically, government ministers acting on advice from their advisers – provide direction to the commissioning organisations on their priority target groups and the outcomes they want to see (as well as the resources necessary to achieve them). They seek to identify gaps in the current situation and allocate resources to address them. Policy advisers are looking for the system-level information, including data on which cohorts received services and the outcomes achieved, in order to identify areas of unmet need and determine where future state resources should be targeted.

Interrelationship across domains

The social services have traditionally been divided into various domains, including welfare, health and education. In the past, separate agencies have been responsible for providing services in each of these domains. However, a person's needs are interrelated and they interact simultaneously with services across multiple domains, especially for those who fall into quadrant D of the Productivity Commission's matrix shown in Figure 10.2. For instance, people suffering from a health condition are likely not only to be at risk of poorer health but also of higher demand for welfare support over the longer term. Hence it is difficult to improve social outcomes while services are not coordinated or the organisations providing them are not aware of each other's roles. The result is often fragmented services providing contradictory messages, and gaps caused by assuming that other services have responsibility for particular activities.

Hence, taking a social investment approach is more likely to be effective if policy-makers shift to more holistic targets to address overall well-being. Moreover, as it is impossible for a government organisation to micro-manage such a wide range of services, it may be optimal that control over the service-delivery details be delegated to organisations that have close relationship with the people who need those services.

An adaptive system

The system that underpins social investment deals with complexity in the realm of people's families and individual circumstances, in the interface with agencies in their communities, and in the wider social and economic conditions within which they live. Hence, collecting and analysing relevant data that provides adequate context needs to be information-driven and adaptive. Information from each part feeds into and affects the behaviour of the other parts.7 To enable this to happen effectively, the data infrastructure needs to allow a continuous transfer of information between the parts and to incorporate as many sources of data and research as possible.

Ideally policy design incorporates information from a range of sources, including analysis of quantitative data, qualitative information from the 'coalface' of delivering programmes, the voice and experience of service users and practitioners, the results of evaluation, and published research. It is important to recognise that community-based providers are able to observe changes in needs within their communities in real time, and this should be considered when testing assumptions about community issues gained by analysis of administrative data.

Data analysts need to be able to provide feedback to commissioning organisations and service providers on what appears to be working and not working. Receiving timely and accurate feedback from other agencies, NGOs and local administrative bodies allows the commissioning organisations to learn and adapt their systems. It also helps providers to continuously refine their services to better meet the needs of their clients. An information system that is too rigid and pre-defined will not be effective in the long term as the population of clients, the needs of those clients, and the context in which they arose evolves and changes over time. Evaluation and feedback on programme effectiveness, the choice of consistent measures of outcomes, and the ability to adapt programmes all contribute to an adaptive system of data, evaluation, testing and implementation.

THE SYSTEM REQUIREMENTS

This section proposes aspects of analytical capability necessary for implementation of a social investment approach.

Data infrastructure requirements

The data infrastructure needs to support the following activities:

- collection and recording of client data
- sharing and reporting of relevant data
- consolidation and aggregation of datasets
- incorporation of client experience, evaluation and research.

Service providers need to be able to collect and record data about their interactions with clients and the progress they observe in some form of client management system (CMS). They use the data collected for internal accounting, practice management and service development.

As a condition of funding, providers typically need to report data on the services delivered, and in many cases the outcomes observed, to commissioning agencies. Client access to the appropriate services is often reliant on the ability to share client service-level information across the services the client is interacting with.

In principle, in the age of digital media and the internet the transfer of the data should be straightforward. However, in the context of social services the data often contains sensitive information about the client and family. Sharing and reporting of this data with others requires careful consideration of client rights and the purpose for which this data is shared.

The data collected at the individual or service level needs to be consolidated and aggregated to enable monitoring and evaluation of services, system-level research and policy-making. When data on service activity is combined with data on the individuals who received those services (e.g., their characteristics and outcomes), it can inform the types of services that are effective for particular cohorts. Nevertheless, due to the complex nature of the interplay of service delivery across multiple systems, it is important that this information is not used on its own to evaluate the performance of providers and to measure the return on investment from government spending.

Standardising some data elements across social service providers, funders, community networks and government agencies facilitates the transfer of data both horizontally and vertically throughout the system. For contextual and subjective data entry in particular, it is helpful if all participants in the social investment system use some common descriptors where possible. This allows easier knowledge transfer, communication and coordination of resources.

Similarly, efficiencies could be obtained by standardising and aligning the data reporting requirements across commissioning organisations. Service providers frequently obtain funding from multiple organisations for different services provided to the same individual. Having to report the same (or similar) information to separate organisations increases their reporting burden and diverts resources from delivering services to administration.

That said, it is important to recognise that standardising and aligning data requirements is costly for both service providers and commissioning organisations. There are transaction costs of agreeing on and implementing a common set of fields as well as potential opportunity costs if there is no flexibility for adjusting to evolving circumstances and knowledge about what matters over time. Hence, to reduce those costs the standardised format should be relevant for the people who use it and closely related to the format in which providers typically collect data to inform service delivery and improvement.

Analytical capability requirements

Extracting valuable information out of the data depends on the capability to analyse it properly. For instance, one way to improve on the traditional way of determining who needs help is predictive modelling. This approach uses statistical methods to identify the demographic and other characteristics (referred to as risk factors) that make parts of the population more or less likely to achieve (or not achieve) a specific outcome.[8] It depends on having the necessary data on the whole population (or a representative sample), and being able to measure or create reliable proxies for the desired outcomes.

Similarly, there is a set of methods that provides a more systematic way of evaluating the impact of services. These methods involve creating and tracking the performance of a control group that did not receive the service and then comparing the outcomes of recipients against those of the control group.

Randomised controlled trials (RCTs) are often considered the 'gold standard' because randomising the allocation of the service removes any bias due to selection. However, in many cases RCTs are not feasible due to legal, political or ethical considerations, the inability to construct a proper control group or to prevent cross-contamination between the treatment and control, or lack of time.[9] Instead, analysts can use a quasi-experimental approach that attempts to approximate the random allocation of the service in an RCT, such as propensity-score matching, regression discontinuity design or an instrumental-variables approach.

These more systematic types of analysis generally require skills in statistics and/or econometrics. Predictive models rely on some form of regression model to determine the association between various characteristics and an outcome. Actuarial modelling, which has been used by MSD to estimate the long-term liability associated with different types of welfare beneficiaries, is an application of statistical modelling to assess the risk of an event occurring and the costs associated with that risk. The statistical skills required to analyse and interpret the results from a properly constructed RCT are relatively simple, but applying the quasi-experimental techniques that attempt to approximate for RCTs and interpreting their results requires more sophisticated skills as well as an understanding of the situation in which they are being applied.

In many cases the statistical techniques have been automated in a software package so they can be implemented without understanding the underlying model. Nevertheless, each technique relies on a set of assumptions about the data and/or the variables, and determining whether the assumptions are appropriate often depends on judgment that cannot be captured in a formulaic process. For instance, to be able to reach valid conclusions from propensity-score matching (the most popular method used by government analysts for quantitative evaluation) one needs to be able to argue that all systematic differences between the treatment and control group are captured in the observable variables. This requires knowledge of the context in which the treatment was allocated and the factors that went into making that allocation. More generally, using these statistical techniques requires an understanding of both the models underpinning them and how to apply them, which requires a combination of analytical training and experience.

That said, the results from applying statistical approaches rarely provide a complete picture on their own, and they must be interpreted carefully in light of knowledge about what is actually going on ‘on the ground’. By definition, modelling relies on simplifying assumptions, so using it requires judgment not only about which assumptions are reasonable but also about the situations in which they are not valid. Often a quantitative analytical approach will generate an answer that provides some insight into the general situation, but getting a complete picture also requires an understanding of the complexity of people’s lives and the responsiveness of the social and economic systems they interact with. Tim Hughes’s contribution to this volume (Hughes, 2017) provides an excellent discussion of the advantages and disadvantages of predictive modelling relative to professional judgment.

For the social investment approach to be effective, it also needs to embed an understanding of complexity and ecological systems theories. Assumptions and modelling in data analytics have traditionally been based on linear attribution concepts, but it is important to recognise the interrelatedness of macro, meso and micro systems impacting on the lives of social service users (e.g., through an ecological-systems approach). At the same time, analysts and researchers need to understand how communities work and the importance of a sense of belonging for people’s well-being, and to recognise that the historical, social and environmental contexts in which people live influence their ability and readiness for change.

Hence it is important that the capability in quantitative analysis is coupled with the ability to interpret qualitative knowledge, as well as understanding about the environment in which the data was generated and the lens through which it has been interpreted. To achieve this, analysts, policy-makers and practitioners need to work closely together.

THE CURRENT STATE OF THE SYSTEM IN NEW ZEALAND

This section examines the current state of the data infrastructure and analytical capability in the New Zealand social investment system, using the framework described in the previous section.

Data infrastructure

Provider-level infrastructure

As described above, the first component of the data infrastructure necessary to support the social investment approach is a CMS. It is now standard for service providers in New Zealand to use some form of CMS, but the sophistication of those CMSs varies across providers and there is large variance in the way they are used. As a result there is great variability in the capacity of provider databases to integrate with external databases in order to easily share data and analysis across CMSs.

The barriers to investing in new CMSs include:

- relatively low funding of service providers over the past ten years, with no CPI increase to acknowledge increased employment or contract compliance costs;
- the huge increase over the same period in the complexity of the problems with which clients are presenting, with often only contributory funding based on a lower level of client complexity;
- the unreliability of future funding, resulting in the fear that value of such a major investment in data infrastructure might not be realised; and
- uncertainty about whether contractor/funder-owned CMSs will be required for future contracts.

Many existing government contracts require providers to use funder-owned CMSs or reporting tools which use contract-specific language and reporting measures, reducing the ability to easily undertake whole-of-service development. The advantage of funder-owned data capture and reporting systems is that all providers enter data related to a specific service in a standardised form. The main disadvantage is the high cost imposed on providers when they are required to enter different data elements in different formats for services relating to a single individual funded by different commissioning organisations or 'agencies'.

The reporting systems in place across funders are siloed and disjointed, and the data collected are as myriad as there are agencies. Over the years funders have developed their own systems for collecting data, with few cross-government standards for collection. These systems have used various architectures and platform storage software that are incompatible (e.g., Oracle, MS SQL Server and SAS). Even fields with the same definition can be stored according to different field formats (e.g., date and time fields).

The compliance burden this can impose is illustrated by the case of Presbyterian Support Upper South Island.10 This NGO provider works within a wide regional area, with about 4,200 clients each year and public funding for child and family work of $3.5 million across a range of government agencies – Ministry of Education, Ministry of Justice, Department of Corrections, Ministry of Health, Ministry for Vulnerable Children/Oranga Tamariki and Ministry of Social Development (MSD). Workers are required to use multiple reporting databases, with additional compliance reporting totalling 177 reports per year. The provider is required to report on 174 separate measures, with a total of 948 measures over a 12-month period (some reports are monthly), and 27 narrative questions. In addition to the time frontline workers spend collecting and entering client data, approximately one full-time-equivalent employee is needed to monitor and act on data-quality issues, and collate data for the various reports.

Another disadvantage of funder-managed systems is that providers can often extract only limited information from the databases, and in some cases they cannot use the information to inform their internal service development or to demonstrate service effectiveness externally. Instead, providers must rely on funder-produced reports which focus on the reporting needs of the commissioning organisation.

Policy-level infrastructure

The Social Investment Agency (SIA), established to advance and embed the government's social investment approach, has been building a cloud-based 'Data Exchange' to enable the safe and secure sharing of data in near real-time between social sector government agencies and contracted NGOs.11 When fully developed, the Data Exchange will enable system-wide, two-way sharing of data through a cloud-based platform, which will clean, structure and manage the exchange of data. It will collect and deliver data to participating NGOs and providers to support their service delivery. Access to it is via a secure log-on, with each participating organisation having specific terms and conditions governing its activities on the exchange. This includes standards, governance, security parameters and purpose-based access to data and other relevant rules.

There has been a view within commissioning organisations that they must know the identity of all clients who receive services in order to verify the effectiveness of services, and they appear to have given little critical thought to the privacy issues around collecting identifiable data on recipients (i.e., what client information should be anonymised and what data needs to be individually identifiable for policy and commissioning purposes). Mansell (2015) argued that data and information that identifies individuals should be for the purpose of helping clients to access services and providing them with coordinated support, and the right to share personal information should be retained by the client.12

The Data Exchange is specifically designed to ensure the security and privacy of the data being shared. In particular, personal information will only be shared with the permission of the individual (i.e., every individual owns the data that relates to them). Encryption ensures data is only seen by those who are authorised to do so. All organisations accessing the data are legally bound to hold it securely and use it appropriately.

Statistics New Zealand consolidates data collected by government agencies and increasingly also NGOs into a central repository, the Integrated Data Infrastructure (IDI). It sources the data, creates identifier keys to join individuals across the source tables, and provides the servers to warehouse it. Only essential staff preparing the database have access to the client-identifying data (such as names and addresses), and once the data has been cleaned and linked this data is removed. Access to the anonymised data is restricted to authorised users, under the provisions of the Statistics Act 1975.

The most powerful contribution of the IDI is joining information on individuals collected by different organisations so that a more holistic view of all government services accessed by an individual can be observed. It is designed primarily for system-level research.

However, the data collection is passive – it consolidates data that has already been collected for another purpose – and most of the fields are administrative in nature (e.g., who received the service? what was the service? when was it started and stopped? who was the case worker? etc.). They are dictated by past needs and/or the requirements of the funding agencies, which do not – as a rule – collect data on the client's current needs or the outcomes before and after receiving a service, which would be necessary to commission for improved outcomes.

Additionally, the IDI's structure does not currently support the incorporation of more qualitative, contextual information into the analysis. Social service providers have experience, knowledge and connections within their local communities that offer a rich source of information to contribute to the development of a sector-wide understanding of what works, for whom, and how it contributes to long-term change. However, commissioning organisations currently only collect, store and utilise qualitative information to the extent required for organising and referencing. Hence the IDI provides a valuable but incomplete contribution to the type of research and analysis demanded by a social investment approach.

Moreover, the data in the IDI is not all in a uniformly clean and usable format. The requirement for service providers to report different data elements to different organisations and in different formats in some cases results in conflicting information about an individual when that data is consolidated in one file. This means that users of the data have to resolve these conflicts before conducting analysis.

Another limitation is that use of the IDI data is constrained by bureaucratic rules, technical skills and the requirement to have operational knowledge. All researchers and analysts must apply for access, pass referee checks and justify use on a case-by-case basis. They must access the data within a secure data lab environment, which means using a data lab at either one of Statistics New Zealand's offices (which are only open during regular business hours) or at the premises of one of the regular users (e.g., large government agencies and universities). Extracting data from the database requires skills in SQL programming (or access to someone with those skills), and time and effort to prepare the data. To use it appropriately, analysts need to be familiar with the data definitions as well as any statistical tools that they apply. Finally, before taking any output outside of the secure lab environment, they must follow a process to confidentialise the data and clear it through Statistics New Zealand checkers, which can be bureaucratic and time-consuming.

Statistics New Zealand has been working to improve access to the IDI and provide support for users. The SIA has also prepared a Social Investment Analytical Layer (SIAL), a set of events-structured tables that arrange a version of the IDI data into a consistent format. This makes it easier and faster for authorised IDI users to use and understand. Nevertheless, obtaining the required authorisations, infrastructure and capability to undertake analysis requires large set-up costs and investment.

Analytical capability

As described above, service providers, commissioning organisations and policy-makers need to analyse the data in order to extract valuable information out of it.

Service providers typically have rich knowledge of the context, but many lack the skills and resources to undertake systematic analysis or formal evaluation of outcomes. Evaluation is more likely to include reviewing client results alongside self-reported information about gains made and skills developed. However, such evaluations do not necessarily meet with the government's view of robust evaluation methodology.

Commissioning organisations also often lack the necessary analytical capability. People with the requisite skills are relatively scarce and/or often too expensive for them to retain. Moreover, to the extent that they employ skilled data scientists, economists and financial accountants, often these people do not have a developed understanding of the social and voluntary sectors, or the complexity and interrelatedness of the systems that people interact with, which means they may not be able to interpret the results from their analyses to make useful conclusions.

Bill Rosenberg, in his Treasury guest lecture comparing and contrasting the then National-led government's social investment approach and MSD's community investment approach, was critical of the focus on the individual at the expense of the social, economic and systemic issues that form part of their experience.13 He suggested that reliance on the use of administrative data, even when matched with other databases, fails to reflect the reality that social effects have social causes.

There is also a replication of analytic and evaluation functions across government agencies, and the analysis done by different organisations is not currently being pulled together in a coherent way. There are a plethora of administrative evaluations, longitudinal research studies, and international and local reports that have been undertaken by various agencies. There is, however, no common understanding of what contributes to effective outcomes for people receiving services and how this informs a social investment approach, or mechanisms for service providers to contribute their knowledge, experience and data to developments across the sector. Furthermore, agency focus on the specific areas they are responsible for reporting on under the Better Public Services targets has exacerbated the siloed approach, rather than recognising and responding to the interrelated nature of complex social problems in the public sector.

The SIA has started to introduce government analytical teams to the language, methodologies and frameworks required to create a cross-government consensus on how individuals can be viewed and results from interventions measured in the social investment context. Through a test case on social housing, it demonstrated the feasibility of measuring the impact of a government intervention across different domains. Meanwhile, Treasury's Analytics and Insights Team has developed methods and code for conducting service evaluation across different government agencies. There is, however, much more effort necessary to spread these developments throughout the social sector.

CONCLUSION

This chapter has sketched out the data infrastructure and analytical capability required to support implementation of the social investment approach. The infrastructure needs to enable collection, sharing and consolidation of individual-level data in a way that makes it amenable to analysis. At the same time it needs to protect the privacy of the individuals and minimise the burden on service providers. Furthermore, it is necessary to build the analytical capability that can not only apply the statistical techniques that generate information out of the data but also understand the context in which the data is generated.

The chapter has also discussed the existing infrastructure and analytical capability. There is a wide variation in the standard of data and analytical capability across the system. While some service providers have sophisticated CMSs and leading-edge analytical capability, many are making do with rudimentary systems and processes. Meanwhile, the disjointed nature of the data used by different agencies imposes costs on both those who provide the data and the policy-makers who attempt to make sense of it. The Data Exchange being developed by the SIA and Statistics New Zealand's IDI are valuable innovations, but there is still a long way to go before their full potential can be exploited. There needs to be a concerted effort to increase the number of people trained in the appropriate methodologies who also understand the context in which the data was generated.

A common understanding of the objectives of social investment in New Zealand and the full range of data required will lay the foundations of an integrated learning system. The recent establishment of the SIA and the Social Investment Board is an important milestone.

It is clear that there is still much to do to develop a data infrastructure and the analytical capability to support the social investment system. Nevertheless, the work undertaken to meet the needs of the most vulnerable in society is complex, as are the mix of agencies and organisations, and the service recipients themselves. The data collection and evaluation discussed in this chapter represent only part of the analysis required. The human factor, whether it be the client's motivation and support for change, or the ability of service providers to reach and engage the right people, are essential parts of this complex picture. Data analysis capability and infrastructure development must include the ability to value and integrate the human and service interactions central to the social investment system.

References

Adams, D., 'Social Investment: The New Black', paper presented at the Treasury Guest Lecture Series, Wellington, 2017

Brown, R., and H. Quilter, 'New Directions at a Watershed for Welfare', paper presented at the *Beyond Dependency Conference*, Wellington, 1997

Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016

Hudson, M., K. Mikaere and A. Sporle, 'Data and Development: Maori Interests in the Data Ecosystem', paper presented at the Treasury Guest Lecture Series, Wellington, 2016

Mansell, James, *Handing Back the Social Commons*, report to the New Zealand Productivity Commission as part of their inquiry into *More Effective Social Services*, April 2015, www.productivity.govt.nz/inquiry-content/social-services (accessed 7 Septem-

ber 2017)
New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015
Rosenberg, B., 'The Investment Approach and Social Investment: What's to Like, What's to Worry About', paper presented at the Treasury Guest Lecture Series, Wellington, 2016
Scott, G. et al., 'Governance and Accountability in Social Investment', report prepared by the Social Investment Working Group to respond and build on the proposals from Matt Burgess and Denise Cosgrove, November 2016
Social Investment Agency, *Fact Sheet: Data Exchange*, 1 August 2017, https://sia.govt.nz/assets/Uploads/SIA-Data-Exchange-August-2017.pdf (accessed 7 September 2017)

Notes

1 The authors would like to express appreciation to Vince Morder, who contributed to an earlier draft, and Jonathan Boston, Doug Lambert, Vaughan Milner, Peer Skov, Amanda Wolf and Steven Youngblood who provided comments on earlier drafts. The opinions expressed in this chapter are the sole responsibility of the authors and do not necessarily reflect the views of the Social Investment Agency, Family Works New Zealand, IGPS or NZIER.
2 D. Adams, 'Social Investment: The New Black', paper presented at the Treasury Guest Lecture Series, Wellington, 2017.
3 R. Brown and H. Quilter, 'New Directions at a Watershed for Welfare', paper presented at the *Beyond Dependency* Conference, Wellington, 1997.
4 Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016; G. Scott et al., 'Governance and Accountability in Social Investment', report prepared by the Social Investment Working Group to respond and build on the proposals from Matt Burgess and Denise Cosgrove, November 2016.
5 Scott et al., 'Governance and Accountability in Social Investment'.
6 The term 'commission' – or 'commissioning' – is used in a variety of ways, but in all these uses it means 'ordering the production of something' – in this context, the production of social services. The Productivity Commission's *More Effective Social Services* report (New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015) defined commissioning as 'the set of interrelated tasks that need to be undertaken to turn policy objectives into effective social services' and emphasised that that commissioning includes a broader set of tasks than procurement. Hence, for these purposes commissioning is the way the government obtains social services.
7 'Complex Adaptive System', Wikipedia: The Free Encyclopedia, https://en.wikipedia.org/wiki/Complex_adaptive_system (accessed 7 September 2017).

8 The Ministry of Social Development has undertaken a series of studies of the feasibility and ethics of applying predictive risk modelling to the prevention of child maltreatment: ‘Predictive Modelling’, Ministry of Social Development, www.msd.govt.nz/about-msd-and-our-work/publications-resources/research/predicitve-modelling (accessed on 7 August 2017).

9 It has also been argued that in a complex system experiment approaches such as RCTs (as well as quasi-experimental approaches) are inappropriate because it is not possible to isolate the impact of a single intervention from other interventions that interact with it.

10 This information was provided by the Presbyterian Support Upper South Island chief executive, Vaughan Milner.

11 Social Investment Agency, *Fact Sheet: Data Exchange*, 1 August 2017, https://sia.govt.nz/assets/Uploads/SIA-Data-Exchange-August-2017.pdf (accessed 7 September 2017).

12 James Mansell, *Handing Back the Social Commons*, report to the New Zealand Productivity Commission as part of their inquiry into *More Effective Social Services*, April 2015, www.productivity.govt.nz/inquiry-content/social-services (accessed 7 September 2017). This proposition was supported by M. Hudson, K. Mikaere and A. Sporle, ‘Data and Development: Maori Interests in the Data Ecosystem’, paper presented at the Treasury Guest Lecture Series, Wellington, 2016.

13 B. Rosenberg, ‘The Investment Approach and Social Investment: What’s to Like, What’s to Worry About’, paper presented at the Treasury Guest Lecture Series, Wellington 2016.

Chapter 11
Implementing social investment
Pharmac's experience

Peter Alsop and Steffan Crausaz

INTRODUCTION

Pharmac was established in 1993 as a single-purpose entity for managing the funding of medicines and certain medical devices used in community-based medical practice. It has been an investor in health outcomes – 'health investment' – for nearly 25 years, making it a useful case study to inform the development of 'social investment'.1 This chapter explores the relevance of Pharmac's health investment to social investment, identifying lessons that may enhance what social investment can achieve. To do this, we discuss several key components of Pharmac's investment approach, specifically:

- having a clear, accessible understanding of existing investments
- developing a pipeline of new investment proposals
- developing a pipeline of ways to free up resources from existing investments
- adopting and applying a clear investment test to proxy value
- maintaining a strong, integrated focus on value
- understanding evidence and integrating various types of knowledge
- having a relentless focus on 'relative value'
- knowing where and how prioritisation and decision-making occurs
- having an efficient mechanism to give effect to investment decisions
- using a commonly agreed framing, nomenclature and terminology
- maintaining public support
- developing the right organisation culture

In broad terms, these components have been a recipe for Pharmac's investment success – and may offer a useful guide to a recipe for successful social investment. As social sector agencies further come to grips with an investment approach, choices will need to be made about development priorities. This will always be an agency-specific judgment reflecting context.

Before turning to the components, our understanding of social investment and what we mean by 'investment' are briefly discussed. We also note that, in drawing on Pharmac's experience, health investment and social investment are not directly comparable in all respects. Each context has unique factors, history, challenges and contextual considerations that influence statutory, policy and operational settings. That said, there are important similarities and analogies between health and broader social contexts and the potential benefits of shared learning between them.2

DEFINING SOCIAL INVESTMENT

The developing discussion of social investment in New Zealand has largely focused on the idea, with less focus on implementation. As discussed in Chapter 2, various definitions have been used, with quite different implications for focus and outcomes over time. Different definitions also risk confusion and misalignment of agencies pursuing similar goals, ultimately at the expense of social outcomes. It's surprising how two simple words – 'social' and 'investment' – can cause so much confusion when combined.

This chapter takes a practical view that social investment is the selection and implementation of well-defined investments to achieve desirable social outcomes. This definition is akin to health investment pursuing better health outcomes; capital investment pursuing future returns from capital; and, more generally in the commercial world, commercial investments pursuing increased commercial value. The definition is neutral on whether investments are 'good' or 'bad'; that depends on the quality of investment management and the performance of the investments themselves. Done well, social investment would result in the selection of investment proposals that achieve the best possible social outcomes. In other words, the best of all choices would be made. Applying this definition, social investment is not inherently tied to investing 'earlier in people's lives' (see Chapter 5) or in 'those with the most complex needs' – as some definitions have promoted. Instead, as the former Prime Minister put it, 'Social investment is about using the investment-type thinking which is used in business every day to target interventions more effectively so that we can change the course of people's lives.'3

WHAT WE MEAN BY 'INVESTMENT'

Investment in what? This is a fundamental question, and perhaps one undervalued in the pursuit of a high-performing investment approach.

In the widest sense, investment is the action of investing resources with the expectation of a future return (see also Chapters 2 and 4). The return may be financial or non-financial. It can be expressed in terms of value, primarily the value the investment was seeking, but also any unintended value picked up along the way. Specification of 'value' is not straightforward. Even for corporations, value is not just an investment's financial return. What would it mean for reputation? For future options (such as new avenues for exploration or development)? Risk profile? Investor confidence? Business partnerships? Staff morale? We return to the specification of value in a section below.

In the context of both health and social investment, an initial conception could be the delivery of services and interventions designed to improve health and social outcomes. However, investment needs to be considered at different levels, from portfolio levels, which abstract from the details of specific investments, through to operational-level investments, and sometimes allocation levels in between.

To give a portfolio example, each year district health boards (DHBs) and Pharmac make a proposal to the Minister of Health for the amount of DHB funding Pharmac should invest in medicines.4 The recommendation, with options for alternate budget levels, is based on analysis of investment opportunities now and in the future but is not defined or bound by specific investment options, which constantly change as new options are received and assessed. A decision by the minister is then made, setting the portfolio budget within which Pharmac goes about its work.

Like the individual choice of services and interventions, the minister's decision is an investment. It is a portfolio-based decision, informed by the expected value of investments yet to be made, weighed up against other choices for the same funds. In both the health and social sectors, the same dilemma plays out in multiple ways, such as the level of Budget funding; the coverage of multi-category appropriations to allow optimisation of decisions across different activities; the allocation of funding across quite different types of interventions; the choices of interventions within each type; and the size and targeting of client groups that receive those interventions.

On one hand these are very different investment questions, at different levels with different decision-makers. On the other hand, the questions all share the same core requirement: the need to judge the value of one choice *relative* to another. Achieving excellence in investment requires excellence in making choices at all investment levels. Improving social investment overall (as a broad concept) will require a focus on potential improvements at each investment level.

It is not only the investment in services, interventions or setting budget levels that lend themselves to an investment approach. Policy settings and system changes can also be considered the same way. The design and enactment of policies is the investment of money in pursuit of future value. But how much value, and compared to what? Such policy changes could be defined, analysed and compared with alternate uses of funding.

The comparability problems associated with different types of investment are an obvious issue. It can be challenging to compare the expected value of, say, policy options with new operational interventions. For this reason (and others), it is commonplace to segment organisational activity into silos to get by. Deliberately creating comparable silos has the potential to make prioritisation more tractable by only comparing things of the same kind. On the other hand, segmenting activity can legitimise a view that cross-segment prioritisation is 'too hard', and opportunities for collaboration and cross-silo value exchange may be missed. It must also be remembered that, just as budget or operational silos can be erected, they can also be adjusted or taken down. And whether or not we choose to acknowledge them, prioritisation decisions are always being made; the choice is how explicit those decisions are and how well informed by analysis of what is best.

Although Pharmac has its own well-honed internal understanding of 'investment', when considering social investment it would seem worth keeping an open mind to the application of investment-type thinking across the ambit of organisational work. We now turn to discussing the key components of Pharmac's investment approach.

HAVING A CLEAR, ACCESSIBLE UNDERSTANDING OF CURRENT INVESTMENTS

Pharmac's experience is that an up-to-date record of core details of existing investments is central to the success of an investment approach. The Pharmaceutical Schedule is a list of the medicines and therapeutic products it manages.5 The list is updated monthly and seen by all key users and stakeholders as the single source of truth about Pharmac's investments. The catalogue includes:

- basic information about the investment, including reimbursement value or price
- who is permitted to make use of the investment and from where
- what groups of people the investment is available for
- any eligibility criteria that apply
- any additional requirements or approvals that must be obtained

On one hand, maintaining the catalogue is a basic record-keeping task. However, the catalogue is also a highly valuable strategic asset, and a fundamental driver and determinant of investment portfolio design.

As further discussed later, good investment requires an understanding of the relative value of investments based on: (1) an assessment of an investment relative to other relevant investments already made; and (2) an assessment relative to other available investment choices. Pharmac's catalogue props up the first assessment. It encourages specific and disciplined assessment because current arrangements cannot (and should not) be ignored. In practical terms, the following sorts of questions can readily be asked:

- Does adding this new investment replace or enhance existing investments?
- With improved knowledge, does it make sense to change criteria for accessing an existing investment?
- Should other professionals now be permitted to make use of an existing investment?

These sorts of questions seem at the heart of a social investment approach. A further key benefit of the catalogue is its role as a platform for contestable investment design (further discussed below). All interested parties can transparently see what investments have been made and can generate new proposals.

Pharmac has had both the luxury of inheriting an investment catalogue, and the challenge of creating one from scratch. At the outset of its work in community medicines, it inherited an existing catalogue, which it has progressively enhanced (the Pharmaceutical Schedule, now an online resource).6 Not so, however, with its role managing medical devices. By mid-2017, Pharmac had spent around three years methodically and comprehensively cataloguing medical devices, covering about 50,000 existing investments (across multiple category definitions that needed to be decided) with a value of about $150 million each year (about 25 per cent of the expected total). It is painstaking work, but impossible to capture anywhere near the full benefits of investment management without it.

While no doubt catalogues (or variants thereof) exist elsewhere in the social sector, they are difficult for interested parties (like chapter writers!) to see. If proposals from a range of sources are considered desirable, it would help to know exactly what's occurring to assist the identification of potentially better ideas.

DEVELOPING A PIPELINE OF NEW PROPOSALS

Imagine being an investor with only a single investment option. If required to invest, the choice would be easy; but it might be expensive, and one would be left wondering about what other choices might have been preferable.

Most people recognise that there are literally endless opportunities for investing in the health and social sectors. However, the experience of life tells us that it's much more common to be faced with a motivated and passionate advocate for a single idea rather than to be presented with a balanced set of alternatives. There is a role for an objective party to harness a competition of ideas – a process that gives all ideas a fair go and, post-assessment, unleashes those offering the best value (and able to be afforded).

Given the pricing power of pharmaceutical suppliers, Pharmac has had a strong motivation to design arrangements to generate, receive and process competing investment proposals. With the system now in place, it is presented with many proposals from multiple motivated parties. Suppliers are incentivised by public funding of their products. Clinicians are often motivated by wider prescribing options or an increased range of treatments. Patients and patient groups have understandable interests in specific treatments or treatment areas. Pharmac itself may also spot treatment gaps and self-initiate proposals. The incentives across parties are different and broad but operate in synergy to give the agency both a volume and liquidity of choices.

In order for analysis to prevail, and competition to work its magic, significant effort needs to have gone into proposal design. Pharmac has comprehensive guidelines to assist and support this design,[7] including to ensure some level of content commonality across proposals. The guidelines are not prescriptive or 'requirements', but part of a collaboration between applicants and Pharmac to generate well-specified investment ideas.

In the social sector, the generation of proposals seems more subtle and opaque, with relatively high reliance on agencies initiating proposals themselves. If micro-economic theory is believed, such a context, with limited proposal competition, risks less emphasis being placed on the definition, contents, analysis and prioritisation of proposals. No doubt there are vast untapped sources of investment ideas across the social sector; the challenge is how to catch hold of them and treat them as investment proposals. There could be an opportunity for external parties to 'pitch' new proposals to compete with or complement those derived from within government agencies. 'Social bonds' have been introduced on trial[8] – an approach where a third party is paid for achieving results – but are not a routine part of the social investment frame.

If investment options have intrinsic value – including ideas spawning other ideas – it follows that a successful system would encourage plentiful options, balanced only by the costs of managing proliferation. While a more open border for proposals may be worth social sector agencies considering, entry hurdles need careful design. For example:

- Who is permitted to bring something to the table? A wide range of parties can generate its own challenges but ensures equal opportunity and openness to all ideas.
- What can parties bring to the table? Anything and everything that may assist social outcomes or something more constrained?
- What expectations are there of different parties? For example, is the germ of an idea acceptable or is some level of assessment required? And should this expectation differ for different parties? For example, Pharmac has different expectations of pharmaceutical suppliers (given their resources and commercial objective) versus members of the public who propose an investment option.

DEVELOPING A PIPELINE OF WAYS TO FREE UP RESOURCES FROM EXISTING INVESTMENTS

In any portfolio there is existing activity and potential new activity. Why should there be an expectation of new money for new activity if existing activity has not been fully explored for opportunities to exchange low-value activity for better-value activity? If efforts are made to consistently undertake value exchange of this nature, the system advances and productivity improves.

This virtuous cycle would seem to be a core rationale of social investment. The process starts with having a good understanding of baseline activities, along with associated data and information on prices and volumes (i.e., knowing what is being used and how much it costs). This information is required to 'see', discuss, assess and transact what might be changed. Without it, one might be forgiven for not knowing where to start.

So what does value exchange – freeing up resources from existing investments – look like? Some examples are summarised below.

- Replacement of existing activity with new activity that achieves the same or better outcomes at lower cost. (Note: this is not 'new' investment in the sense of investing in something brand-new. In Pharmac's case, shifting from a branded medicine to a generic medicine is an example.)
- Disinvesting low-value (preferable the lowest-value) activity. This is the flip-side of an investment approach; low-value activities are stopped to allow other investments to be made. In Pharmac's case, disinvestment is relatively rare, given: (1) a strong upfront focus on the desirability of investment; (2) as a general rule, the reducing price of medicines over time with increasing competition; and/or (3) use of equivalent or better substitute products (i.e., value is released through volume reductions without disinvestment).[9]
- Ensuring prices are efficient by periodically testing the market for supply of a given level of service, impact or type of programme.
- Ensuring volumes are optimal by identifying areas of overuse, underuse and misuse. For example, if medicines are under-used, it is desirable to increase use and expenditure; similar in nature to ensuring full-and-correct-entitlements for people eligible for social support.
- Ensuring that the mix of activity is optimal, i.e., the right interventions are provided in the best possible sequence.

With each expansion of Pharmac's scope, there has been a response from some stakeholders: 'nothing to see here; we use the products efficiently and are getting the lowest prices in the world'. While this is understandable, Pharmac has frequently found the assertion to be incorrect, i.e., there have been significant opportunities to improve value from the existing mix of investment (even before the benefit of better management of new investment is factored in). It's a case of getting started; building the knowledge of baseline activities, prices and volumes; and being explicit and earnest about releasing and realising value.

ADOPTING AND APPLYING A CLEAR INVESTMENT TEST TO PROXY VALUE

If investment is about pursuing value, how is value measured and assessed? As noted earlier, this is not straightforward because value is, in all investment contexts, the product of many different things.

Pharmac is required by law to secure the best possible health outcomes from its funding.[10] That is the overarching definition of value Pharmac is required to apply. It is analogous to social sector agencies pursuing the best possible social outcomes.

For Pharmac to give effect to its objective, it has had to elaborate how 'best health outcomes' will be assessed. In other words, it had to develop a consistent but wider proxy of value.

It updated this specification in mid-2016[11] following extensive public discussion[12] – the first material update in Pharmac's (then) 23-year history. The specification of value is now called the 'Factors for Consideration'. In undertaking the review, Pharmac identified that 'a clearer framework was required to increase transparency of how we make decisions. We also needed to ensure greater visibility of all considerations important to funding decisions.'[13] These are familiar aims for social sector agencies, reflecting the importance of public confidence in the operational approach.

Statutory objective: Does the proposal or decision help Pharmac to secure for eligible people in need of pharmaceuticals the best health outcomes that are reasonably achievable from pharmaceutical treatment and from within the amount of funding provided?

Need	The health need of the person
	The availability and suitability of existing medicines, medical devices and treatments
	The impact on the Māori health areas of focus and Māori health outcomes
	The impact on the health of population groups experiencing health disparities
	The impact on government health priorities
Health benefits	The health benefit to the person
	The health benefit to the family, whānau and wider society
	Consequences for the health system

Suitability	The features of the medicine or medical device that may impact on use by the person The features of the medicine or medical device that may impact on use by the family, whānau and wider society The features of the medicine or medical device that may impact on use by the health workforce
Costs and savings	Health-related costs and savings to the person Health-related costs and savings to the family, whānau and wider society Costs and savings to pharmaceutical expenditure Costs and savings to the rest of the health system

Table 11.1: Pharmac's investment test, called 'Factors for Consideration' (adapted for this book). Source: Pharmac, https://www.pharmac.govt.nz/medicines/how-medicines-are-funded/factors-for-consideration.

Pharmac uses the Factors for Consideration to determine if an investment would best promote 'best health outcomes'. By codifying a breakdown of such outcomes, all parties are clear on what the concept embodies and how it will be assessed, i.e., the 'investment test'. The factors are shown above.

As seen in Table 11.1, the factors represent a holistic set of considerations relevant to Pharmac's investment decisions. The four areas – need, health benefits, costs and savings, and suitability – ensure that Pharmac groups similar considerations together and undertakes a robust and complete assessment. Each of those areas is also considered from three perspectives: (1) people who may benefit from treatment; (2) their family/whānau and wider society; and (3) the wider health system. Importantly, the factors also explicitly reflect the Crown's Te Tiriti obligations through considering the impact on Māori health areas of focus (what Māori have told Pharmac is important to them) and on Māori health outcomes. Put together, the application of the test is synonymous with an assessment of 'value'. Just as a commercial entity would seek to maximise commercial value from its investments, Pharmac seeks to maximise health value from its investments.

As is clear from the factors, health value embodies multiple things, such that individual factors are more or less relevant in different circumstances. Accordingly, well-informed professional judgments are required. For example, in an area of illness with limited or no treatments, relatively small gains in health may be considered to be more valuable than similar gains in areas with multiple treatments. Bigger potential gains with high uncertainty may also be judged as less valuable than smaller gains that are more certain. These are normal investment dilemmas. Having the ability to exercise judgment is critical, as it enables Pharmac, like social sector agencies in their own challenging settings, to respond appropriately to a broad range of situations.

Pharmac's focus on benefits and costs to the wider health system (not just related to pharmaceuticals) is important. It reflects a similar expectation associated with social investment, namely, that agencies think beyond their own functions to pursue the best possible social outcomes overall. In Pharmac's case, this focus ensures that the implications of investments for future DHB costs are considered.

While Pharmac's investments can sometimes avoid future fiscal costs for DHBs through avoiding the need for other health services, investments can also increase such costs where needed to secure valuable health outcomes. Pharmac's decisions give rise to a stream of future costs and savings for DHBs – the net result of which depends on investment details. Pharmac doesn't set out to increase, decrease or avoid future fiscal costs in their own right, because they're only a subset of its overall assessment of value.

In principle, the same holds true in the social sector. Investments that reduce future costs for government could be desirable or, depending on the circumstances, those that increase future costs to secure social outcomes may be first-best. During 2017, for example, the government released a $2 billion 'Family Incomes Package' to purchase better social outcomes.[14] The 2014–15 social housing valuation (released in 2017) underscored the same point: 'The future bill of the government's social housing programme has a figure, $16.4 billion, and it's projected to increase. But it's not a bad thing if it does. In fact an increase to the future liability of New Zealand's social housing system will mean the Ministry of Social Development is doing its job.'[15]

It's important to emphasise that assessment of future costs to government – whether higher or lower – should take a total system view. Pharmac's focus on the health system not only ensures an overall assessment of value from government expenditure, it avoids the risk of cost-shifting inherent in a narrower assessment approach (such as the risk of lower education or welfare expenditure leading to higher police and corrections costs – all of which are government costs).

MAINTAINING A STRONG FOCUS ON THE VALUE OF INVESTMENTS

The Factors for Consideration (Table 11.1) help Pharmac answer the question 'What is best?' It's a simple-sounding question without a simple answer, because the only robust answer is 'It depends'.

As unedifying as the answer sounds, there are strong grounds – analytically, procedurally and ethically – to keep an open mind to what investment might be best. Importantly, 'best' doesn't mean 'most', nor does it mean 'for the most people'. A wide range of factors need to be considered, including:

- How significant are the needs of people the investment may address?

- What are the existing investments in the same broad area?
- Is this investment any better than relevant existing investments?
- Is it 'proven' or is evidence still emerging? How reliable is the evidence?
- Are there any potential downsides that need to be considered?
- How big a population will benefit?
- Does access need to be targeted to increase effectiveness and/or manage the investment's costs?

Different circumstances will generate different answers to these (and other) questions. To illustrate, we use three examples to highlight the importance of maintaining an open mind to answering 'What is best?'

First, we use a hypothetical example about the level of 'need' of people in the community – something that appropriately attracts high attention in both health and social sectors.

Suppose there are two groups of people – one with 'high' needs and one with 'low' needs, with new investment options available for both groups. Assessment reveals the investments generate very similar levels of benefit, such as in reducing truancy or building interview skills to help people into work. At this stage, the decision would likely be to help the group with higher needs. But that, it turns out, will cost materially more and have less predictable results. Is it still clear that investing to help the group with high needs is preferred? Is it possible to conclude anything without, for example, comparing the new investments with those already available to help both groups?

Second, would a de-facto priority of investing to benefit people with 'high and complex needs' be consistent with a strong focus on the value of investments?

Pharmac's experience is that needs (of whatever level) cannot be sensibly separated from what investments can actually do to address those needs. A practical example illustrates this point. Would it be prudent to prioritise people with arthritis (the need), without any regard to the benefits, costs and risks of investments to prevent or treat arthritis? Or without regard to the benefits foregone from treating other diseases? A strong, integrated focus on value is required, which necessitates all relevant factors to be considered together. In Pharmac's context, health need is an essential component of that consideration, balanced by other factors.

Third, would a de-facto priority of investing early or earlier in the life-course be consistent with a strong value focus? As with 'need', it depends. Building on Chapter 5, interventions for early/earlier diagnosis, prevention and treatment all have probabilities of success, benefits and costs. It seems difficult to generalise the value of such investments – both in absolute terms (as individual interventions) and in relative terms (when considered alongside other investment choices).

An investment choice to make preferential or earlier investment in one group of people must (for any level of funding) be accompanied by less or later investment in other groups. Once committed, the same resources can't be used twice. Given that choices please some parties and displease others, a robust and non-discriminatory process that supports decisions is also essential.

UNDERSTANDING EVIDENCE AND INTEGRATING VARIOUS TYPES OF KNOWLEDGE

Understanding benefits and costs, and their likelihood of occurring, is a vital component of comparing investment choices. Few organisations would refute the importance of evidence and taking an evidence-based approach. However, it can be challenging to put in place the necessary organisational infrastructure to efficiently uncover or generate evidence and robustly bring it to bear on decisions.

To many people, an evidence-based approach would imply use of the best evidence, and potentially only using evidence of a certain quality level. It may also imply high confidence in decisions (after all, they're 'evidence-based decisions'). As discussed elsewhere, however, the question naturally arises as to the relativity of a choice: is it better to take a smaller benefit with more certain evidence, or a potentially larger benefit that is more uncertain?

Beneath the headline of being an evidence-based organisation, Pharmac's primary focus is on understanding the strengths, weaknesses, benefits and costs of evidence – and evaluating the range of plausible outcomes evidence suggests could occur. A good example of evidential dilemmas was its assessment of investment in the human papilloma virus (HPV) vaccine. Following market launch, there was a lack of evidence about the appropriate course length and need for boosters, with sensitivity analysis showing a wide range of potential outcomes. While this uncertainty made the investment deliberations challenging, Pharmac's knowledge of the evidential weaknesses led to a bespoke commercial arrangement that effectively managed the risk. This changed the relative value of the investment, which was subsequently made.

The example is a reminder that an evidence-based approach that is too rigid – such as set rules about evidence quality – can be impractical and lead to investment opportunities being missed. It also highlights that other forms of knowledge besides evidence (like commercial and contracting knowledge) can significantly influence value. Overall, what's most important is that investment opportunities and risks, and ways to enhance those opportunities and mitigate those risks, are robustly understood.

Speaking of risk, the risk with a few lines of text is that the evidence discovery and assessment process sounds easier than it is. In practice, the right level, breadth and focus of expert advice needs careful attention, including build-versus-buy considerations, taking into account context and the potential value at stake. In Pharmac's case, in addition to expert staff, an advisory network of around 140 practising clinicians ('PTAC' and its subcommittees) helps to find, unpack, distil and contextualise findings and insights.16 This advisory structure includes specialist 'deep dive' areas (such as oncology and cardiovascular), with an 'all-scope' moderation process to keep focused on advising on the best health outcomes overall.

When it comes to the evidential landscape, there are important differences between Pharmac's context and that of the social sector. These need careful exploration, much more fully than possible in this chapter. By way of introducing some key considerations, however, we provide some high-level comments on three propositions that are often raised:

- *The suggestion that Pharmac is evidence-rich and the social-sector is evidence-poor.* At a general level this is true but, like all polarisations, the truth is in between. While there are some exemplar evidence-based programmes to address social issues, there are other areas with very limited evidence. For Pharmac, the balance of available evidence is more favourable, though nor does that mean the right kinds of evidence always exist (such as in the HPV example above).
- *The suggestion that Pharmac can rely on evidence produced by other parties, whereas social sector agencies must either develop evidence or go without.* Again, while the overall balance may be very different, in both cases there is a need to close evidence gaps and carefully interrogate sparse evidence. Pharmac's significant investment in the SOLD trial to help determine the optimal treatment length for the breast cancer treatment Herceptin (a question not addressed by the available evidence at the time) was a high-profile case in point.17 The choice of whether or not to allow and encourage other parties to make investment proposals may also play a role – something we return to just below.
- *The suggestion that evidence for pharmaceuticals is 'better' or 'stronger' than for social services, with reference to the perceived superiority of clinical trials (used much more often with pharmaceuticals) or difference in the predictability of a physiological (pharmaceuticals) versus behavioural (social sector) response*. Randomised controlled trials are used in both settings but, compared with widespread use for medicines, are only emerging in the social sector (a context Pharmac also appreciates, given its medical devices work where clinical trials are much less prevalent). There may also be important contextual differences in the extent and significance of replicability and implementation fidelity of interventions.

Without trivialising contextual differences – because they're real – they are not insurmountable issues, and perhaps lay the foundation of a challenge for social sector researchers, stakeholders and investors alike. As a subset of that challenge, the extent to which other parties are permitted and incentivised to produce investment proposals – and justify them with at least some evidence – is also a choice. In Pharmac's case, there is sufficient incentive for pharmaceutical suppliers to generate evidence, including for re-use across international jurisdictions. In such a setting, widespread evidence-making by Pharmac would risk eroding commercial parties' incentives to justify their products. In the social sector, the incentive to produce evidence is undoubtedly less, but nor can it be concluded an incentive does not exist. As agencies continue to focus on how best to improve outcomes, and what roles they themselves do and don't play, this may be fertile territory to further explore.

Evidence-making through trials or piloting of new investments (what might be called 'prospecting') must also take into account the fact that it is speculative activity. Prospecting is not cost-free and, as such, an investment strategy needs to balance speculative activity with more certain results. Too much speculation would risk forgoing more certain social outcomes; too little would risk missing new breakthroughs in investment design and delivery. At whatever scale, the most promising of all prospecting options in terms of expected value should also be pursued (there's no escaping prioritisation!).

HAVING A RELENTLESS FOCUS ON 'RELATIVE VALUE '

It is one of life's conundrums: an investment offering net benefits (expected benefits exceeding expected costs) can be poor value for money. How can something sounding so superficially wrong be absolutely right? The answer lies in understanding 'relative value'.

As indicated above, Pharmac has a strong focus on understanding relative value, based on an assessment of investments (1) relative to existing investments and (2) relative to other investment options. There are a number of key aspects, introduced below, that give relative value its legitimacy, prominence and sanctity within Pharmac's work.

- *The right organisation culture* – This is, in our view, a central feature of ensuring a strong relative-value approach, discussed in a later section.
- *The right objective* – The framing of Pharmac's statutory objective (best health outcomes from available funding) expressly requires the best possible choices to be made. To do that, options need to be assessed, prioritised and decided. A relative context is an inherent part of Pharmac's role.
- *Comparable applications* – While investment proposals always have important differences, Pharmac's application guidelines ensure sufficient commonality and comparability in proposals to allow them to be meaningfully compared.

- *Use of a consistent test* – Pharmac's investment test (Table 11.1) is central to assessments of relative value because every assessment is with reference to the same test – a consistent basis upon which to base and make comparisons.
- *Clarity of prioritisation and decision-making processes* – This is discussed in the next section.
- *An evidence-based approach* – As earlier discussed, an explicit choice to invest for the benefit of group A is an explicit choice not to invest the same resource to benefit groups B, C or D. In making these difficult choices, Pharmac requires a strong analytical and evidence-based focus on relative value.
- *Acceptance of good enough* – As in all technical domains, the pursuit of ever more academic and refined assessment reports can easily become a pursuit in itself. With a focus on relative value, the analysis does not need to be 'perfect'; it needs to be good enough to deliver confidence that one investment option is *probably* better than other. Practically speaking, this also helps 'land' assessment work, even when evidence is sparse. The costs and benefits of more assessment work must always be kept in mind.
- *Public acceptability of making tough choices* – This is discussed in a later section.

In an abstracted discussion of organisational capability like this, it's worthwhile coming back to why the above factors are critically important. Whether Pharmac or social sector agencies, if the best choices aren't made, some New Zealanders will have shorter or poorer quality lives than could otherwise be the case. And given we're talking about making choices, a relentless focus on relative value within organisations is also a choice. For example:

- It's a choice for decision-makers to demand relative assessment of a proposal in decision papers. If this is not expected, relative assessment is unlikely to be carried out.
- Without a codified and agreed investment test, the comparability of investments is likely to be significantly compromised.
- Without sufficient competition between investments, which creates a competition for high-quality assessment work, incentives for such work are likely to be reduced.
- The absence of a strong evidence-based approach to making choices could erode public confidence, as well as (unless particularly lucky) compromise outcomes that could otherwise be achieved.

If every investment is considered different, and not able to be compared, it should be no surprise if investments aren't compared! It can be done, and it's about leadership. It's also important to note that the notion of affordability does not constrain the choices that can be generated, assessed and even prioritised. Funding of course affects what can be pursued but, without information of where an expensive choice sits relative to other options, it is not possible to mount a case for further investment, or stop or defer other investments to redirect funding.

Pharmac is often asked how it forecasts the extent to which investments will be used. A good handle on volumes is central to understanding relative value – both for new investments and finding ways to free up resources from existing investments. In the case of the agency's main budget (the Combined Pharmaceutical Budget), it is not demand-driven; it is fixed, requiring volume changes to be managed within the existing investment catalogue. If total expenditure is forecast to be exceeded, opportunities to reduce expenditure *must* be found (and practical ones that can be transacted and successfully implemented with the public). This isn't always easy, but reflects a major design principle of managing investments within a budget. This in turn maintains strong incentives to understand and act on assessments of relative value. Clearly, to act in response to a forecast result – sometimes quickly – a pipeline of potential ways to free up value from existing investments is essential. There is also a natural incentive to be good at forecasting and keep building that capability over time.

KNOWING WHERE AND HOW PRIORITISATION AND DECISION-MAKING OCCURS

To make the best of all choices, well-designed business processes are required to facilitate the comparison. Well-embedded processes can also provide enduring organisation capability – the assets that remain when process designers and today's process users move on.

There are many process, system and wider business capability considerations inherent in an investment approach. Policies, for example, are clearly important, as are development plans for human capital (such as building skills in evidence appraisal and cost-effectiveness analysis). The codification of analytical techniques can also enshrine an organisation (rather than person-specific) approach. The Prescription for Pharmacoeconomic Analysis (PFPA)[18] – Pharmac's published guidance 'for assessing the value for money of pharmaceuticals in New Zealand' – is a good example.[19] Pharmac periodically reviews and consults on this guidance, harnessing expert feedback and maintaining stakeholder legitimacy in its assessment work.

A full overview of desirable business capability is beyond this chapter's scope (though there are cues throughout). However, we draw out two particularly important capability considerations below.

Pharmac has found that a well-defined prioritisation process is central to its work. It has established a defined workflow and regular internal meeting structure whereby each investment option is ranked against all others on the basis of assessment results. This is a very deliberate and systematic activity, working through investment details and the Factors for Consideration. As intended in the process's design, the act of prioritisation elicits healthy competition of views as to what should be ranked 'best'. The result is the 'prioritisation list' – a strategic asset that is a routine focus of senior management and Pharmac's board. It is commercially sensitive, given obvious risks to the pricing of pharmaceuticals, but in other contexts it may be possible for such a list to be widely reviewed as a potential catalyst or focus point for new investment ideas.

When it comes to deciding on Pharmac's investments, there is a well-worn path. Decision papers start from approved templates, framing the required expectations of key issue identification, analysis and recommendations. Decisions must also be presented and justified with reference to the factors, with commentary related to all quadrants; there is no escaping the common test that must be applied. While there is latitude in specific content, Pharmac has found that some codified base expectations provide a strong incentive for complete and high-quality work. Investment decisions are also being made all the time; there is a constant flow of activity, including through a monthly board cycle for investment decisions the board reserves to itself. This points to another important matter: clarity of delegations as to who can decide what. For efficient work and management of organisation risk, these delegations need to be clear and well known.

HAVING A RELIABLE MECHANISM TO GIVE EFFECT TO INVESTMENT DECISIONS

For Pharmac, the job isn't done until medicines reach patients and the intended health outcomes have been achieved. There's no comfort in the effort to make the best choices if those choices aren't transacted or can be circumvented or undermined. There are opportunities for both 'hard' and 'soft' implementation capabilities. Hard capabilities include the existence of systems that manage, monitor and validate payments and service delivery requests – built around Pharmac's investment catalogue. Decisions are taken to modify the catalogue, and the catalogue is reflected in the various payment and prescribing systems across the health sector, including in pharmacy dispensing software, prescribing software and the claims processing and validation activity of the Ministry of Health. In other words, the sector's transacting system is well aligned with Pharmac's decisions. Similar capabilities do not yet exist for medical devices, but the health sector is working hard to put them in place.

An investment can't be implemented if you can't pay for it, and this is a second 'hard' implementation capability. A series of structures and authorities exists to ensure that a budget is set, and that Pharmac has authority over it and accountability for it, and can make unfettered decisions about the deployment of those funds.

There are three 'soft' implementation capabilities of note. The first is support of individual investment decisions ‘on the ground’, supported by the second, a well-developed communications capability. There needs to be knowledge of the changes in the market beyond just system changes, training in how to implement the investment, and feedback and resolution of practical challenges. Pharmac has built a team to support implementation of investment choices, and to coordinate and harness the excellent and mission-critical capabilities of people distributed across the health system. The third capability is, in effect, a reputation for delivering. If capability can be demonstrated through prior actions, then there will be confidence that future actions can be implemented and people will tend to act accordingly.

Implementation capability in a robustly managed system also needs to be balanced with an ability to exercise discretion when appropriate (a pressure valve, in effect). Pharmac recognises that individual needs and circumstances can vary from some level of generalisation inherent in the assessment and codification of investments (such as to specific groups) when conducted at a system level. To help manage this issue, it has a process for investment in individual ‘exceptional circumstances’, dealt with in parallel to, and with knowledge of, wider activity to avoid unintentionally undermining the integrity of investment management overall.

USING A COMMONLY AGREED FRAMING, NOMENCLATURE AND TERMINOLOGY

‘If you wish to converse with me, define your terms.’ When it comes to social investment, Voltaire had that right. The transaction of investments involving multiple people requires common understandings and norms. While perhaps slightly overstated, ‘there can be no discussion of any real merit … without reducing the ideas in question to their simplest, least-divisible form, for the purpose of absolute clarity, distinction, and for the most accurate transmission of meaning’.[20]

As noted at the start of the chapter, the combination of ‘social’ and ‘investment’ seems slightly hamstrung by different understandings of definitions and intent. This must be worked through and, if the above quote is accepted, the working through will be more micro than macro. Even as fundamental as considering ‘investment’, it’s hard to eat the investment elephant in one go. What sort of investment? Budget setting? Portfolio? Policy choices? Operational services and interventions – and even then:

- prospecting for new ideas?
- freeing up value from existing investments?
- new investment proposals?
- making optimal use of investments already made?

Clearly, there's a need for some strong conceptual thinking to design robust frameworks and, piece by piece, unpack and put back together the core moving parts of an investment approach.

Within Pharmac, relevant frameworks, terms and norms have been created, clarified and embedded in the day-to-day activity of the organisation over 25 years. They are shortcuts to what otherwise could be long-winded or confused debates; a compass, the road-rules, the pigeonholes in the old mailroom and glossary all rolled into one. A number of Pharmac's terms and norms have been discussed throughout this chapter. Below we summarise some as examples that could be built from and contextualised into the social investment arena.

- Pharmac's catalogue, the *Pharmaceutical Schedule*, is a core organising framework. The decision to publish such a catalogue represents a commitment to work through all the conceptual design and definitional matters required of a clear and coherent document for both internal and external parties.
- *Therapeutic groups* are collections of pharmaceuticals that sit within a defined area of treatment. Oncology is an example. The activity in a therapeutic group is overseen by a single manager, who has a deep understanding of the informational and contextual issues pertaining to that group. In other investment contexts, the question is what the best of all conceptual breakdowns of investment activity would be.
- *Targeting* is the delivery of funded access for a pharmaceutical towards circumstances where the best value can be obtained. It is implemented though processes, rules or criteria in the schedule. An example is the use of pre-authorisations to enable and validate future payments, known as *special authorities* (a flexible tool well-known to all users of Pharmac's investments), which enable targeting to be enacted with integrity in a distributed system (including through monitoring).
- *Transactions* are activities aimed at freeing up resources from existing investments. The term is used in part to distinguish such activity from investments, a term Pharmac reserves for new investments that consume resources with a health outcomes return.
- *Health technology assessment* is the process of unravelling and understanding the value proposition of a potential investment, as indicated by its evidence-base. It is partly informed by *cost utility analysis*, which is the analytical process by which some elements of the *Factors for Consideration* are converted to gains in quality of life from a potential investment, in order to provide a comparable basis for treatments with disparate outcomes.

These are a few core examples of the architecture and constructs that frame and guide Pharmac's work. Those fit for one context won't necessarily fit another, but embedding the right architecture and construct is likely to prove essential to investment success.

MAINTAINING PUBLIC SUPPORT

Pharmac has built public confidence in its strong focus on relative value, even though individual decisions are challenging and have different impacts for different people. Such confidence is a product of many things, such as:

- Public consultation on how Pharmac works, such as the design of decision-making processes and analytical approaches (the redevelopment of the Factors for Consideration, for example, involved extensive discussions with the public, given the high importance of understanding what factors New Zealanders feel Pharmac needs to consider);
- Public availability and perceptions of evidence-based work (the meeting minutes of clinical advisory groups, for example, are published);
- Ongoing effective communication and stakeholder engagement;
- Provision of quality processes and systems to enable public participation (beyond easy ways for people to share views, this includes policies and procedures that maintain the integrity of data and information and also provide for appropriate levels of transparency); and
- Importantly, the achievement and perception of results.

As in other complex contexts, public confidence must continually be maintained and enhanced. This can be considered at a macro level where results can be measured or observed through accountability documents and processes; survey tools; and analysing public commentary (or specific parts of it, such as confidence among medical professionals in Pharmac's work). Confidence can also be assessed and built at micro levels, such as working closely with Māori and Pacific people (important groups when it comes to health and social outcomes); medical professionals who play a critical role implementing Pharmac's decisions; and consumer advocacy groups, product and service contractors, and funding partners.

Measuring success with communities of interest is inherently complex but might reasonably be characterised by the level and quality of engagement that takes place and the depth of understanding of one another's perspectives. To this end, Pharmac regularly engages in local community forums on topical matters, presents at conferences and meetings across the sector, and hosts a biennial national forum for all stakeholders.

There is invariably an element of advocacy from some stakeholders, which is understandable and desirable in a democratic society. Other pressures, such as litigation, independent reviews and petitions, also promote good performance and are part of the overall suite of accountability arrangements (in the broadest sense). Acceptance of these pressures, coupled with robust operating policies and procedures, helps to maintain public confidence, as does a culture of respect for stakeholder perspectives and willingness to listen and learn, and a clear decision-making delegation framework.

DEVELOPING THE RIGHT ORGANISATION CULTURE

It's well-known that defining and describing culture, and the building of culture, is a difficult task. Culture is the product of many things, and many other things are the product of culture. And we know from extensive research and popular quotes (e.g., Peter Drucker's 'Culture eats strategy for breakfast') that the right culture is central to high performance and maintaining it over time.

Organisation values are far from the full culture story, but a way into defining what culture is desired. There are different views on what values should be based, such as moral conduct; a link to key priorities; or a performance tool to bring profile to behaviours, competencies or ways of working that need to be improved. Let us run with asking what sorts of value statements might best support improved investment performance. Here are some potential ideas:

- 'We always remember the effect on all people and their families (not just those seeking a particular treatment).'
- 'We spend public money carefully and always try to maximise the value of its use.'
- 'We believe in sticking to our budget constraint, so always think hard about the investment choices we have to make.'
- 'We think ambitiously and are never satisfied with the status quo.'
- 'We never advocate.'
- 'We are cautious of seductive-sounding ideas and avoid being gullible.'

With values being culture 'push-factors' – assertions of desire – there are also multiple 'pull-factors' that play a complementary role. For example, what expectations are decision-makers setting for their advice? What professional development opportunities are being promoted? Are people with deep experience in relative assessment of investments being recruited? Should prioritisation have a sharper edge through a formalised prioritisation process? And, to finish on a lighter but no less important note, what accomplishments are celebrated at Friday's morning tea? Building culture is complex and multi-faceted but, done effectively, it's an investment that needs to be made and sustained.

CONCLUSION

In te ao Māori, the Māori world, a kete is a basket of choice; a choice of what contents go in and get taken out and, once picked up, how they get used for best effect. That is the purpose of this chapter: a basket of options, drawing on Pharmac's experience, for considering how an investment approach can be improved.

In providing these options, different aspects are likely to interest organisations in different ways, at different times. Some may not be relevant at all (though we feel that's unlikely) but context will dictate what's fruitful, when and in what form. Pharmac's approach is not necessarily a cookie-cutter that can be transported and directly imposed. The contexts for organisations and their stakeholders, and the 'maturity' of current investment work, matter a great deal. As noted earlier, for example, pharmaceutical suppliers are well incentivised to generate investment proposals; whereas the best ways for generating investment ideas from social sector stakeholders would need careful thought and design.

Recognising differences is essential, but it's also essential these are interrogated and understood. This is because differences may relate to *how* something is done, or *how well*, rather than *whether* it should be done at all. Pharmac's prioritisation process, for example, is a sophisticated and well-resourced process that draws on an extensive network of clinical advice. It's essential to Pharmac's context but quite possibly over the top for other investment arenas. But while the extent of work or depth of capability to do it may differ, the *necessity* of having a prioritisation list to inform decisions about relative value may not. As with Pharmac's recent medical devices work, it's a case of laying foundations, getting the frames up and then progressively working to build the house.

Prioritisation and investment are so inherent to daily life – decisions today for value tomorrow – that everyone and every organisation likely feels they're at least doing OK. But is OK good enough in the context of lives and well-being? A strong focus on investment capability and investment performance are central to public sector management. There is probably further scope to build public sector leadership and coordination in this area.

In Pharmac's experience, a very explicit and purposeful approach to investment management – refined through experience, hard work and listening to stakeholders – has paid dividends over time. What's remained constant, however, is that there's no time like the present to improve. We close with a Māori proverb well-grounded in investment and aspiration: Ko to pae tawhiti, whāia kia tata; ko te pae tata, whakamaua kia tīna. Seek out distant horizons and cherish those you attain.

References

Alsop, P., S. Metcalfe and J. Evans, 'Funding a Clinical Trial: The Perspective of a Medicines Funder', *Pharmacoeconomics*, 26 (2008)

Davis, P., 'Tough but Fair?: The Active Management of the New Zealand Drug Benefit Scheme by an Independent Crown Agency', *Australian Health Review*, 28, 2 (2004)

Gauld, R., 'Ahead of Its Time?: Reflecting on New Zealand's PHARMAC Following Its 20th Anniversary', *Pharmacoeconomics*, 2, 10 (2014)

Parkinson, B., C. Sermet, F. Clement et al., 'Disinvestment and Value-Based Purchasing Strategies for Pharmaceuticals: An International Review', *Pharmacoeconomics*, 33, 9 (2015)

Notes

1 P. Davis, 'Tough but Fair?: The Active Management of the New Zealand Drug Benefit Scheme by an Independent Crown Agency', *Australian Health Review*, 28, 2 (2004), pp.171–81; R. Gauld, 'Ahead of Its Time?: Reflecting on New Zealand's PHARMAC Following Its 20th Anniversary', *Pharmacoeconomics*, 2, 10 (2014), pp.937–42.

2 This chapter assumes some familiarity with Pharmac's role. For readers not familiar with Pharmac, a brief review of its website may bring additional value from this chapter: Pharmaceutical Management Agency (Pharmac), www.pharmac.govt.nz (accessed 7 September 2017).

3 'Q + A with Prime Minister Bill English', MinterEllisonRuddWatts, 12 May 2017, https://minterellison.co.nz/our-view/qa-with-prime-minister-bill-english (accessed 11 August 2017).

4 'Setting and Managing the Combined Pharmaceutical Budget (CPB)', Pharmac, 11 October 2016, www.pharmac.govt.nz/about/your-guide-to-pharmac/factsheet-08-managing-combined-pharmaceutical-budget (accessed 11 August 2017).

5 'Pharmaceutical Schedule', Pharmac, 17 August 2017, www.pharmac.govt.nz/tools-resources/pharmaceutical-schedule (accessed 11 August 2017).

6 'Online Pharmaceutical Schedule', Pharmac, 1 September 2017,www.pharmac.govt.nz/Schedule (accessed 11 August 2017).

7 Pharmac, *Guidelines for Funding Applications to PHARMAC*, 2015, www.pharmac.govt.nz/assets/guidelines-for-funding-applications-2015-08.pdf (accessed 11 August 2017).

8 'Social Bonds: New Zealand Pilot', Ministry of Health, 12 April 2017, www.health.govt.nz/our-work/preventative-health-wellness/social-bonds-new-zealand-pilot (accessed 11 August 2017).

9 B. Parkinson et al., 'Disinvestment and Value-Based Purchasing Strategies for Pharmaceuticals: An International Review', *Pharmacoeconomics*, 33, 9 (2015), pp.905–24. 10 New Zealand Public Health and Disability Act 2000, sec. 47: Objectives of Pharmac, http://legislation.govt.nz/act/public/2000/0091/latest/DLM80878.html?search=sw_096be8ed813ee3b1_pharmac_25_se&p=1 (accessed 11 August 2017).

11 Pharmac, 'New Zealand Public Help Improve PHARMAC Decision Making', press release, 6 July 2016, www.pharmac.govt.nz/news/me-

dia-2016-07-06-factors (accessed 11 August 2017).
12 Pharmac, *PHARMAC's Decision Criteria: Consultation Document*, May 2013, www.pharmac.govt.nz/assets/consultation-2013-05-17-decision-criteria-review.pdf (accessed 11 August 2017).
13 Pharmac, *2016 Year in Review*, www.pharmac.govt.nz/assets/year-in-review-2016.pdf (accessed 7 September 2017).
14 New Zealand Government, 'Family Incomes Package at a Glance: 2017 Budget', www.budget.govt.nz/budget/2017/family-incomes-package/index.htm (accessed 11 August 2017).
15 Stacey Kirk, 'Social Housing: The $16b Price Tag of Housing the Vulnerable', *Stuff*, 28 June 2017, www.stuff.co.nz/national/politics/94171047/Social-housing-the-16b-price-tag-of-housing-the-vulnerable (accessed 11 August 2017).
16 'Pharmacology and Therapeutics Advisory Committee (PTAC)', Pharmac, 1 September 2017, www.pharmac.govt.nz/about/committees/ptac (accessed 11 August 2017).
17 P. Alsop, S. Metcalfe and J. Evans, 'Funding a Clinical Trial: The Perspective of a Medicines Funder', *Pharmacoeconomics*, 26 (2008), pp.811–14.
18 Pharmac, *Prescription for Pharmacoeconomic Analysis: Methods for Cost-Utility Analysis*, Version 2.2, 2015, www.pharmac.govt.nz/assets/pfpa-2-2.pdf (accessed 11 August 2017).
19 Pharmac, 'Economic Analysis', 10 August 2017, www.pharmac.govt.nz/medicines/how-medicines-are-funded/economic-analysis (accessed 11 August 2017).
20 'Voltaire and the Scientists', LiamScheff.com: Collapse Watch, 21 August 2007, http://liamscheff.com/2007/08/voltaire-and-the-scientists (accessed 11 August 2017).

Chapter 12
Minding the implementation gap
NGO social service delivery and the social investment approach

Jo Cribb

INTRODUCTION

This chapter attempts to reconcile two distinct worlds: the world of the social investment approach and the art and science of changing the behaviour of individuals.1 That former world inhabits office buildings in central Wellington, powered by data analysts, their spreadsheets and data manipulation packages, and exponentially increasing computing power that is generating the ability to integrate and analyse data in ways we could only have dreamed of a decade ago.

The latter world consists of individuals or families or whānau ('clients') meeting a 'service provider' in the client's home, the provider's office, a health clinic or corrections facility. It is in this world that social outcomes can be achieved. And they are often achieved by individuals working for non-governmental organisation (NGO) social service providers. Providers in New Zealand include national NGOs such as Barnardos, iwi social services, and specialised regional and local providers like the Kirikiriroa Family Services Trust.

This chapter explores how to ensure that the potential gains from the new approach (i.e., using data to improve targeting of services, more selective interventions and new and alternative ways of governing, including commissioning and improved contracting) translate into and support what happens in those houses and clinics. How, in other words, can the implementation gap between 'knowing more' and 'delivering better results' be bridged? The answer advanced here is to accelerate decentralised decision-making, enhancing outcome-informed contracting, improving the monitoring of outcomes, and investing strategically in NGO capacity and capability.

The world of the social investment approach

It has been widely acknowledged that there is no shared understanding of the definition of social investment as applied in the New Zealand context.2 Initial applications have involved using actuarial analysis based on the expected reduction in the Crown's forward liability to inform decisions about targeting interventions and prioritising clients.3 Key elements are expected to include decisions based on evidence of what works and an in-depth analysis of people's needs, followed by more systematic measurement of the effectiveness of services delivered.4

The investment approach has been underpinned by the political and bureaucratic will to invest in integrating government administrative datasets and by the constantly improving ability to make sense of large volumes of data. What seems to be new is an intensified focus on evaluative evidence and data analysis which provide decision-makers with tools to target services in order to manage the ever-present problem of rationing government's spend on social services.

Delivering social outcomes – another world

The social outcomes desired by the former National-led government are outlined at the macro level as Better Public Services Results Areas.5 They include reducing the serious crime rate (Result 7), reducing the number of children experiencing physical and sexual assaults (Result 4) and 'healthy mums and babies' through increased numbers of pregnant women registering with a lead maternity carer or LMC (Result 2).

Achieving these results will be possible when individuals (such as parents or caregivers) change their behaviour – that is, stop doing something (e.g., violent offending or assaulting children) or start doing something (e.g., registering with an LMC). There are a range of policy options available to governments to do this but to achieve many of the desired results requires engagement of a professional to work with an individual, family or group. Professionals deliver, for example, violence prevention and anger management programmes for family violence (the largest contributor to violent crime). Professionals include drug and alcohol counsellors, employment brokers, social workers and teachers.

Evidence is conclusive that one of the key indicators of the success of such interventions is trust between the professional and their client.6 Building relationships of trust takes competence and consistency. Some of these professionals will be core public service employees (such as statutory social workers and Work and Income employees), but most will be employed by organisations in the wider state sector such as district health boards (DHBs) and schools, NGOs and for-profit businesses. Most of the government's 'frontline' – those who directly deliver publicly funded services – are early childhood education centre staff (who work for private businesses or NGOs), general practitioners (who may be private businesses), Plunket nurses and iwi social service social workers. These people are not public servants and do not work for government departments. However, senior public service leaders and those who lead the public service's public management design usually incorrectly assume their 'frontline' is the lowest tier of client-facing staff in government departments.

Arguably much attention, investment and accountability effort then focuses on the performance of core public service organisations (e.g., select committees, accountability documents, performance improvement frameworks, the Leadership Development Centre's focus on the public service).

Less attention, both in terms of public scrutiny and investment, is paid to the organisations in the wider state sector, private sector or NGO sector that actually employ many of the staff who work with clients to change their behaviours, and therefore are critical to the government achieving its desired social outcomes. While consolidating the data has proven difficult, the taxpayer investment in NGO contracts is substantial. The Ministry of Social Development alone contracted NGOs for $542 million of services in 2014–15.[7]

The mechanisms by which the core departments commission and support these organisations and assure the effectiveness of their services are crucial. The teams in government agencies that commission and contract are a main lever the government has for achieving many of its desired social outcomes.

Contracting and commissioning – focus on NGOs

Commissioning is the term generally given to a set of tasks that are needed to be completed to turn a policy objective into a service. The Productivity Commission's report provides a good outline of what it should be.[8] Commissioning is the process of clarifying the objectives to be achieved, analysing the target populations, choosing the appropriate service model, undertaking detailed design, implementing the service and providing stewardship of it (such as monitoring and service improvement). As a result of a commissioning process, an agency may then choose to contract an NGO to deliver a service.

The Productivity Commission concludes that commissioning across social services occurs in an ad hoc way. Indeed, the processes may happen in different silos within agencies that may not be coordinated. And some of the activities critical to commissioning may be missed out – such as early engagement with clients in the detailed design and the ongoing stewardship of provider capability. Implementation of the service is often given minimal attention.

However and whenever the commissioning decisions were reached, contracting NGO providers to deliver services has been a well-utilised choice of service model. The benefits and risks of such contracting have been well documented, as summarised by this writer.[9] From a government perspective, it can provide greater customer choice,[10] and introducing competition is said to promote efficiency and responsiveness.[11] NGOs are thought to be closer to clients and are often consulted as proxies for community voice.[12] However, specifying what should be delivered and measuring its effectiveness remains an ongoing challenge, as does the variable capacity and capability of providers.[13]

From an NGO perspective, they can access financing to expand service provision, but the costs of contracting include increased monitoring,[14] threats to their mission and independence,[15] and the higher transaction costs of working with government agencies.[16]

The Productivity Commission concluded in its report that this uncomfortable relationship can work adequately for some services, in particular those that can be standardised. However, for clients with complex needs (a small group who are the most disadvantaged New Zealanders, and the most costly for the social services system), the system does not work well.

THE IMPLEMENTATION GAP – TWO WORLDS COLLIDING

For applying the social investment approach to the purchase of these contracted social services and achieving a positive return on an investment, Boston and Gill identify a number of prerequisites:[17]

- capability and capacity within agencies for effective commissioning – selecting the right services, delivered in the right way so as to get the best results;
- knowledge of what programmes or interventions work and for what group of clients they work (so the appropriate 'investment' can be purchased);
- some assurance that the intervention is delivered in a way that assures people it works (programme fidelity);
- capacity and capability in the provider to deliver the appropriate intervention where it is needed (both time and location); and
- strong feedback and evaluation to provide assurance of success and to encourage changes in approach in response to new evidence.

If these prerequisites are considered in light of the current reality of the NGO provider world, a not unexpected implementation gap can be identified. This gap is neither new nor unknown, and the issues have been well identified by the Productivity Commission.[18] They include problems with commissioning – the objectives are often not clear (that is, what social outcome is desired?) at the outset of a commissioning process, and the commissioning agent has limited knowledge of what works and what the provider's capacity and capability is (and there is a wide range of capacity and capability in the NGO sector). The resulting contracts are often highly specified and standardised, which means that tailoring to clients' needs is difficult.

Gaps also occur in delivery when contracts are driven by administrative silos. This can make it difficult to coordinate services for the complex needs of some clients. Service providers wanting to provide seamless wrap-around services for their clients are forced to be creative with the multiple contracts and differing demands from different agencies.

Government also usually pays only a percentage of the cost of service delivery. NGOs then need to subsidise it from their own sources, often by fund-raising. Issues of service quality and 'mission drift' can arise as organisations piece together funding. These issues arise regardless of whether or not decision-makers are using an investment approach to ration social service spending.

Knowledge of what works

There is limited knowledge of what works. Few evaluations are undertaken and those that are can be of poor quality. Findings from evaluations are also not well utilised in commissioning or contracting decisions.19 Programmes of substance will have been evaluated, though many evaluations prove inconclusive. Evaluative evidence may not be able to be widely generalised, so questions of 'for whom' and 'under what circumstances' do interventions work may not be answered.

From an evaluation perspective, the 'gold standard' – randomised controlled trials (RCT) – is expensive and time-consuming and may not generate conclusive data. Given that many current interventions are small-scale (pilots that have just kept running are common), it is unlikely that a significant reliance upon RCT-type evaluations will be feasible either fiscally or methodologically. Indeed, many contracts are for less than $20,000 and some are as small as $5,000. Evaluating the services delivered as a result would be costly and ineffective. RCT trials also may need to be structured so that one group of clients is 'treated' at the expense of others (a control group), which can be ethically fraught and unacceptable to the public.

There is also debate about what constitutes evaluation and valid data. Wolf outlines the challenges of determining whose knowledge and understanding is prioritised.20 'Knowing' what works through evaluation is currently not completely possible and will require a large investment in resources to improve. 'Knowing' what works from the perspective of clients is not always captured and built into the design of services. Programme fidelity

Even if an intervention has been evaluated and proved effective, to replicate the success found by the evaluation, the intervention needs to be delivered in the same way. When there are likely to be multiple independent providers, clients with differing needs and individual professionals with different practices, programme fidelity can be difficult to achieve. Doing so takes substantial resources invested in specifying, training and monitoring.

If providers and even individual practitioners innovate and customise delivery to their clients' specific needs, the intervention may be more effective – or less effective. This creates an interesting tension. The standardisation and fidelity that can provide more assurance of results sits uneasily with encouraging innovation. Indeed, international experience has shown that the drive to create social enterprises that develop innovative and hybrid responses to social problems, often on a local scale, has resulted in fragmented delivery and potential duplication.[21]

The tension between professional judgment and NGO discretion and standardised delivery of programmes may be intensified by the social investment approach. The importance of cultural responsiveness is well recognised in social service delivery.[22] The ability of the skilled professional to relate to their client and the value of culturally responsive organisations that welcome clients cannot be overstated. This involves professional judgment and tailoring at the level (as a New Zealand example) of iwi or hapū or a Pacific community. Identifying where and for whom discretion and flexibility in service delivery will generate improved outcomes, and where it may not, will prove an ongoing challenge.

Capacity and capability to deliver

Research shows that while many NGOs orientate their service provision to their current government contracts,[23] the skilled and trusted professionals they employ and who can work effectively with families with the most complex needs are scarce.[24] The NGOs often have to compete with government agencies for staff, while offering lower rates of remuneration.

Furthermore, NGOs have missions and funding sources independent of government and must respond to the demands of a range of funders.[25] Assumptions that NGO services can easily and flexibly be deployed by the government in response to investment decisions need to be challenged.

Feedback loops

The tools of the social investment approach provide for more refined data about the needs of New Zealanders and more targeted and localised solutions. In order for NGOs to provide meaningful data to decision-makers and commissioning agents, there will need to be a substantial investment in capability building and data capture systems beyond reporting on contracted output delivery. Many NGOs, even if they had staff capable of data analysis, would not have the capacity to free them up to do it.

Any investment will also need to be underpinned by a shared understanding between commissioning and contracting agencies and NGO providers about what the data is needed for and how it would be used. Without such clarity, the trust that is essential for good flows of data will not exist. And the conversations around what is learned as a result will also not exist.

IMPLICATIONS – BRIDGING THE GAP

Thinking through the social investment approach through the lens of NGOs providing social services – seeing the two worlds colliding – raises issues about potential tensions that, if not addressed, can widen the implementation gap:

- programme fidelity to achieve desired results sits uneasily with constant innovation;
- specified programmes delivered by professionals sit uneasily with community co-production and ownership;
- scaling up to generate efficiencies sits uneasily with bespoke, customised and localised responses to need;
- trust can be key to effective service delivery – but trust is an intangible quality that is difficult to contract for;
- innovative responses to issues (such as social enterprises) may make service integration for families with complex needs more difficult; and
- the need for NGOs to respond to their communities may sit uneasily with their need to be responsive to government funders that make different investment decisions.

Clearly, bridging the implementation gap is a classic 'wicked' problem.26 It can be easy to map such problems and point out the challenges. Navigating pathways forward is far more difficult. Such problems are not easily solvable. Instead, managing the tensions and ambiguity to create optimal pathways is the way forward.27

For government agencies that contract with NGOs, one of the implications of the new approach must be that their investment decisions need to be made closer to the client. While national and regional priorities will determine who and what should be invested in, to achieve maximum results from increased targeting of investments, localised knowledge of clients and what works for them will need to drive the final phase of contracting.

Commissioning agents will need to have knowledge of the specific strengths and limitations of the organisations they are contracting, as well as what works for the communities and clients they are commissioning services on behalf of. They will require a closer relationship with their contracted NGOs in order to, for example, have the ability to understand what innovations are occurring and how effective they are.

The social investment approach provides the tools for targeted service delivery focused on client needs. This will potentially result in customised and bespoke delivery. Contracting for such – trying to specify potentially localised and individualised interventions – will generate substantial transaction costs. This points to the need to accelerate the development of contracting for intermediate outputs and outcomes-informed payment regimes, leaving NGOs with more discretion over the inputs and even the outputs of what they deliver. Derek Gill (Chapter 6) discusses this in more depth, including the need for monitoring frameworks iteratively based on outputs and impacts, as opposed to the current focus on delivering specified outputs via set contracts.

Following this, many current evaluation tools and strategies will be ineffective for localised and individualised service delivery. Generalisability, at the least, will become difficult. Instead, monitoring and tracking the outcomes of clients seems to be a logical focus to efforts to hold NGOs accountable. Instead of being a mechanism to hold providers to account, evaluation and feedback loops could become more of a mechanism of learning and sharing. For this to happen, they will need to be built into contracts and resourced appropriately.

The government needs a more in-depth and joined-up understanding of NGO providers throughout the country. In particular, it needs to know where specialist skills are, and what the current capability and capacity for delivery is. This will allow for a targeted investment strategy in building capacity and capability where it is predicted to be needed.

Without such a strategy, there is a risk that the current quasi-market for providers will either ensure provision is dominated by a few providers (who may not have the will or ability to be agile and responsive in their delivery) or generate a raft of small bespoke providers without the critical mass to be sustainable. Both scenarios are feasible under the incentives of the social investment approach, and neither will serve communities well.

The commissioning and contract teams in government agencies need to be staffed by the best and brightest with intimate knowledge of the communities, clients and NGO providers they are serving, and the ability to build trusting relationships and make complex (and hard) decisions. Staffing should be consistent and stable – each time someone leaves, the government needs to rebuild its credibility with NGOs, and its knowledge of communities and clients again. Commissioning staff should work on the basis of respect: it is their job to support NGO staff who will achieve many of the government's desired social outcomes.

At the same time, there also is much work to be done to ensure NGO providers can deliver the most effective services. Recent research into the governance and change capacity of social service NGOs shows that they are approaching the potential changes in their funding environment in a range of ways.28 Some, too busy and in survival mode, are just managing day-to-day delivery for their clients. Others are taking a watching brief. Some astute leaders are adapting by doing things like investing in advanced data capture and client monitoring systems, or looking to partner with other NGOs that offer complementary services, so as to build scale and integrated service offerings for their community.

However, those organisations that aren't preparing themselves for change may be the ones that provide the services commissioning processes identify as most needed. These agencies might hold the trusted relationships with hard-to-reach clients that are crucial to achieving results.

Most organisations surveyed were less than 50 per cent funded by government. This was the strategic intent of some NGOs, so as not to be beholden to government agencies. This means that government ability to dictate what the NGO focuses on is limited. It also means that 50 per cent of the service capability of these NGOs could be funded by other organisations, who could also change their objectives away from things that the government wishes NGOs to deliver.

The implication is that commissioning agencies will require a good relationship with providers to work through such issues. Relationships will need to be based on trusted and shared objectives, not on the sophistication (or not) of an NGO's client database or by using funding as a threat. For some government agencies, the current relationship with their NGO providers is fraught with mistrust. Moving to effective commissioning will take a substantial investment in relationship re-building.

This writer's research also identifies opportunities for the NGO sector to improve its own capability.[29] Governance structures (such as representatively elected boards) are proving barriers to having an effective governance function – something that is critical for an NGO if it is to navigate the changing environment successfully. Some NGOs are reluctant to collaborate and will only welcome consolidation in the NGO social services sector if it means they keep being funded.

BEST OF BOTH WORLDS

The social investment approach focuses on targeting investments to reduce forward fiscal liability. But it will only ever be as effective as the individuals who deliver the services that change the behaviours of those targeted. These changed behaviours are what are needed to achieved the desired social outcomes.

This chapter has outlined some of the challenges of translating the insights from increased data into improved outcomes for New Zealanders, looking through the lens of NGOs who deliver some of the services provided. Just because we can know more about individuals and communities does not automatically mean outcomes will improve. They improve when individuals change their own behaviours, often supported and/or incentivised by professionals to do so.

The social investment approach offers commissioning agents guidance as to whom services should be targeted to. However, unless there are trusted competent providers who can effectively work with those to whom services are targeted, better outcomes will not result.

To ensure we harness the opportunity that the approach offers, a series of questions must be asked:

- Are we investing in building the capabilities within government and NGOs required to effectively commission services?

- Are we investing as much time and resources in building the capacity and capability of NGO providers as we are in knowing about who to target with what?
- Are we focused on working through the messiness of the implementation gaps? Especially the tensions outlined here – innovation sitting uncomfortably with programme fidelity, NGO independence and community responsiveness grating with commissioning agents' specificity and targeting, the judgment of a professional in their office with a client or the result of data analytics?
- How do we ensure the current limitations of our social service delivery system do not just magnify and undermine the opportunities the social investment approach offers?
- How do we ensure that unintended consequences (such as changes to the landscape of providers) do not again undermine any advances? Understanding that there are two worlds is a start, as is acknowledging the existence and the importance of bridging the implementation gap.

References

Adams, Kimberly, and Sandra Christenson, 'Trust and the Family-School Relationship. Examination of Parent-Teacher Differences in Elementary and Secondary Grades', *Journal of School Psychology*, 38, 5 (2000)

Boston, Jonathan, and Derek Gill, *IGPS/SoG: VUW & NZIER Project on the Social Investment Approach: Project Scoping*, Wellington, 2016

Boulton, Amohia, Jennifer Tamehana and Tula Brannelly, 'Whanau-centred Health Social Service Delivery in New Zealand', *MAI Journal*, 2, 1 (2013)

Butcher, John, 'Investing in Not-for-Profit Sector Capacity: The Australian Capital Territory's Community Sector Development Program', *Australian Journal of Public Administration*, 75, 2 (2016)

Carson, Ed, Donna Chung and Andrew Day, 'Distant Relations: Limits to Relational Contracting in Domestic Violence Programmes', *International Journal of Public Sector Management*, 25, 2 (2012)

Considine, Mark, Siobhan O'Sullivan and Phuc Nyuyen, 'Governance, Boards of Directors and the Impact of Contracting on Not-for-Profit Organisations: An Australian Study', *Social Policy and Administration*, 48, 2 (2014)

Cribb, Jo, *Being Accountable: Voluntary Organisations, Government Agencies and Contracted Social Services in New Zealand*, Institute of Policy Studies, Wellington, 2006

Cribb, Jo, 'Governing for Good: The Governance Capability of Social Service NGOs', 2017, *Community Research*, www.communityresearch.org.nz

Cribb, Jo, Robbie Lane, Heather Penny, Kylie van Delden and Kathie Irwin, 'Pragmatism and Caffeine: Lessons from Cross-Agency, Cross-Sector Working', *Policy Quarterly*, 7, 4 (2011)

Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment for Our Future*, Wellington, 2016

Ellis, J., and T. Gregory, *Accountability and Learning: Developing Monitoring and Evaluation in the Third Sector*, Charities Evaluation Service, London, 2008
Gill, D., S. Pride, H. Gilbert, R. Norman and A. Mladenovic, 'The Future State Project: Meeting the Challenges of the 21st Century', *Policy Quarterly*, 6, 3 (2010)
Jackson, Matthew, 'Matching Rhetoric with Reality', *International Journal of Sociology and Social Policy*, 30, 1/2 (2010)
Le Grand, J., 'Quasi Markets and Social Policy', *The Economic Journal*, 101 (September 1991)
Le Grand, J., *The Other Invisible Hand: Delivering Public Services Through Choice and Competition*, Princeton University Press, 2007
Lewis, J., 'New Labour's Approach to the Voluntary Sector: Independence and the Meaning of Partnership', *Social Policy and Society*, 4, 2 (2005)
May, J., P. Cloke and S. Johnsen, 'Re-phasing Neoliberalism: New Labour and Britain's Crisis of Street Homelessness', *Antipode*, 37, 4 (2005)
New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015
Rathgeb Smith, Steven, and Susan Philips, 'The Changing and Challenging Environment of Nonprofit Human Services: Implications for Governance and Program Implementation', *Nonprofit Policy Forum*, 7, 1 (2016)
Reamer, Frederic, *Social Work Values and Ethics*, Columbia University Press, New York, 2010
State Services Commission, 'Better Public Services 2012–2017', 13 March 2017, www.ssc.govt.nz/better-public-services (accessed 7 September 2017)
Thorn, David, Mark Hall and Gregory Pawlson, 'Measuring Patients' Trust in Physicians when Assessing Quality of Care', *Health Affairs*, 23, 4 (2004)
Van Slyke, David, 'The Public Management Challenges of Contracting with Non Profits for Social Services', *International Journal of Public Administration*, 25, 4 (2002)
Van Slyke, David, and Christine Roch, 'What Do They Know and Who Do They Hold Accountable?: Citizens in the Government – Nonprofit Contracting Relationship', *Journal of Public Administration Research and Theory*, 14, 2 (2004)
Wallis, Joe, and Brian Dollery, 'Revitalising the Contribution Non-Profit Organisations Can Make to the Provision of Human Services', *International Journal of Social Economics*, 33, 7 (2006)
Wolf, Amanda, *Information Requirements: Understanding the Social Investment Feedback Loop*, IGPS/NZIER Project, Wellington, 2016

Notes

1 As this chapter was prepared, the gulf between 'the world of the social investment approach' and 'the world of the NGO provider' was demonstrated publicly through media debate. The Ministry of Social Development was seeking data from NGO providers on their clients. Some providers were actively resisting providing such data. The interactions between officials and NGO leaders at the workshop where an earlier version of this chapter was presented clearly demonstrated the 'clash' of two different worldviews.

2 Deloitte/NZIER, *State of the State, New Zealand 2016: Social Investment*

for Our Future, Wellington, 2016, p.15.

3 Jonathan Boston and Derek Gill, *IGPS/SoG: VUW & NZIER Project on the Social Investment Approach: Project Scoping*, Wellington, 2016.

4 Bill English, as cited in Boston and Gill, *IGPS/SoG: VUW & NZIER Project on the Social Investment Approach.*

5 State Services Commission, 'Better Public Services 2012–2017', 13 March 2017, www.ssc.govt.nz/better-public-services (accessed 7 September 2017).

6 Kimberley Adams and Sandra Christenson, 'Trust and the Family-School Relationship. Examination of Parent-Teacher Differences in Elementary and Secondary Grades', *Journal of School Psychology*, 38, 5 (2000), pp.477–97; David Thorn, Mark Hall and Gregory Pawlson, 'Measuring Patients' Trust in Physicians when Assessing Quality of Care', *Health Affairs*, 23, 4 (2004), pp.124–32; Frederic Reamer, *Social Work Values and Ethics*, Columbia University Press, New York, 2010.

7 New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015.

8 Ibid.

9 Jo Cribb, *Being Accountable: Voluntary Organisations, Government Agencies and Contracted Social Services in New Zealand*, Institute of Policy Studies, Wellington, 2006.

10 J. Le Grand, *The Other Invisible Hand: Delivering Public Services Through Choice and Competition*, Princeton University Press, 2007.

11 J. Le Grand, 'Quasi Markets and Social Policy', *The Economic Journal*, 101 (September 1991), pp.1256–67.

12 Matthew Jackson, 'Matching Rhetoric with Reality', *International Journal of Sociology and Social Policy*, 30, 1/2 (2010), pp.17–31.

13 David Van Slyke, 'The Public Management Challenges of Contracting with Non Profits for Social Services', *International Journal of Public Administration*, 25, 4 (2002), pp.489–517; David Van Slyke and Christine Roch, 'What Do They Know and Who Do They Hold Accountable?: Citizens in the Government – Nonprofit Contracting Relationship', *Journal of Public Administration Research and Theory*, 14, 2 (2004), pp.191–209; John Butcher, 'Investing in Not-for-Profit Sector Capacity: The Australian Capital Territory's Community Sector Development Program', *Australian Journal of Public Administration*, 75, 2 (2016), pp.249–57.

14 J. May, P. Cloke and S. Johnsen, 'Re-phasing Neoliberalism: New Labour and Britain's Crisis of Street Homelessness', *Antipode*, 37, 4 (2005), pp.703–30.

15 J. Lewis, 'New Labour's Approach to the Voluntary Sector: Independence and the Meaning of Partnership', *Social Policy and Society*, 4, 2 (2005), pp.121–31.

16 J. Ellis and T. Gregory, *Accountability and Learning: Developing Mon-*

itoring and Evaluation in the Third Sector, Charities Evaluation Service, London, 2008.

17 Boston and Gill, *IGPS/SoG: VUW & NZIER Project on the Social Investment Approach.*

18 New Zealand Productivity Commission, *More Effective Social Services.*

19 Ibid.

20 Amanda Wolf, *Information Requirements: Understanding the Social Investment Feedback Loop*, IGPS/NZIER Project, Wellington, 2016.

21 Steven Rathgeb Smith and Susan Philips, 'The Changing and Challenging Environment of Nonprofit Human Services: Implications for Governance and Program Implementation', *Nonprofit Policy Forum*, 7, 1 (2016), pp.63–76.

22 Amohia Boulton, Jennifer Tamehana and Tula Brannelly, 'Whanau-centred Health Social Service Delivery in New Zealand', *MAI Journal*, 2, 1 (2013), pp.18–32.

23 Joe Wallis and Brian Dollery, 'Revitalising the Contribution Non-Profit Organisations Can Make to the Provision of Human Services', *International Journal of Social Economics*, 33, 7 (2006), pp.491–511.

24 Ed Carson, Donna Chung and Andrew Day, 'Distant Relations: Limits to Relational Contracting in Domestic Violence Programmes', *International Journal of Public Sector Management*, 25, 2 (2012), pp.103–17.

25 Mark Considine, Siobhan O'Sullivan and Phuc Nyuyen, 'Governance, Boards of Directors and the Impact of Contracting on Not-for-Profit Organisations: An Australian Study', *Social Policy and Administration*, 48, 2 (2014), pp.169–87.

26 D. Gill et al., 'The Future State Project: Meeting the Challenges of the 21st Century', *Policy Quarterly*, 6, 3 (2010), pp.31–39.

27 Jo Cribb et al., 'Pragmatism and Caffeine: Lessons from Cross-Agency, Cross-Sector Working', *Policy Quarterly*, 7, 4 (2011), pp.50–54.

28 Jo Cribb, 'Governing for Good: The Governance Capability of Social Service NGOs', 2017, *Community Research*, www.communityresearch.org.nz.

29 Ibid.

Chapter 13
Policy delivery is risky
The administrative and political uncertainty of making policy happen

John Yeabsley

RISK IS PERVASIVE

Risk is an important cross-cutting theme that runs through many chapters in this volume.[1] This is because risk is inherent in all policy programmes: indeed, it is often one of the reasons for government involvement in the first place. In the context of social investment this chapter looks beyond technical risk (the risk inherent in the design and execution of social programmes) to the political risk (associated with public perception of answerability and accountability for public policy's design and implementation).[2] *Technical risk* stems from the way a policy is shaped and executed. It springs from the nature of the intervention used. It is driven by features of the real world that are often uncontrollable. *Political risk*, on the other hand, is a man-made phenomenon stemming from the political contest. It is hard to predict, as issues become salient and then lose their profile as other issues come along.

Technical risk/political risk

At the level of broad categories, this contrast between the two types of risk can be seen at work. Any new experimental policy programme like the social investment approach inevitably entails technical risks. A poor range of solutions and management weaknesses can mean inadequate selection or delivery of interventions. Hard-pressed governance can fail in the oversight of innovative delivery models.

Almost all technical risks associated with an experimental programme like social investment come with an associated and different political risk.[3]

REAL RISK

There are different aspects of risk.[4] The focus here goes beyond the technical (statistical) risks that programmes might fail or otherwise underperform.

What does this chapter cover?

The main theme in this chapter is about the wider risks associated with the delivery of a specific type of policy. To consider this, we are going to use a framework developed in the next section. We look at a generic delivery model of the social investment approach and its necessary supporting structures.[5] First, specific technical risks are identified, then associated political risks are developed. Finally, we turn to ideas to assist with the mitigation of political risks.

The social investment approach – stylised delivery model

The setting is a social problem associated with a defined sub-population. It is sufficiently concerning to be accepted as a topic on which it is worth spending public resources. The members of the subset are not obvious before they become associated with the problem.[6] Instead, there is a stock of data about factual details of individuals in the subset, and historical records about the problem and previous (policy) treatments.[7]

The presenting issue is a suggestion to intervene earlier to stop the problem occurring.[8] The reasons this is preferable are not necessarily well-articulated, but there is a popular intuitive bias for acting early (the old saying 'An ounce of prevention saves a pound of cure').

In this model, there is no unthinking application of this maxim.[9] Rather, as part of the social investment approach the policy design seeks to grapple seriously with this problem, to achieve a genuine improvement in social outcomes, while husbanding public resources. This may involve the sequential application of treatments drawn from possible remediation strategies, and may also mean withholding early intervention if it does not provide an adequate return.

The components of such a system are:

Delivery team's broad tasks:

- examining the presenting cases (conceptually individually, but perhaps as subgroups) and classifying them by 'problem';
- selecting an appropriate intervention (treatment) for the case (possibly no action) to address the problem identified;
- implementing that intervention; and
- evaluating the effects, subsequently.

Support activities:

- a **data structure** within which to gather information to appraise the cases and classify them into treatment classes or, crucially, into a non-treatment class;
- an **intervention** set that is well-tested (so measures are known, capable of be-

ing carried out, and predictable), and available;
- a **choice/matching mechanism** to select the appropriate intervention, given the treatment class appraisal of the specific case;
- the **resources** to effectively implement the selected intervention; and
- an **evaluation framework** to assess the success of the intervention, including a clear definition of what is a better situation.

We abstract from implementation risk (operator failure) to focus first on the technical risks in the system.

Risk realities[10]

To consider the issues of interest here we must assemble the pieces of the story. First, two aspects of risk are intertwined with the mechanisms in the model above.

Classification issues

In any set of real empirical information used to test for an underlying characteristic, two important classes of error may occur. These are 'false positives' and 'false negatives'. False positives (or false alarms) occur when individuals' associated data assigns them to a treatment class when they are in fact not in that class – in some cases, they should be in the non-treatment class (wrongly treated.) False negatives (or failed alarms) occur when individuals' observed data assigns them to the non-treatment class (wrongly not treated.) Clearly, the consequences and thus the actual social costs associated with each of these errors depends on the specifics of the situation.[11] In general, some costs are unavoidable, as the data are unlikely to be discriminating enough to separate the groups without mistakes.[12]

Aggregated assessment

As with all areas of public policy there is usually data gathered to check whether the individual interventions are working. Because there may be varied responses to these separate actions (up, down or sideways), and often a range of measures being used, summing them up is a serious challenge.[13] Because of this, there is a risk that the aggregation method and thus the overall assessment of progress is open to dispute.

RECOGNISING THE SETTING

All public social investment takes place in an environment of political decisions about policies, resources voted as public allocations, and a series of accountability mechanisms.[14] It is inevitably part of the world of politics.

Risk and politics

Many experts cover the local political scene with a variety of research and commentary on the way policy and politics interact. But to sum up the New Zealand position we draw on the clear and insightful writing of Mark Prebble. The following extract serves as the basis for the rest of the discussion.[15]

The Iron Law

Being responsible and accountable to the House, and thence to the voters, has created an unwritten iron rule of political contest (the iron rule), which often surprises new MPs in its intensity, but is soon branded indelibly on their psyches. Its quadruple formulation is as follows.

- *The opposition is intent on replacing the government.*
- *The government is intent on remaining in power.*
- *MPs want to get re-elected.*
- *Party leadership is dependent on retaining the confidence of colleagues (which is shaped by the first three principles).*

From this law (the corollary of which is 'to a politician everything is political') flow various factors relevant to the political way of considering risk.

Risk perception[16]

In the political market, the relentless contest means the way risk 'plays out' is not the way it works in other areas. In particular, risk is not always subject to portfolio 'cancel-out'. In short, the political consequences of a bad result may not be offset by another good result – possibly not even by many positive results. While in a normal financial analysis five good results and one bad might net about four good results, in politics, such a scenario befalling a government may be a net of one bad outcome.[17] Assessments and thus choices related to political risk do not simply 'add up and cancel out'.

Objectives and means

The best policy from an analytical standpoint may not be the best from a political standpoint. This can be caused by a variety of situations often relating to the way previous political disputes were fought out, and/or the meaning thereby associated with key phrases.[18] Analytically, a good rule of thumb is that cost-benefit analysis (CBA) is about efficiency (aggregate national income) while politics is about distribution (how income or costs fall on individuals).

Acceptability of supporting players[19]

Any new social intervention system is going to change the distribution of assistance; that is the idea. But the social investment model is likely to shift the system towards targeting currently underperforming groups. This raises the risk that the measures proposed and the groups that receive them may not be attractive to a significant block of the middle class.20 Such measures are potentially politically negative.

Framing

Another source of specific political concerns is that politics is closely related to the presentation of an issue, and the frame can change. Aggregate economic growth policy may involve temporarily (or even permanently) reducing a group's income (restructuring an industry.)21 Rather than assessing the policy by its success in creating growth, the misfortune of those made less well-off may be the political scales used.

Focus

The way the political market approaches an issue has its own rules and priorities. One obvious facet is time. Short-term results and quick responses are the stuff of the political cut and thrust. Political risk is also hard to predict, as the salience of issues comes and goes. Specific topics wax and wane, as new issues emerge. This relates to the way politics is entwined with communication. Politicians zero in on what will gain them wider notice, as the whole point is to have support from many voters.

The road to the biggest audience lies through the media (traditional and social). Their role can be as minor as story spreaders and amplifiers, but they can influence the slant of the coverage.22 Given the trend to simplify, stories become less nuanced and subtle; complicated matters are presented as slogans. But their influence can easily be overstated, as politicians themselves often make the running.

A case study that shows the distance of technical risk from the political sphere is that of the discontinuation of anti-reoffending programmes in the Department of Corrections in 2005–6.23 The department had done the right thing: reviewed programmes and stopped those with poor evaluations. But criticism by an opposition member of a select committee of the 'waste of public money in ineffective programmes' was the headline. Gill commented that 'gathering information on effectiveness and acting on it still results in criticism – it just comes in a different form'.24

Aspects of how political logic works, including a concentration on a simple (or even wrong) version of a social issue, are instanced in Warren Young's comprehensive discussion of recent justice policy.[25]

Political aspects

In summary, technical risk relates to the substance of the underlying process, while political risk is mainly about short-term perceptions of the issue (which can last into the long run). Though political risk has a complicated logic, it is not written in stone and has various aspects. For instance, on occasion doing nothing can be a serious risk – it can be worse than trying and failing.

The logic of the political world is like that of pragmatists. For instance, according to one version, the pragmatic version of truth is: 'The opinion which is fated to be ultimately agreed to by all who investigate is what we mean by the truth, and the object represented in this opinion is the real.'[26] Or, the truth is what will come to be widely accepted. The political world here is one that sets out to achieve this eventual result via a flying start.

To illustrate this in practice, consider the distinction that underpinned earlier New Zealand writing about public management: outputs (controllable agency results) and outcomes (wider results subject to environmental influence).[27] When implemented, outputs were down to the agency, while outcomes were ministerial result areas. But in the political world here, the assignment could be reversed, with ministers taking outputs (with a political salience) and the agency driving outcomes as longer-term differences in the wider setting. Of course, some ministers are interested in outcomes, just as there are officials focused on short-term delivery.

Aspects of the delivery model and political risk

These general factors are applied to the social investment approach developed above.

Data structure[28]

The data structure has to collect a sufficiently rich set of observations to support a classification of cases into usefully distinct treatment groups. This depends on having a 'theory' (understanding) of what fixes the problem. In other words, the underlying method demands sufficient insight into the mechanisms at work to be able to say: if we have indicators x present (or possibly absent), then treatment z may improve matters.[29] The data structure thus must include enough indicators about individuals to make it reasonably likely that the classification system assigning citizens into treatment classes will work.

This logic means technical risk occurs at many points. This includes the data failing to differentiate effectively between classes. Further, the 'theory' may not be accurate, or the necessary data may be intrusive or hard to collect or establish.

Intervention set

The demand is for a set of reasonably understood and tested interventions whose relationship with the available data is clear. This creates other technical risks. The set of practical interventions may be insufficient (lack diversity) to deal with the range of treatment classes. Alternatively, the interventions may be hard to operate and thus frequently fail. And as they are used over time the ‘power’ of the interventions may wane, perhaps due to gaming.

Choice mechanism

The crucial matching of classification and suggested intervention creates its own technical risks. False positives trigger the ‘wrong’ intervention, while false negatives omit the ‘right’ people. Or the feedback may be insufficient to ‘tune’ the choice of intervention in the light of experience.

Resources

Having enough resources is a perennial public service delivery issue. Here it creates the specific risks. There can be a tendency to live with false negatives rather than check them. And there is pressure toward ‘cheaper’ solutions to spread resources.

Evaluation framework

As discussed, the assessment process is not straightforward. Its complications and complexities mean technical risks. All systems are designed and run with inherent levels of ‘failure’ as part of system management. Intervention and outcome are separated in time (and, often, space) so initial impact and final result are not closely aligned. Disputes about the original objectives create ‘mission creep’ so the project is judged against new aims.

THINKING ABOUT SOCIAL INVESTMENT AND RISK

This review shows the inevitable technical risks with a social investment approach. (And we have put to one side fundamental public policy implementation problems such as motivation and those stemming from agent/principal and contracting matters.) But it means factors come into play encouraging political risk, not the least of which are exposures to straightforward technical risks. These factors are a direct consequence of shifting the focus of the social policy system from delivering programmes to addressing social problems.[30] They fall into two groups.

General issues[31]

- **Hazy benefit identification** and measurement – often changing over time.
- **Complicated cause and effect** mechanisms – with time lags, and gaming.
- Result of a **political process** – so subject to political oversight rather than other decision structures.[32]
- Fierce reductionism at the agenda-setting stage driven by the **lack of institutional capacity** to work out, work up, agree and guarantee (commit to) complicated intertemporal deals.

Focusing on social investment

- Everything is modelling/estimated and **errors self-identify** – compare this with a cost-benefit analysis which always includes a counterfactual and has techniques to deal with uncertainties.
- All about cost-effectiveness, so inevitably has **two-sided risk**; over- and under-spending are both blameable. To avoid political consequences, budget management (like predictions) must be very accurate.
- Entails **longish time lines** – making the learning difficult and attenuating the realism of the follow-through. Is anyone still standing to be accountable?
- **Probabilistic projection** in the sense of pushing forward previous observed behaviour. Aside from agents deliberately changing their actions (see below), the prior period may not be typical or may be disjunctive.[33]
- **Poor source data** – data is not free; it is not even cheap to collect. Hence the pressure and strong tendency for policy to use existing data collection, which has been gathered for other purposes. This data is usually administrative.
- Worst cases are **extremes** – the centring of this process in political space inevitably focuses attention on the treatment (and results) of the 'worst' cases. Technically this raises risks on its own – the types of treatment offered are likely to be subject to an effectiveness response that is best around the mean of the distribution. Expecting good results at the edge of the distribution may be a long shot, and achieving sound average outcomes is not an acceptable substitute.
- The long-term focus brings Goodhart's Law into play. It means **responses will inevitably change** as the participants learn the rules and game the system.[34] Gaming is a political minefield, as it shifts public opinion and is difficult to predict in outturns and in public perception.[35] The market segmentation that

underpins the social investment approach magnifies the potential for gaming. Together these attributes (all of which are present for most social investment schemes) make up the reasons why implementing the social investment approach is a difficult and demanding task.36 And they are worse when the policy is large-scale.

Overall, it is probable that the shift to a social investment approach will increase the likelihood that the policy will be more successful, but increase potential political risk.

WHAT CAN WE TAKE AWAY ABOUT THE SOCIAL INVESTMENT APPROACH?

The social investment approach hinges on the successful operation of a dual system that includes new ways of working alongside mainstream service delivery.37 It is intended to shift the centre of gravity of social policy delivery rather than be a new system. It does, however, open the door to potentially greater political risk, not least by encompassing an increase in technical risk.

Where are we with risk and policy?

A fundamental risk issue is that all technical problems endangering policy success have potentially serious political consequences. Indeed, high technical risks are probably the greatest controllable contribution to political risk. Technical risk management is an important underpinning of political risk control.

The chance of such failure translates into the political world to produce a negative context for experiments and new policy initiatives, as they are likely to produce bad outcomes (meaning blame); cause programmes to be cut (possibly embarrassing); or just take longer than expected to produce results. All of these are negatives, in political terms.

On the other hand, the political world lives for and seeks the new and exciting. One driver is news value. Public attention can come from a launch, or even a carefully positioned trial. And in politics – where time is strangely attenuated – the outcome can be far away, so even if negative, it may not harm the initiator.38

Stage of delivery	Technical issue	Implication
Data structure	Lack of discrimination	Poor targeting so poor results
	Poor understanding	Muddled outcomes
	Lack of data	Cannot defend against critics
Intervention set	Insufficient variety	Extremes are missed
	Ineffective	Mistakes occur

	Fade over time	Value for money goes
Choice mechanism	False positives	'Wrong' intervention
	False negatives	'Wrong' people
Resources	Too little	Live with false negatives
	Too short-term	Bias to 'cheap'
Evaluation	Inherent failure rate	Just not working
	Time lags	Not working fast enough
	Mission creep	Failing to do job properly

Table 13.1: Social investment means difficult delivery – technical risk drives political risk. Source: Author's analysis of Social Investment Roundtable discussions 2016.

Therefore, we still see innovative and risky public policy programmes proceeding, despite the critical political authorising environment. Politics is all about getting things done, hopefully to improve the world, and that frequently entails taking risks. Table 13.1 summarises the findings.

Implications

The next section looks at the implementation system, beginning with its potential for minimising or mitigating technical risk. By so doing, all else being equal, there should be a reduction in political risk. Then a final section – far more speculative – looks at whether there are ways of directly changing the political risk aspects.

Possible technical work-ons

Data

The drive for classification, or market segmentation, demands much more from the data than seems to be readily available – at least what is readily available without a major effort to both capture more, 'better' data and clean existing sources.39 There is no reason that such an effort should not be made. Indeed, a serious improvement in the quality of administrative datasets would be likely to pay off in its own right, without spinoffs in this direction.40

Looking at the social investment approach on its own merits, better data would allow meta-level analysis to hone the workings of the interventions. This would occur as the number of characteristics per individual and the number of individuals increased and widened the ambit of the analysis, because it would allow testing and appraisal of a range of alternative indicators and classifications.

Better data could also allow searching among available interventions for the most cost-effective. This type of efficiency gain is unusual now, as the 'fit' between the tools available and the challenges of the problems is poor.

The need for an intervention toolkit – work on it

The idea of widening the domain of available tools is about more than having alternative proposals for solving difficult problems. It is the basis of a response to heterogeneity in need – searching for treatments to work with otherwise neglected clients. (Previous policy approaches were broadly like an off-the-peg suit, fitting few properly but covering many after a fashion. In a small, rather mingy public sector, that was satisfactory. But today the income elasticity of demand for better social solutions to tough problems is on show. We seek better fitting treatment: heterogeneity in interventions, if that is what it takes to address the harder, more enduring social problems.)

Of the risks identified, the lack of more than a few workable interventions stands out. But scanning overseas jurisdictions and being a fast follower, plus waiting for good local ideas, is not enough. We need more proactive explicit research and development. And previous work has examined the political risks that such initiatives face and the responding environment best suited to encourage it.[41] But all these need more than just a raw technical method; the task is demanding and the force of the political side strong. A positive environment that accepts no policy is perfect and that developing better treatments is about 'cut and try' might come from being more open about the realistic prospects of new ideas.[42]

More far reaching – possible political work-ons

Making the system more risk-resilient by setting its parameters better[43]

Rather than trying to cherry-pick better policies one by one, or improving either data or available interventions, is it possible to make the whole system more robust, and perhaps to see a move to a more systematic assessment? Realistically, this seems unlikely, given the present system is built to make national decisions in an accountable adversarial environment. Politicians have a vital role and they do it the best they can. Their behaviour reflects their environment and the pressures to which they are subject.

So the group best incentivised to build a better public understanding is the agencies themselves. While they have much on their plates, they should be the best placed to soldier ahead in the non-partisan fashion that is the role of the public servant. Their individual work and the assembling of collective reputations for integrity and conscientiousness contribute to the public's trust of the system, and through that the public's willingness to accept complicated explanations.

Probably the best that can be expected is a gradual growth in awareness among the wider public that social problems are difficult and expensive and that dealing with them is rarely a matter of solving hard problems at a stroke. This would help create a better public climate for political debates about experiments and improvement trials.

Structural changes to improve risk tolerance

Given the discussion above, is there another way that does not entail an unlikely sea change among politicians? The notion has been raised of trying to shift the implementation locus from the political sphere. It has been pointed out that lots of risks in our society remain at the technical level. The distorting lens of politics is not applied.

So, can a shift of 'location' of action be a way of moving the risk assessment towards a more rational assessment? Two approaches can be considered. One option is to allow agencies to try and 'earn' a reputation as a safe pair of hands. A stock of 'good performance' and reliable information might favourably condition the situation when risks eventuate as negatives. Another option is structural. Could the delivery of certain policies be relocated within the public sector to try and neutralise the process? There may be a precedent in the Swedish model of delivery by 'boards' which are sort of state-owned enterprises and thus not assessed case by case but on aggregate indicators. My reading is that the success of this model in Sweden is driven by the Swedish political culture, which is a lot less 'iron-law'-related than ours. And the portents are not great – regardless of the relationship to the political space it seems difficult to prevent delivery risks being retained at the ministerial level. At least, this seemed to happen with the contract to manage prisons.44

Overall then, it seems the 'diet and exercise' approach (working to reduce the real risks and letting the political side lie where it falls) is likely to be the best approach to managing political risk.

References

Caygill, David, 'Managing Risk: A Ministerial Perspective', in Alex Sundakov and John Yeabsley (eds), *Risk and the Institutions of Government*, Institute of Policy Studies, Wellington, 1999

Creedy, John, *Interpreting Inequality Measures and Changes in Inequality*, New Zealand Treasury Working Paper 14/20, Wellington, 2014

Crystal, Alec, and Paul Mizen, 'Goodhart's Law: Its Origins, Meaning and Implications for Monetary Policy', paper for Charles Goodhart Festschrift, Bank of England, November 2001

Dewey, John, *Logic: The Theory of Inquiry*, Henry Holt and Company, New York, 1938

Eppel, Elizabeth, David Turner and Amanda Wolf, *Experimentation and Learning in Policy Implementation: Implications for Public Management*, Working Paper 11/04, Institute of Policy Studies, Wellington, 2011

Gill, Derek, *The Iron Cage Recreated: The Performance Management of State Organisations in New Zealand*, Institute of Policy Studies, Wellington, 2010

Hughes, Tim, 'Predictive Analytics for Policy and Practice: Reflections from the Criminal Justice System', *Policy Quarterly*, 11, 2 (2016)

Liu, James, and Duncan Mills, 'Modern Racism and Neo-liberal Globalization: The Discourses of Plausible Deniability and Their Multiple Functions', *Journal of Community and Applied Social Psychology*, 16 (2005)

Lucas, Robert, 'Econometric Policy Evaluation: A Critique', in Karl Brunner and Allan Meltzer (eds), *The Phillips Curve and Labor Markets*, Carnegie-Rochester Conference Series on Public Policy 1, American Elsevier, New York, 1976

Nixon, Chris, and John Yeabsley, 'Voyage of Discovery: How Do We Bring Analytical Techniques to State-driven Behaviour Change?', in Susy Frankel and John Yeabsley (eds), *Framing the Commons: Cross-cutting Issues in Regulation*, Victoria University Press, Wellington, 2014

Prebble, Mark, *With Respect: Parliamentarians, Officials and Judges Too*, Institute of Policy Studies, Wellington, 2010

Prebble, Mark, 'Public Value and Limits to Collaboration', *International Journal of Public Administration*, 38, 7 (2015)

Rees, Nigel, *Brewster's Quotations*, Cassel, London, 1994

Russell, Louise, 'Prevention vs. Cure: An Economist's Perspective on the Right Balance', in Halley Faust and Paul Menzel (eds), *Prevention vs. Treatment: What's the Right Balance?*, Oxford University Press, New York, 2012

Scobie, Grant, 'Evidence-Based Policy: Reflections from New Zealand', paper for the *Strengthening Evidence-Based Policy in the Australian Federation* Conference, Canberra, 2009, www.pc.gov.au/research/supporting/strengthening-evidence/09-chapter7.pdf (accessed 7 September 2017)

Sundakov, Alex, and John Yeabsley (eds), *Risk and the Institutions of Government*, Institute of Policy Studies, Wellington, 1999

Yeabsley, John, *Successful Settlement of Migrants and Relevant Factors for Setting Immigration Targets*, NZIER Working Paper 97/12, 1997

Yeabsley, John, 'Discussant's Remarks: *Social Investment – The Intertemporal Dimension* by Jonathan Boston', paper for First Social Investment Approach Roundtable, 2016

Notes

1 The author would like to express appreciation to Derek Gill, Mark Prebble and Cathy Scott for helpful discussions and wise counsel. Michael Mintrom similarly provided useful advice. Of course, none of them can be held responsible for the material included here. The opinions expressed in the chapter are the sole responsibility of the author and do not reflect the views of the IGPS or NZIER.

2 For definition and discussion of this idea, see Wilson and Destremau (Chapter 2 of this volume).

3 Many of these risks are not peculiar to the social investment policy; but they

appear in this context.

4 Hughes (Chapter 7) focuses on predictive risk modelling. This piece is complementary.

5 Like all models this oversimplifies the way the world works.

6 This is an identification problem, and as such not unexpected. Categorisation is the stuff of traditional public management when different classes of cases are treated diversely. Yeabsley discusses complex policy delivery hinging on this type of identification/classification: John Yeabsley, *Successful Settlement of Migrants and Relevant Factors for Setting Immigration Targets*, NZIER Working Paper 97/12, 1997.

7 Such information will generally be 'administrative' as a by-product of the delivery system rather than selected to be problem-relevant.

8 See Hogan (Chapter 5).

9 Sensibly, as studies show, it is not always true. For instance, in medicine, Russell sums up: 'The evidence, from hundreds of studies published over the last four decades, shows that most preventive interventions add more to medical spending than they save, even as they improve health. With prevention, as with so much else, it costs more to get more': Louise Russell, 'Prevention vs. Cure: An Economist's Perspective on the Right Balance', in Halley Faust and Paul Menzel (eds), *Prevention vs. Treatment: What's the Right Balance?*, Oxford University Press, New York, 2012.

10 This section draws on Hughes (Tim Hughes, 'Predictive Analytics for Policy and Practice: Reflections from the Criminal Justice System', *Policy Quarterly*, 11, 2 (2016), pp.37–44, and Chapter 7 in this volume). Aspects of the issue are treated in Wakeman and Garrett (Chapter 10), and Wolf (Chapter 9).

11 For instance, the net value of the consequences of a false negative depends on the social efficacy of the treatment occurring if the case were accurately classified. So, if the treatment is not very effective (as are many early interventions to change individuals' anti-social behaviour), the cost of the mistake is low.

12 Scobie clinically discusses data shortages in the context of sound local policy-making: Grant Scobie, 'Evidence-Based Policy: Reflections from New Zealand', paper for the *Strengthening Evidence-Based Policy in the Australian Federation Conference*, Canberra, 2009, www.pc.gov.au/research/supporting/strengthening-evidence/09-chapter7.pdf (accessed 7 September 2017).

13 For children taken into care, measures may be: eating soundly; behaving normally; attending school regularly; and avoiding self-harm. In any case, different variables may go in different directions. Assessment is turning the four variables into a single indicator. This 'aggregation' issue (making multidimensional data a single index) has a long history in economics. For

thoughtful discussion (in the context of inequality), see John Creedy, *Interpreting Inequality Measures and Changes in Inequality*, New Zealand Treasury Working Paper 14/20, Wellington, 2014.

14 See Gill (Chapter 6), who among other questions deals extensively with the application of accountability to the social investment approach.

15 Mark Prebble, *With Respect: Parliamentarians, Officials and Judges Too*, Institute of Policy Studies, Wellington, 2010: 'This formulation of the iron rule was devised by Andrew Ladley' (p.3). We note this is not the only view of the situation.

16 See introduction and overview in Alex Sundakov and John Yeabsley (eds), *Risk and the Institutions of Government*, Institute of Policy Studies, Wellington, 1999.

17 This might be a logical political implication of the government having won a popular contest as to who is the best likely government. This usually involves claims about future performance in office so they are (like auction winners) subject to the dangers of the 'winner's curse': overpromising about performance. This would have them being assessed against perfection.

18 Here the term 'meaning' includes the associated political 'emotion' (for instance, a pejorative meaning was associated with 'vouchers' in educational policy debates after the 1990s). Such 'overtones' were first developed in the work of philosopher J. L. Austin in the 1950s.

19 This section draws on Mark Prebble, 'Public Value and Limits to Collaboration', *International Journal of Public Administration*, 38, 7 (2015), pp.473–85

20 For instance, working with ex-prisoners is not well resourced – seemingly for this type of reason.

21 Few policies are pareto-optimal (no one is worse off; some are better off). Thus, we have decision-makers subject to accountability that can mean having to leave office.

22 One example is 'Tuku's underpants', a corporate perk for the MP at a broadcasting company with a government contract, seemingly fulfilled. A crusade by the *Dominion* created an impression (particularly among journalists) that the money was public funds, so the spend was a scandal. This view lasted. Years later, a blogger wrote that 'Morgan does appear to have a taste for the good life; in 1997, as a director of Aotearoa Television, he spent $4,000 of public money on clothes, including $89 on a pair of designer underpants' [Karl du Fresne, Blogspot, 15/12/2010]. James Liu and Duncan Mills, 'Modern Racism and Neo-liberal Globalization: The Discourses of Plausible Deniability and Their Multiple Functions', *Journal of Community and Applied Social Psychology*, 16 (2005), pp.1–16.

23 See Derek Gill, *The Iron Cage Recreated: The Performance Management of State Organisations in New Zealand*, Institute of Policy Studies, Wellington,

2010, p.260, and references there.

24 Ibid.

25 See Chapter 14.

26 Peirce, in John Dewey, *Logic: The Theory of Inquiry*, Henry Holt and Company, New York, 1938.

27 This paragraph draws heavily on a suggestion by Derek Gill; see also the review by Gill and Schmidt, in Gill, *The Iron Cage Recreated*.

28 The approach here draws on thinking presented earlier in Nixon and Yeabsley (2014). It is related to material covered in Wakeman and Garrett (Chapter 10).

29 It may require both a positive and negative list – I am grateful to Cathy Scott for this point.

30 Again, this is discussed at more length in Gill in this volume.

31 These come from John Yeabsley, 'Discussant's Remarks: *Social Investment – The Intertemporal Dimension* by Jonathan Boston', paper for First Social Investment Approach Roundtable, 2016.

32 See David Caygill, 'Managing Risk: A Ministerial Perspective', in Alex Sundakov and John Yeabsley (eds), *Risk and the Institutions of Government*, Institute of Policy Studies, Wellington, 1999, pp.46–55.

33 This sort of problem of using the past to guide future policy has a long history in economics and, among other contributions, won the Nobel prize for Robert Lucas in 1995: Robert Lucas, 'Econometric Policy Evaluation: A Critique', in Karl Brunner and Allan Meltzer (eds), *The Phillips Curve and Labor Markets*, Carnegie-Rochester Conference Series on Public Policy 1, American Elsevier, New York, 1976, pp.19–46.

34 See Alec Crystal and Paul Mizen, 'Goodhart's Law: Its Origins, Meaning and Implications for Monetary Policy', paper for Charles Goodhart Festschrift, Bank of England, November 2001. Definition: Goodhart's Law, that any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes.

35 Berlusconi in Italy and recently Trump in the US show that public attitudes may be fluid. Electorates in mature democracies expect politicians to model good citizen behaviour, say, by paying taxes without being 'sharp'. Trump, however, not only refused to release his tax records but suggested that it is sound business practice to game the system.

36 Young (Chapter 14) makes the point that new policies often work when being trialled, because the operators are specially selected, but then lose impact after time.

37 See the discussion in Gill in this volume.

38 Recall the joke about the man who avoided execution by promising to teach the king's horse to talk. When questioned about the wisdom of this short-term move, he is said to have replied, 'Well, I may die; the king may die;

the horse may die; or, who knows, the horse may talk.' He was obviously in political space, where the immediate trumps the distant, and long shots can come home.

39 Such a plea is made (gently) in Hughes, 'Predictive Analytics for Policy and Practice'.

40 Possibly by enhancing the ability of policy analysts to conduct better research and testing of policy ideas, or by allowing improved public management of the delivery systems themselves.

41 See Elizabeth Eppel, David Turner and Amanda Wolf, *Experimentation and Learning in Policy Implementation: Implications for Public Management*, Working Paper 11/04, Institute of Policy Studies, Wellington, 2011, and further work.

42 Trust is generally a quality that is earned.

43 This is my take on a discussion at the roundtable, with key participants Graham Scott and Verna Smith, to whom no blame should attach for what follows.

44 The 2015 debate about Serco's management of Mt Eden had the Minister of Corrections at the heart of it.

Part 3
Future Directions and Applications

Chapter 14
The justice sector
Opportunities and challenges

Warren Young

INTRODUCTION

The justice system is, at first sight, an ideal candidate for the application of the social investment approach.[1] It consumes a significant amount of government expenditure ($3.6 billion dollars or 1.4 per cent of GDP in the 2016–17 financial year); it is often viewed publicly as failing to deliver results; and the policies underpinning its operations frequently lack a sound evidential base. It is an area where there is a constant gap between political rhetoric and evidence-based reality.

Moreover, many of the problems with which the justice sector has to deal have their genesis in long-standing family, community and health issues, sometimes intergenerational in nature. It is beyond the capacity of the justice sector effectively to address these problems on its own.

This was recognised by at least some members of the former government. On 11 May 2011 Bill English, then Minister of Finance, described prison as 'a moral and fiscal failure'[2] (a sentiment he publicly reiterated in 2017). He expressed his hope that the prison being built at Wiri at the time would be the last the government had to build, and said that 'it would be good if we could have … less people coming into the pipeline where they start with a minor offence and end up with a ten-year sentence'.

THE APPLICATION OF THE SOCIAL INVESTMENT APPROACH TO THE JUSTICE SECTOR

A more detailed statement of the supposed benefits of a social investment approach was presented by the then Minister of Justice, Amy Adams, in a speech on 3 May 2016.[3] She noted that the incidence and impact of crime is unevenly spread, with 3 per cent of adults experiencing 53 per cent of all crime.[4] She also expressed concern at New Zealand's high per capita imprisonment rate by international standards (now standing at over 217 per 100,000 of population); the substantial over-representation of Māori in the criminal justice system, both as perpetrators and victims; and the 'horrendously high rate of intergenerational family violence'. She saw social investment as being about investing more effectively, and earlier, to achieve a reduction in the burden of crime on society, and noted: 'We now have the opportunity to use high-quality data analytics to model how we can better reduce crime and victimisation, not just by what occurs once an offender comes into contact with the justice system, but long before that.'

At the heart of the social investment approach in the justice sector, therefore, is the belief that data analytics will enable the identification of those most at risk of long-term offending, and that targeted evidence-based intervention at an early stage will provide the best return on investment.

Amy Adams identified four streams of work being undertaken by the Ministry of Justice and designed to give effect to the social investment approach:

- The development of measures of the burden crime places on society, in order to determine if government investments are reducing that burden.
- The building of actuarial models that will identify those most at risk of future offending and victimisation, thus allowing much better targeting of interventions.
- Work to enhance the government's understanding of what works to reduce crime, not just in the justice system but right across government and at all stages of the life-course.
- The development of processes for connecting decision-makers across the system with this knowledge, so that they take informed decisions as a result.

This political statement has resonances with the main elements of the New Zealand social investment approach spelt out by both Boston and Gill, and Destremau and Wilson, in Chapters 1 and 2 of this book.[5] It involves evidence-based decision-making at all levels from government policy-making to individual case decisions at the programme level; early, cross-sectoral and integrated interventions to subsequent crime problems; a long-term view of the return on investment; the development of more robust and detailed data analytics that will support better targeting of interventions; commissioning and purchasing services for outcomes rather than outputs; and a feedback loop on the effectiveness of services and interventions.[6]

While at this stage the focus has largely been on the potential of an investment approach in the justice sector to apply to the criminal justice system, a social investment approach arguably applies as much to the civil jurisdiction of the sector as to its criminal jurisdiction. That is because returns on investment should be measured in terms of not only crime but more broadly other desired social outcomes. Take decisions about the care and custody of children and young persons that are made across the justice and social sectors. Under a social investment approach, those decisions should presumably be informed by the full range of economic and social benefits (however defined) that will be enjoyed not only by the individuals directly affected but by the community at large in the short and long term. A siloed view of the criminal and civil jurisdictions would therefore be inconsistent with the need for an integrated and cross-sectoral assessment of the return on investments. There is clear recognition of this in the funding provided to the Ministry for Vulnerable Children (Oranga Tamariki) as part of the $321 million social investment package in the 2017–18 Budget.[7]

The logic and conceptual attractiveness of the social investment model as a means of improving the performance of the justice sector and its effectiveness in reducing crime and victimisation is undeniable. That is because:[8]

- Most offenders are occasional or one-off and desist as they mature without the need for expensive or enduring interventions.
- The majority of offences are committed by a small proportion of repeat offenders.
- These offenders start committing offences early and typically present with a range of other dysfunctions (such as educational under-achievement, substance abuse, mental health issues and high unemployment).
- Once their pattern of offending has been established, interventions to prevent it are believed to have a fairly low return on investment.
- The failure to prevent their offending carries high costs. For example, imprisonment costs an average of $112,000 per inmate per annum. But there are significant other social and economic consequences not only for victims and the community at large but also for the criminal justice system. This includes the resultant difficulties in finding employment, thus increasing benefit dependency and the likelihood of subsequent offending both by the ex-prisoners and their dependants.
- If we are able to identify the small group who will become persistent offenders (and especially those who will become persistent serious offenders), either before or at an early stage in the life-cycle of offending, we are more likely to be able to intervene effectively to reduce its incidence.
- The per unit cost of that early intervention is much lower and it is thought more likely to produce a substantial positive economic and social return in the long run – not only in terms of a reduction in the direct cost of crime and victimisation but also in terms of reduction in the indirect costs of welfare dependency, family breakdown, intergenerational crime etc.[9]

There is nothing new in any of that. Both early intervention and evidence-based decision-making has been the mantra of youth justice for many years: it is at least part of the basis for the Youth Crime Action Plan adopted by government in 2013, and it has underpinned previous programmes such as the Drivers of

Crime (2012)[10] and Effective Interventions (2006).[11] To that extent, the social investment model does not appear to be much more than a plea to ensure that discretionary expenditure on small-scale, place-based initiatives is targeted at those where there is reliable evidence of effectiveness. That is hardly a radical new approach to spending across the justice and social sectors.

To a large extent, work to date has been at this level. As indicated above, the Ministry of Justice is undertaking work to develop accurate risk prediction tools and better knowledge about what works to reduce crime; and, of the $3.68 billion annual spend on the justice sector, it is targeting its social investment decision-making at the approximately $500 million allocated to 'crime prevention' (although even that is a substantial overstatement of the available discretionary expenditure, since it comprises all police staff resource routinely directed at 'prevention' activities such as neighbourhood policing).

But the rhetoric of social investment offers the justice sector very much more than that. It purports to change the horizon of spending decisions; to assess the long-term as well as the short-term costs and benefits of interventions; to give preference to investments in prevention and early intervention where these are shown to provide the best returns; and therefore to provide a more coherent basis for making choices between front-end expenditure (e.g., interventions with vulnerable families or at-risk children or youth) and back-end interventions (e.g., the long-term imprisonment of adult offenders, or the provision of drug and alcohol treatment programmes to those at high risk of reoffending).

CHALLENGES TO JUSTICE DECISION-MAKING

If the social investment approach were to be applied in a comprehensive way to justice system decision-making, the implications would be profound.

First, it would potentially require the deliberate rebalancing of investment in justice services from the back end of the system (to support the activities of policing, courts and Corrections in the arrest, conviction and punishment of offenders) to the front end (to support evidence-based interventions by education, health and social service agencies).[12] This would need to be a prolonged and stable model requiring ongoing political commitment, as the payoff (in terms of costs avoided) from social investments for the justice system are over the long term. Lessons from other long-term programmes, such as those being developed in the United States under the auspices of Justice Reinvestment,[13] would need to be applied in this regard.

Second, it would require a new mode of decision-making – ultimately a culture-transformation in a system with a large range of independent decision-makers unused to having their decisions assessed by reference to their contribution to the system's overall performance. Decisions in every part of the system, from child protection workers and youth justice workers to frontline police officers and the Parole Board, would need to be re-examined. Decision-makers in social sector agencies, at not only the whole-of-government level but also the portfolio and programme levels, would need to develop knowledge of what works in terms of not just their own core outcomes (e.g., improving educational attainment or reducing benefit dependency) but also of reducing crime and victimisation. This would require a coordinated approach to the delivery of services by justice and social sector agencies (especially Justice, Health, Social Development and Education), not merely at the point where their jurisdictions intersect (e.g., when a young person still at school or a mentally impaired person offends) but in all their decision-making. In other words, it would require the justice sector to identify and support social sector outputs as a core component of its overall strategic framework; and the social sector to produce and be held accountable for long-term justice sector outcomes.

At a more practical level, it would raise issues for how the government commissions and purchases services, the workforces and training for those services, the infrastructure for social service providers, and the government's ability to effectively contract for and monitor outcomes. It is not too difficult to imagine mechanisms to achieve more coordinated approaches to these issues at the whole-of-government and even the portfolio levels. It is presumably the reason why the Social Sector Board (comprising the social and justice sector chief executives) has recently been reshaped as the Social Investment Board. It is a lot harder to envisage how they would be addressed at the programme level.

Moreover, governmental control over some programmes is at best indirect and at worst non-existent. For example, the involvement of the education sector in the delivery of broader social sector outputs is largely dependent on decision-making at the local level. That is driven by independent elected boards of trustees and individual school principals. They have traditionally been reluctant to see the delivery of services to at-risk youth as part of their core business, and government has only limited ability to change that.

Finally, to reiterate the point made by Amy Adams,[14] it would need to be supported by much better and more detailed data analytics, not only to identify the risk indicators that would allow more accurate prediction of future persistent offenders, but also to understand the likelihood of the success of various interventions for particular types of individuals.

There are a number of major impediments to the successful adoption of such an approach. These fall into two categories: administrative and technical challenges; and more fundamental constitutional and political obstacles.

Administrative and technical challenges

There are several difficult administrative and technical obstacles to overcome before social investment could move beyond an aspirational set of guiding principles affecting decisions on the margins of expenditure. These are all well recognised, and many of them are already the subject of significant work across justice sector agencies (particularly the Ministry of Justice).

The broad nature of the objectives being pursued

The application of social investment in the criminal justice system to date appears to have proceeded on the assumption that the sole, or at least the overriding, function of criminal law and criminal justice is directly to prevent crime and victimisation by the individual at whom the intervention is directed, and perhaps others directly associated with them, such as their children. But this is not the reality. The bulk of investment in criminal justice has two much broader and related functions: the expressive or denunciatory function; and the general deterrence function.15

The expressive or denunciatory function refers to the role of criminal law and its enforcement in reinforcing fundamental social values. Most people obey the law not primarily because they are afraid of the consequences but because they think that it is the right thing to do. And they have internalised that view because of a wide range of social control mechanisms of which the criminal law is a central part.

The general deterrence function refers to the role played by criminal law and the punishment of offenders in dissuading potential offenders from offending because of fear of the consequences. The system attempts to fulfil that function through the perceived likelihood of detection and the perceived severity of punishment, although this varies significantly between offence types.

Most expenditure on enforcement and punishment is guided more by these functions than by the prevention of offending or reoffending by the affected individual. We might develop programmes to foster the rehabilitation of offenders while they are in prison, but if that is shown to be ineffective (or less effective than an alternative rehabilitative strategy in the community), the result is not generally a cessation of imprisonment. That is because the prevention of reoffending is not its core aim, and that is why the starting point for the determination of the appropriate sentence by the courts is the seriousness of the offence and the culpability of the offender.

An assessment of the costs and benefits of shifting resources from the back end to the front end cannot therefore be confined to the effectiveness and efficiency of the interventions in terms of the behaviour of the at-risk individuals at whom the interventions are targeted and their immediate others. It must also take into account the possible dilution of the expressive and general deterrent functions of arrest, conviction and punishment at the back end.

This should not be overstated. For example, there is little evidence to substantiate the view that decreases in the extent to which offenders are charged with and convicted of offences, or in the severity of the punishment they face, significantly impede the operation of expressive or general deterrent processes (at least in relation to most types of offences). Nevertheless, this dimension of the criminal justice system cannot be left out of the cost-benefit equation altogether. It must be confronted and tackled if the social investment approach has any prospect of real traction.

In reference to those who have already offended, part of the challenge in this respect is to reconcile, or at least to accommodate, the competing demands of customised and localised programmes to ensure targeted interventions on the one hand, and expectations of consistency and fairness on the other.

Take the development by the police of what has become known as 'alternative resolution'. This comprises a range of strategies short of prosecution and conviction that include pre-charge warnings, community panels and iwi panels, restorative justice and police diversion. All of these strategies come within the police's 'Prevention First' operating philosophy and are presented as a more cost-effective way of dealing with lower-end offenders who will otherwise clog up the court system and receive a punishment that will not reduce – and may even increase – their risk of reoffending.

These strategies have a great deal to commend them. However, they are also criticised as producing inconsistency and unfairness.16 Because offenders may be perceived to be acting with impunity, they run the risk of eroding both the expressive and general deterrent functions of the system.

The problem of measurement

Wider functions such as those discussed above would pose significant measurement problems, since the effectiveness of at least the expressive function and to a lesser extent the general deterrent function17 is largely an article of faith. But even if the objectives were confined to a reduction in offending and reoffending by those at whom the intervention is directed, there is the problem of developing an agreed method of measuring the return on investment (discussed in depth by Boston in Chapter 4 of this book)18 and, to the extent that a cost-benefit analysis includes long-term benefits, determining the discount rate to be applied.

The former Minister of Justice rightly pointed out that the development of an average cost of an offence, and a simple count of the number of offences prevented, would not provide a meaningful basis for a cost-benefit analysis.19 She suggested that a harm-based measure or an index based on a severity weighting of the offending could give a more meaningful picture. But measures of the severity of offending have been notoriously difficult to develop, and efforts to attach economic values to various forms of physical, psychological and even material harm have proved contentious. The Cambridge Crime Harm Index offers a comprehensive attempt at a weighted measure of crime harm, and is starting to be put to use by police forces in the United Kingdom.[20] In New Zealand and Australia, the best available is the seriousness score,[21] a way of quantifying the relative seriousness of offences based on the average sentence imposed for each offence.

A severity weighting of this sort would be only a crude measure. There are two reasons for that. The first is that views about seriousness, whether reflected in sentences imposed or otherwise, are highly subjective.[22] The second is that, to the extent that the analysis takes into account the long-term risk of offending, there is no good data currently available to enable us to determine what that offending is likely to be. It is even difficult to predict the type of offence that will be committed by a convicted offender who is at risk of reoffending; burglars, for example, are just as likely as violent offenders to commit a violent offence if they reoffend. So it is not at all clear how one would weight and attach a value to the range of offending that might be committed by an at-risk ten-year-old child. There are exceptions to that rule: sex offenders, for example, tend to specialise. But for the rest, the best we may be able to do is attach a low-, medium- or high-average seriousness weighting to the offences that potential persistent offenders or reoffenders are likely to commit, combined with an assessment of the frequency of their offending.

However, it is arguable that even crude measures and estimates of this sort are better than nothing. The benefit of the investment approach model is that it would overlay existing decision-making models, and could be applied at a system level: to the sector's biggest investments (e.g., a new prison); to the service/intervention initiation, design and distribution phase; to individual programme funding decisions; and to decisions concerning individuals entering – or at risk of entering – the criminal justice system. Rather than cannibalise the decision-making process, say for the introduction of iwi panels, it would provide additional information enabling the initiative to be more reliably weighed against the expressive and general deterrent functions of the justice system. Over time, it is possible to conceive of a more complex return on investment calculation that would ascribe values to these and other aspects of the justice system, such as trust and confidence in the system, or the system's value in supporting a stable economy.

The difficulty in establishing valid and reliable risk prediction instruments

Even if social investment confined itself to the costs and benefits of direct intervention with those at risk of offending or reoffending at various points in their life-cycle, it confronts the significant hurdle of overcoming inaccuracies in risk prediction.

The issue here is not that there is difficulty in identifying who will be wrongly predicted to pose a risk with the methods currently available; it is that they are incapable of identification. There are no hidden individuals identifiable in principle but not in practice who certainly would or would not reoffend. There may be a correct prediction, based on the best evidence, that an individual is highly likely to offend or reoffend, but they may not go on to act in accordance with that prediction because of a wide variety of unpredictable changes in life circumstances (entering into a stable relationship, having children, winning Lotto, finding religion etc.), or simply because they decide not to behave as they are disposed to. Risk prediction is inherently uncertain and incapable of accuracy.

Inaccuracies and 'errors' are therefore inevitable, but that is not a good enough reason to abandon risk prediction altogether. Moreover, the fact that the risk does not materialise does not necessarily mean the prediction was unjustified. Predictive error is inevitable, because people may fail to act in accordance with a justified prediction for many reasons, including a change in life circumstances or the absence of opportunity. That is in the nature of risk prediction; it does not in itself make it unjust. But, as Tim Hughes (Chapter 7) succinctly explains, inaccurate prediction produces a number of costs. These include wasted resources on unnecessary interventions; potential harmful effects on those subject to those interventions or their immediate others; stigmatisation of those wrongly identified as 'at risk' of offending; and potential infringement of human rights. Interventions should reduce these costs to the degree that is reasonably practicable, and that in turn requires the nature of the competing risks and the likelihood of their occurrence to be identified and weighed as systematically and fairly as possible.

Hughes rightly notes that actuarial risk prediction is generally superior to professional or clinical judgments, although individual decision-makers are generally reluctant to accept that! It should therefore be the basis for decisions at the policy and portfolio levels.

Better data collection and the development of more sophisticated statistical analytical tools have undoubtedly improved the accuracy of risk prediction. In particular, methods of actuarial risk prediction have greatly improved in the last 20 years. In relation to at least some types of reoffending, we have pretty good information on the factors that demonstrate ongoing risk. So some predictive tools have a high degree of accuracy.

For example, there are now at least 25 different risk assessment tools for sex offenders, such as the Static-99[23] and STABLE 2007[24] tools. There is also a variety of tools for other types of offenders, and many jurisdictions (including New Zealand) have developed risk assessment instruments validated on their own offender populations. Moreover, the Integrated Data Infrastructure (IDI) that aggregates data from the tax, education, benefit and justice systems is likely to greatly enhance our capability to map the probability of New Zealanders committing or experiencing crime over their lifetime. For example, it will be able to assign groups with defined characteristics to categories such as 'vulnerable adults', 'petty criminals', 'career criminals', 'at-risk young people', 'vulnerable children' and 'not at risk', and that information can be used to determine the way in which resources should be directed.

So there is hope that in the future our ability to target will be substantially improved. But the reality is that at present there are still considerable gaps in our knowledge about the complex interaction between the various factors that lead to persistent offending as an adult, and even greater gaps in our knowledge about why some individuals do not act in accordance with the statistical risk of the group to which they belong. And the earlier the intervention, the greater the risk that the costs arising from inaccurate prediction will be incurred.

Moreover, when it comes to decisions about the individuals to whom an intervention should be applied in an individual case at the programme level, an actuarial risk assessment, no matter how accurate, is not enough; there must also be assessment of the individual dynamic factors that might affect the person's level of risk in the future. That is not only important in the interests of accuracy, but required in the interests of justice. How that should be done – the way in which it should combined with an actuarial assessment – is not generally articulated. Too often, a subjective judgment is made on the basis of a pool of information comprising actuarial and individualised information, with no articulation of the weight that should be attached to each. Risk prediction raises other issues which, while not significant of themselves, also have a bearing on the development of the investment approach and the way it is implemented, particularly as some of these issues raise the spectre of discrimination and bias. They include:

- **black box** – that there is the potential for a lack of transparency as to how the predictive tool operates – a particular concern when significant capacity for operating the predictive analytics rests with private providers;
- **mission creep** – that a predictive tool developed for one purpose often gets adopted for use in other circumstances;
- **free will** – that the use of risk prediction challenges our belief that people are in charge of their destiny and can choose not to commit crime;
- **missing datasets** – that we are heavily reliant on what data is already collected (and in particular offending behaviour that comes to light) and may therefore develop a predictive tool with built-in biases and distortions;25
- **the tyranny of efficiency** – that uncertainty makes decision-making slower, but reducing uncertainty (i.e., through a predictive tool) can introduce – and reinforce – bias;
- **bias in visualisation and measurement** – that there is a temptation to define concepts by how they are measured (for example, the idea that the Rule of Law index could eventually define the rule of law);
- **fairness and distributive equity** – that investing only in the small group of individuals who pose the highest long-term cost is at the expense of the much larger at-risk group for whom a lower-cost intervention has a greater likeli-

hood of success.

Inefficiency of predictions when there is a low base rate

The limits of the accuracy of prediction are compounded by the fact that early intervention inevitably confronts the base rate problem. That is, even if a risk prediction is very accurate, it will result in inefficiently targeted interventions if it is applied to a population where the base rate (i.e., the rate at which the predicted behaviour will occur) is low.

For example, if only 1 percent of a group of schoolchildren will go on to become persistent offenders in their late teens and adulthood, and there is a predictive tool that is 80 per cent accurate in identifying both the future offenders and the future non-offenders, there will still be 25 unnecessary interventions for every one necessary intervention.26

There is therefore a trade-off between efficiency in targeting and effectiveness of intervention. Early intervention is likely to be more effective (because it is attempting to change behaviours and life circumstances before they become entrenched) but less efficient in its targeting of the population at risk (because of the substantial number of false positives arising from the low base rate). Conversely, later interventions are likely to be less effective but more efficient.

This has a number of implications. First, there may be justice implications if the intervention has an element of coercion, even indirectly. One does not need to conjure up the extremes in the film *Minority Report* to demonstrate that interventions based on the over-prediction of inherently uncertain risks have the potential to undermine fundamental rights and freedoms and deny the ability of individuals to reform without state intervention.

Second, there may be fairness implications if the intervention results in an inequitable distribution of resource on the basis of poor targeting.

Finally, although interventions early in the life-course are likely to have a much lower per-unit cost than interventions when a person's offending has become entrenched, the over-prediction arising from a low base rate increases the potential for this cost to exceed the projected benefits after application of the discount rate. That is because, to take the example above, the return on investment in terms of the avoidance of offending by the one person who would have offended must be set against the costs arising from the unnecessary intervention in the lives of the 25 people who would not have gone on to offend. It cannot simply be assumed that prevention is better than cure.27

None of this may matter so much if the intervention is not only entirely voluntary but also producing other demonstrable social benefits that may be regarded as having high priority – that is, if it is producing social sector outcomes as well as justice sector outcomes. For example, an investment in cognitive behavioural therapy is likely to reduce future offending but will also have other benefits for individuals in terms of health, education and social outcomes. In other words, if the return on investment is calculated by reference to whole-of-life outcomes rather than fiscal outcomes relating to crime and victimisation, the justification for the social investment approach becomes easier to maintain, notwithstanding poor targeting in justice terms. The establishment in late 2016 of a new ministerial portfolio covering social investment indicated an awareness of this issue and a desire to take a life-course approach to investment, rather than an agency-by-agency approach.

Lack of evidence of long-term impacts of interventions

The evidence of what works in criminal justice is largely confined to short-term interventions.

Most of that evidence comes from evaluations without control groups; very few constitute randomised control trials.

This is not simply because of lack of funding or poor practice. There is real difficulty in establishing what works within a complex social system with multiple services, interconnected needs and complicated causal mechanisms.[28] Even if we accept that randomised controlled trials are the 'gold standard' in researching the impact of clinical or social interventions, they are generally an impracticable methodology for measuring the effectiveness of criminal justice and social sector interventions. If they were regarded as ethical (and many would baulk at the idea, for example, that social sector interventions addressing social disadvantage or dysfunction should be randomly allocated in the interests of research), they would still be ill-suited to the dynamic and shifting nature of social interventions primarily delivered by NGOs. While the independent nature of the community and voluntary sector makes it easier for innovation to occur, it also makes it hard for governments to plan for and control the nature of that innovation or its manner of delivery, and even harder to apply it across the system.

This problem is compounded by the fact that research demonstrating effectiveness is often difficult to replicate, not because the positive findings from the research itself occurred by chance but because the conditions that led to success cannot be maintained. For example, there has been a significant amount of research into the effectiveness of specialist alcohol and drug treatment courts in reducing reoffending, with highly variable results. One potential explanation for these variable results may well be that such courts work when they are first set up because they are supported by a passionate judge who invests time and energy in marshalling the resources and commitment of other practitioners; treatment resources are diverted from elsewhere; and substantial additional court resources (by way of multiple court appearances) are put into monitoring the offender's progress. However, when the pioneering judge moves on and the specialist court, while staying in place, becomes routine practice, it becomes much more difficult to produce effective outcomes.

Just as significantly, there are very few studies of the effectiveness of interventions where the end point being measured (such as persistent serious offending in adulthood) is 10 or 15 years in the future. Inevitably, therefore, the methodology itself risks stifling innovation when the benefits are uncertain. In addition, as will be discussed in more detail below, the politics of law and order make it difficult to sell the notion that people should sacrifice a degree of public safety in the short term in favour of greater but uncertain benefits in the long term.

The unduly narrow focus of the life-course perspective on crime prevention

The social investment approach tends to focus on interventions that will affect the life-course of at-risk individuals. Crime prevention efforts are therefore directed at individuals with the potential to offend. However, many of the most effective crime prevention strategies are situational in nature: they reduce crime not by altering an individual's disposition to offend but by reducing their opportunity to do so. For example, the introduction of EFTPOS has virtually eliminated cheque fraud; burglar alarms and other devices such as deadlocks have reduced burglary or the amount of loss incurred when it happens; and alcohol interlock devices have the potential to significantly reduce the incidence of repeated driving with excess blood alcohol.

It must be acknowledged that such situational crime prevention efforts may sometimes merely have a displacement effect: they divert offenders into other forms of offending where the chances of detection are lower. However, this is by no means always the case. Much crime is opportunistic and unplanned, and measures that make its commission more difficult are likely to have a significant effect on its overall incidence.

The risk here is that the enthusiasm for the social investment model will distort crime prevention efforts by focusing on individuals to the exclusion of the wider environment. Funding will be driven by evidence of the relative cost-effectiveness of individual programmes, and other strategies that may have a much greater prospect of success will be overlooked.

Political and constitutional obstacles

However, there are more fundamental political and constitutional obstacles to be overcome before the social investment model could be adopted as a core operating model in the justice sector. These fall into two categories: the politics of law and order; and the separation of powers.

Politics and policy

The rhetoric around social investment to date appears to assume that ministers, bureaucrats and programme providers can be expected to make rational decisions weighing up short-term and long-term costs and benefits and determine the optimal approach to achieve the desired result. It also assumes that, with appropriate discounting, long-term benefits assume as much importance as short-term ones.

There is an air of unreality about that. The vast bulk of expenditure in criminal justice goes towards the generally fixed workforce and infrastructure costs associated with policing, the courts and the corrections system. There has been plenty of evidence for a considerable time that many of the policies governing at least the courts and corrections systems are not cost-effective in reducing offending and reoffending. For example, imprisonment does not reduce and may increase reoffending,[29] and the same appears to be true of taking young offenders through courts.[30] Even if a wider view of the purposes of arrest, conviction and punishment is taken to include the expressive and deterrent functions discussed above, much of what we do has little evidence to support it. For example, it is clear that for medium- and low-risk offenders much shorter prison terms (or alternatives to prison) would provide a better return on investments than current practices. A re-orientation of the criminal justice system is required if we are to implement social investment in the justice sector to its full extent.

It is a little ironic that social investment is being promoted as the preferred approach to criminal justice policy-making at that same time as New Zealand's prison population has reached by far its highest per capita historical level – more than 217 per 100,000. Bill English's hope in 2011 that the prison being built at Wiri would be the last one has not been realised, and was always unlikely to be realised, given current policy settings. The former government committed massive additional expenditure in expanding the prison estate (a further 1800 beds at a cost of $1 billion),[31] and the legislative policies that have produced the need for this commitment (particularly more restrictive bail laws since 2009) continue to be upheld as the appropriate response to offending.

At the risk of over-simplifying the complexities of politics in this area, politicians perceive the need to follow rather than lead public opinion, or at least to adopt strategies that pacify the strongly held minority opinions epitomised by populist law-and-order lobby groups such as the Sensible Sentencing Trust, for whom reliable evidence is an unnecessary and irritating distraction. The problem is that the short-term political gains from responding to the demands of such groups outweigh the benefits of rational evidence-based decision-making. This is exacerbated by the fact that, as Boston (Chapter 4) notes, the nature and magnitude of benefits in, say, 10 or 20 years may be extremely difficult to ascertain and quantify, and it is likely to be difficult to convince an electorate exposed to a daily diet of crime stories that a small amount of public safety now should be sacrificed in favour of uncertain benefits for the next generation.

The core problem in the justice sector is not that decision-making unwittingly fails to take into account evidence about what works (although that has sometimes been the case). It is rather that evidence-based decision-making (on purely utilitarian grounds) is often incompatible with perceived political needs for deontological posturing.[32] Apart from policies governing law enforcement and sentencing decisions (an issue to which we return below), criminal justice policies above the programme level are largely the domain of the executive and the legislature, and they are sadly more a reflection of politics than of evidence. As a result, they are typically neither rational nor sustainable. That is the reason why in the justice sector advice from officials to ministers often ends up being directed towards minimising the damage from an espoused policy rather than towards achieving positive gains.[33]

Social investment therefore cannot be made to work, at least as a comprehensive approach, by devolution of decision-making to government departments or programme providers (through a Social Investment Board or otherwise). It cannot simply be tacked on; it will require a fundamental change in the nature of the law-and-order debate that can only be led politically. And even if the government of the day courageously decided to take that lead and put aside politics in the interests of evidence-based policy, there is little likelihood under current political settings that this would survive the politics of law and order at the following election.

There is, of course, some prospect that the debate about and language of social investment may itself be the catalyst for some change in that direction by encouraging a degree of cross-party support for sound evidence-based making; focusing on long-term as well as short-term benefits; and enhancing policy stability in this area. However, we are still a long way from that point.

The separation of powers

The obstacle posed by the politics of law and order is exacerbated by the separation of powers: under our structure of government, the executive, the judiciary and (particularly in an MMP environment) the legislature are separate arms of government with independent decision-making powers, thus providing a system of checks and balances to protect against arbitrary and dictatorial governments.

Within that constitutional structure, much of the politics of law and order finds its expression in legislation. While the executive has substantial control over the content of that legislation, its provisions can also be the result of coalition deals or simply compromises with other parties in the course of the passage of legislation. The 'three strikes' legislation enacted in the Sentencing and Parole Act 2010 is a case in point: it was championed by the Act party and supported by National as part of the coalition arrangements.

However, that is not the main impediment produced by the separation of powers. Even if all legislation were the result of rational, evidence-based decision-making by government, it is a blunt instrument incapable of producing the kind of targeted and case-based interventions required by the social investment approach. Indeed, legislation that attempts to prescribe in detail the nature of interventions (such as the current restrictive bail laws and the three-strikes legislation) generally cause injustice and incur unnecessary costs far outweighing the benefits. The reality is that the decision-making that consumes the bulk of criminal justice resources – from arrest and prosecution through to conviction and punishment – is controlled by law enforcement agencies and the judiciary.

This is more of a theoretical than a practical issue in relation to law enforcement agencies. Although the police are operationally independent from government and have a wide discretion in determining how to respond to offending in individual cases, they see themselves as part of the justice sector; they have adopted Prevention First as their core operating philosophy, including placing much greater emphasis on alternative resolutions rather than prosecution and conviction; and they are an active player in the social sector.

However, policing strategies short of arrest and prosecution – which may be introduced in consultation with, and have the support of, the wider justice sector – only apply to prevention work and responses to relatively low-level offending. If social investment is to lead to evidence-based decision-making across the system, and to facilitate a real diversion of resource from the back end to the front end where cost-benefit analyses demonstrate that this provides the best return on investment, it must find a different way of responding to serious and repeat offenders. That is because they will continue in any event to be brought before the courts for conviction and punishment. In other words, social investment must bring conviction and punishment decisions within the frame, since they are a major part of the system, consuming a substantial and increasing resource.

Therein lies the real difficulty posed by the separation of powers. For those who are arrested and convicted, our punishment structure simply does not allow for a different form of resource allocation to be introduced in a planned and controlled manner. Parliament prescribes the maximum penalty for each offence. However, those penalties are explicitly reserved for the worst possible hypothetical class of case for the particular offence, and generally bear little relationship to day-to-day sentencing practice. If the legislature wishes to alter sentencing levels, it can do so only by changing the maximum penalty, in the expectation that judges will change their day-to-day practice in some undefined way.34

The result is that, while there are some statutory purposes and principles and a small number of semi-mandatory penalties such as disqualification from driving, judges are left with a large measure of discretion in determining the appropriate sentence for a particular offence and the policy settings within which that decision is made. The vast bulk of sentencing policy is therefore made not by the legislature or the executive but by the judiciary. That policy is expressed in appellate decisions and (in relation to some more serious types) through guideline judgments by the Court of Appeal or the Supreme Court.35 Significantly, it is developed without explicit reference to, or even knowledge of, available resources.

In a real sense, therefore, punishment is treated as a 'free good'; unlike other areas of government expenditure, it is not effectively rationed according to available resources. The government can, of course, exercise some small control over the expenditure incurred as a result of a particular sentencing decision. For example, it can decide to introduce double-bunking as an alternative to building a new prison; reduce the intensity of the supervision provided in respect of those on community-based sanctions; or introduce more rehabilitative programmes for those serving sentences (such as drug and alcohol treatment programmes for prisoners) in order to reduce the risk of reoffending. However, this represents expenditure at the margin. In the end, unless the government has an appetite for significant changes to penal settings (such as legislating to create waiting lists for the serving of sentences, as some overseas jurisdictions have done), additional penal resources such as prisons have to be provided to implement judicial decisions, whether the government likes it or not.

Public expenditure on punishment, therefore, is almost totally demand-driven. The government would rightly baulk at the idea that public expenditure on health, or even on policing and victim support services, should be totally or overwhelmingly demand-driven. It is unclear why punishment should be treated differently. If social investment is to have any prospect of developing as a comprehensive approach to criminal justice, we must find a way of breaking the mould and establishing a different model for setting sentencing levels.

That was precisely the purpose of the Sentencing Council proposed by the Law Commission in 2006 and given effect through the Sentencing Council Act 2007.36 Although that Act was brought into force in 2008, the government elected in 2008 opposed it, never implemented it, and finally repealed it in 2017.

The council's key task was to have been to set sentencing guidelines, specifying ranges for all major offence types, as well as to develop guidelines for parole decision-making. Draft guidelines were to be published and public submissions invited before finalisation. The guidelines were then to be tabled in Parliament, accompanied by a statement of their likely effect on the prison population. Although this was not specified in the legislation, it might also have been expected that the guidelines would be accompanied by a more general cost-benefit analysis. Parliament was able to 'disapply' the guidelines by resolution within 15 days of their being tabled (that is, to reject them by negative resolution). If it did not do so, they would come into force automatically after 20 days from the date of tabling. Parliament was also prohibited from cherry-picking by approving some guidelines and not others: it was restricted to rejecting the guidelines presented to it as a package.

Although this was partly intended to address sentencing and parole inconsistency,37 its primary purpose was to provide a mechanism for bringing sentencing and parole policy within the democratic frame and allow the return on investment, by comparison with other areas of government expenditure, to be taken into account.

The Sentencing Council was criticised both by some members of the judiciary and the then Attorney-General, Chris Finlayson, on the basis that it was constitutionally inappropriate and an attack on the independence of the judiciary. However, that confuses the judiciary's independence in applying the law with Parliament's role in setting it. It is open to Parliament to set whatever sentencing policy it likes, including day-to-day sentencing levels for particular offence types. It has simply not had the means to do so, because Acts and Regulations are too blunt a tool for such a task. The fact that it has not developed such a mechanism is a matter of political preference rather than constitutional principle.

The Sentencing Council might or might not have been the optimal approach. Certainly the workability of having a set of sentencing and parole guidelines, – at least of the type envisaged and debated by Parliament – has not been tested, and it was not clear what would have happened if the result had been an impasse between Parliament and the Sentencing Council. But some mechanism of this type must be found for enabling sentence length, and more broadly punishment levels, to be evaluated by comparison with both other forms of intervention to prevent crime and victimisation and the social outcomes from other forms of investment across government. Without that, a social investment approach seems doomed to influence decision-making only at the margins.

CONCLUSION

This chapter has argued that while the justice system seems the ideal candidate for the application of the social investment model, the practical and political hurdles to its adoption are arguably greater than in any other sector. These hurdles are of both an administrative and technical nature and a political and constitutional nature. The former will be challenging to address but are by no means fatal to the adoption of the model. However, the latter – arising from the politics of law and order and the separation of powers – represent more fundamental challenges. Overcoming them will require a major change to our political and policy settings in this area.

Although this might suggest a rather bleak and cynical picture about what the social investment model has to offer the justice system, it would be premature to dismiss it as just another fad that will shortly disappear into the mists of time.

The justice sector knows a great deal more than it did 20 years ago. There is an exponential growth in knowledge about the drivers of the criminal justice system, the predictors of offending and the effectiveness of different types of interventions.

And there are overseas examples, such as Justice Reinvestment in the US,[38] or the work of the Washington State Institute for Public Policy (see Chapter 3),[39] showing that it is possible with the right decision-making framework for multiple small-scale investments in what works in criminal justice to have an impact on long-term prison forecasts and expenditure.

The justice sector has started small, proving the concept of the investment approach methodology by showing that it has sufficient analytical capacity to build a useful predictive model and the beginnings of a portfolio of evidence of what works.[40] These, in the short term, have the potential to form the basis for small-scale interventions that may, in the long term, avoid some future costs.

The challenge for the sector now is to capitalise on the opportunities presented by the investment approach. In particular, the approach, if well-implemented, has the potential to:

- mobilise and organise the criminal justice research sector, by creating demand for New Zealand-specific evidence of what works;
- enable government to more effectively respond to increased iwi/Māori capacity (and demand) in a post-settlement environment to deliver initiatives that improve justice outcomes for Māori;
- enable governments to more effectively target the most intractable problems in criminal justice – such as family violence – by providing a neutral framework for investment across the social and justice sectors;
- encourage the systematic introduction and testing of innovations in criminal justice;
- drive the performance of the justice system, by enabling better understanding of what interventions and decisions work best for whom.

If this is done well, it will result in a portfolio of ‘what works’ in New Zealand, accessible to all, as well as a regular breakdown of the different groups most at risk of crime and victimisation.

But the political hurdles will still remain. If we do not tackle the fundamental political and constitutional obstacles discussed above, which are the cause of the current poor return on investment in the system, social investment is doomed to be a good idea that does nothing more than guide a few decisions about the allocation of discretionary expenditure at the margins. A portfolio of ‘what works’ in cost-benefit terms over the short and long terms will have a real impact only if it is able directly to influence, or at best dictate, both policy and portfolio decisions and individual case decisions. If that is to occur, we must change our mechanisms for signalling change to critical decision-makers through legislation or executive government policy, which are outmoded and need a rethink; we must find ways of changing the politics of law and order; and we must bring punishment policy within the democratic frame.

If these changes can be made, the investment approach to justice may represent the most significant opportunity to transform the New Zealand criminal justice system in recent history. Indeed, at its best the approach has the potential to be world-leading and, most important, to improve outcomes for New Zealanders. In the long term, it will do this by informing decisions at every level of the justice system, from individual decisions at the frontline through to the sector's biggest investments in programmes, policies and prisons. Ultimately, the investment approach might be the way in which we achieve the former Prime Minister's goal of never having to build another prison again.

References

DeLisi, M., and A Piquero, 'New Frontiers in Criminal Careers Research, 2000–2011: A State-of-the-Art Review', *Journal of Criminal Justice*, 39 (2011)

France, S. (ed.), 'Sentencing', in *Adams on Criminal Law*, Thomson Reuters, 2012

Goodall, W., and R. Durrant, 'Regional Variation in Sentencing: The Incarceration of Aggravated Drink Drivers in the New Zealand District Courts', *Australian and New Zealand Journal of Criminology*, 46, 3 (2013)

Hanson, R., and K. Morton-Bourgon, *The Accuracy of Recidivism Risk Assessments for Sexual Offenders: A Meta-Analysis*, User Report, Public Safety and Emergency Preparedness Canada, Ottawa, Canada, January 2007

Independent Police Conduct Authority, 'Review of Pre-charge Warnings', public report, 14 December 2016

Jonson, C., 'The Impact of Imprisonment on Reoffending: A Meta-Analysis', PhD dissertation, University of Cincinnati, 2010

New Zealand Law Commission, *Sentencing Guidelines and Parole Reform*, Report 94, Wellington, August 2006

New Zealand Law Commission, *Variations in District Court Sentencing: Regional Analysis*, Wellington, 4 June 2006

New Zealand Law Commission, *Maximum Penalties for Criminal Offences*, Study Paper 21, Wellington, 28 September 2013

Petrosino, A., C. Turpin-Petrosino and S. Guckenburg, *Formal System Processing of Juveniles: Effects on Delinquency*, Campbell Systematic Reviews 1, 2010

Pratt, T., F. Cullen, K. Blevins, L. Daigle and T. Madensen, 'The Empirical Status of Deterrence Theory', in F. Cullen, J. Wright and K. Blevins (eds), *Taking Stock: The Status of Criminological Theory*, Transaction Books, New Brunswick, 2006

Sherman, Lawrence, Peter William Neyroud and Eleanor Neyroud, 'The Cambridge Crime Harm Index: Measuring Total Harm from Crime Based on Sentencing Guidelines', *Policing: A Journal of Policy and Practice*, 10, 3 (September 2016), https://academic.oup.com/policing/article-lookup/doi/10.1093/police/paw003 (accessed 7 September 2017)

Washington State Institute for Public Policy, *Predicting Criminal Recidivism: Systematic Review of Offender Risk Assessments in Washington State*, Olympia, February 2014

Notes

1 The author would like to express appreciation to Aphra Green and Tim Hughes for their helpful input into earlier drafts of this chapter.

2 Bill English, speech opening a Families Commission 50 Key Thinkers forum, 11 May 2011.

3 Amy Adams, 'Social Investment in the Criminal Justice System', press release, 3 May 2016, www. beehive.govt.nz/speech/social-investment-criminal-justice-system (accessed 7 September 2017).

4 Ministry of Justice, *New Zealand Crime and Safety Survey 2014: Main Findings*, report produced by the Research and Evaluation Team within the Ministry of Justice, 2015, www.justice.govt.nz/assets/Documents/Publications/NZCASS-201602-Main-Findings-Report-Updated.pdf (accessed 7 September 2017).

5 Boston and Gill (2017) and Destremau and Wilson (2017).

6 Treasury, 'Social Investment', 12 July 2017, www.treasury.govt.nz/state-sector/socialinvestment (accessed 7 September 2017).

7 See Amy Adams, 'Budget 2017: $321m Social Investment Package', press release, 3 May 2017, www.beehive.govt.nz/release/budget-2017-321m-social-investment-package (accessed 7 September 2017).

8 See M. DeLisi and A Piquero, 'New Frontiers in Criminal Careers Research, 2000–2011: A State-of-the-Art Review', *Journal of Criminal Justice*, 39 (2011), pp.289–301.

9 This assumption is not necessarily correct, given the inefficient targeting that early intervention necessarily entails. At least some later interventions may prove to be more cost effective: see Washington State Institute for Public Policy, *Prison, Police, and Programs: Evidence-Based Options that Reduce Crime and Save Money*, Olympia, November 2013, www.wsipp.wa.gov/ReportFile/1396/Wsipp_Prison-Police-and-Programs-Evidence-Based-Options-that-Reduce-Crime-and-Save-Money_Full-Report.pdf (accessed 7 September 2017).

10 New Zealand Government, *Drivers of Crime Investment Package*, 19 October 2011, www.beehive.govt.nz/sites/all/files/DriversofCrimeInvestmentPackage.pdf (accessed 7 September 2017).

11 Mark Burton, 'The Effective Interventions Initiatives and the High Number of Maori in the Criminal Justice System', speech, 28 November 2006, www.beehive.govt.nz/speech/effective-interventions-initiatives-and-high-number-maori-criminal-justice-system (accessed 7 September 2017).

12 The distinction between 'front end' and 'back end' is somewhat blurred. For example, given the intergenerational nature of offending, correctional measures designed to maintain a prisoner's contact with his or her family (whether through mother and baby units, home leave, or other support for prisoners' families) may be regarded as front-end rather than back-end inter-

vention.

13 Office of Justice Programs, 'What is JRI?', Justice Reinvestment Initiative, www.bja.gov/programs/justicereinvestment/what_is_jri.html (accessed 7 September 2017).

14 English, speech opening a Families Commission 50 Key Thinkers forum.

15 Some would also say that it has the more visceral aim of ensuring retributive punishment for offending, but for the purposes of this chapter I will put that to one side, since it is an end in itself and has no identifiable return other than a feeling of vindication by those who have been wronged and the community.

16 See Independent Police Conduct Authority, 'Review of Pre-charge Warnings', public report, 14 December 2016.

17 The evidence for the effectiveness of the severity of punishment as a general deterrent is much weaker than generally thought. See, for example: T. Pratt et al., 'The Empirical Status of Deterrence Theory', in F. Cullen, J. Wright and K. Blevins (eds), *Taking Stock: The Status of Criminological Theory*, Transaction Books, New Brunswick, 2006; and Washington State Institute for Public Policy, *Predicting Criminal Recidivism: Systematic Review of Offender Risk Assessments in Washington State*, Olympia, February 2014.

18 Boston, 2017.

19 English, speech opening a Families Commission 50 Key Thinkers forum.

20 Lawrence Sherman, Peter William Neyroud and Eleanor Neyroud, 'The Cambridge Crime Harm Index: Measuring Total Harm from Crime Based on Sentencing Guidelines', *Policing: A Journal of Policy and Practice*, 10, 3 (September 2016), pp.171–83, https://academic.oup.com/policing/article-lookup/doi/10.1093/police/paw003 (accessed 7 September 2017).

21 Charles Sullivan, Ong Su-Wuen and Rory McRae, *Justice Sector Seriousness Score (2016 Update): FAQs*, Justice Sector Working Paper, 13 December 2013, updated 1 February 2017, www.justice.govt.nz/assets/Documents/Publications/2016-FAQs-Seriousness-Scores2.pdf (accessed 7 September 2017).

22 See New Zealand Law Commission, *Maximum Penalties for Criminal Offences*, Study Paper 21, Wellington, 28 September 2013, Appendix C.

23 See Static-99, 'Static-99: Overview', www.static99.org (accessed 7 September 2017).

24 R. Hanson and K. Morton-Bourgon, *The Accuracy of Recidivism Risk Assessments for Sexual Offenders: A Meta-Analysis*, User Report, January 2007.

25 A good example can be found in tools used to predict sexual offending. Because it is known that only a very small proportion of such offending is reported and results in a conviction, such tools tend to use a different scale of risk, with the threshold for high risk being set at a much lower likelihood

of reconviction than for other offences. That is based on the assumption that those who are offending but not being convicted share the same characteristics as those who are being convicted.

26 For example, if there is a population of 1,000, and only 1 per cent (i.e., 10) will offend, a predictive tool that is 80 per cent accurate both ways will correctly predict 8 (out of 10) offenders, but wrongly identify 198 (out of 990) non-offenders, as requiring intervention.

27 See Treasury, 'Social Investment'.

28 See Chapter 8.

29 C. Jonson, 'The Impact of Imprisonment on Reoffending: A Meta-Analysis', PhD dissertation, University of Cincinnati, 2010.

30 A. Petrosino, C. Turpin-Petrosino and S. Guckenburg, *Formal System Processing of Juveniles: Effects on Delinquency*, Campbell Systematic Reviews 1, 2010.

31 Judith Collins, 'Government Approves Plans for Increased Prison Capacity', press release, 18 October 2016, www.beehive.govt.nz/release/government-approves-plans-increased-prison-capacity (accessed 7 September 2017).

32 See Yeabsley (Chapter 13).

33 Advice from officials on the 'three strikes' policy, for example: Vernon Small, 'Three Strikes Papers "Seen but not Signed" by Justice Minister', *Stuff*, 4 March 2010, www.stuff.co.nz/national/politics/3396736/Three-strikes-papers-seen-but-not-signed-by-justice-minister (accessed 7 September 2017).

34 For example, when Parliament increased the maximum penalty for sexual violation from fourteen years to twenty, the Court of Appeal responded by raising the starting point in its own sentencing guideline from five years to eight.

35 See S. France (ed.), 'Sentencing', in *Adams on Criminal Law*, Thomson Reuters, 2012.

36 New Zealand Law Commission, *Sentencing Guidelines and Parole Reform*, Report 94, Wellington, August 2006.

37 There is substantial evidence of widespread and unjustifiable sentencing inconsistency, partly because judicial sentencing policy at a national level tends to be directed to the more serious offences resulting in substantial periods of imprisonment. See New Zealand Law Commission, *Variations in District Court Sentencing: Regional Analysis*, Wellington, 4 June 2006; W. Goodall and R. Durrant, 'Regional Variation in Sentencing: The Incarceration of Aggravated Drink Drivers in the New Zealand District Courts', *Australian and New Zealand Journal of Criminology*, 46, 3 (2013), pp.422–47.

38 Washington State Institute for Public Policy, *Prison, Police, and Programs*.

39 For an example of how the institute's work on predicting recidivism is used to guide decision-making, see Washington State Institute for Public Policy,

Predicting Criminal Recidivism.

40 'What Works to Reduce Crime?', Ministry of Justice, 7 September 2016, www.justice.govt.nz/justice-sector-policy/key-initiatives/investment-approach-to-justice/what-works-to-reduce-crime (accessed 7 September 2017).

Chapter 15
The implications for the education sector

Gary Hawke

INTRODUCTION

'Social investment' appears to be a very natural fit with education.[1] The economics of education has long been synonymous with human capital formation. Education generates both private and public benefits.

Nevertheless, the 'social investment' approach has little salience in the education sector. All sectors are preoccupied with their own affairs and education is more insulated than most. Most of the sector scarcely notices developments in the wider arena of public policy. 'Social investment' appears simply as the latest in a number of initiatives over many years, such as PPBS in the mists of time, or SRAs and KRAs 25 years ago, none of which impacted much on education. The National-led government's education sector targets – participation in early childhood education, student achievement at level 2 NCEA and the proportion of the workforce holding qualifications at level 4 or above on the NZ Qualifications Framework – were widely seen as political impositions on the sector and little known as elements in the set of Better Public Services objectives.

The education sector also has an ambivalent relationship to anything labelled 'social'. Public management has repeatedly sought more connections among related portfolio areas and this has been expressed most clearly in groupings of ministries, especially those involved with social services and economic development. The education sector sits, somewhat uncomfortably, between the two. Social investment on the other hand is often presented as related to social services.

Wilson and Destremau record that 'Following submission of a paper by the Ministers of Finance and State Services in December 2015, Cabinet agreed the following statement of what the social investment approach would be: "Social Investment puts the needs of people who rely on public services at the centre of decisions on planning, programmes and resourcing, by: a) Setting clear, measurable goals for helping those people; b) Using information and technology to better understand the needs of people who rely on social services and what services they are currently receiving; c) Systematically measuring the effectiveness of services, so we know what works well and for whom, and then feeding these learnings back into the decision-making process; d) Purchasing results rather than specific inputs, and moving funding to the most effective services irrespective of whether they are provided by government or non-government agencies."'[2]

The emphasis is clearly on social service delivery. (We will return to 'people who rely on public services' below.) Wilson and Destremau go on to propose a consistent but wider understanding of social investment: 'Social investment means a programme funded by the government that entails applying resources today in the expectation that a measurable improvement in a dimension of policy interest will result at some point in the future.'[3] Indeed, they go further and identify some elements in common with European ideas of social insurance, none of which has played any part in education policy discussions in the last thirty years, although they have been prominent in the context of New Zealand superannuation, as for example in the Super 2000 Task Force of which I was a member. Even the understanding which is wider but still tightly focused on public management has not impacted on the education sector.

Most of the public discussion of social investment, including academic discussion, relates primarily to social services. In a guest lecture at Treasury on 22 March 2017, the head of the Social Investment Unit concentrated on improvements in social services and did not mention education.

HUMAN CAPITAL

While 'social' was always likely to be read as signalling 'relevant to social services', 'investment' should have more appeal to the education sector. Even though education activists have used 'investment' in the sense common to much political rhetoric and pretentious commercial advertising, ('expenditure of which I approve, preferable financed by somebody else'), it could also link to the importance in educational thinking of human capital. 'Investment' is simply the first difference of 'capital'.

Adam Smith saw the parallel between how physical capital increased the productivity of labour and how education and skills did the same. So the concept of human capital is very old. But it really came to prominence in the 1950s and 1960s as Blaug, Schultz, Mincer and Becker all developed it to help explain output growth which could not be attributed to the quantity of labour and capital, and quickly applied it to both education and the skills of the workforce.[4] By the mid-1960s, the concept was familiar in Australia (through Chris Selby-Smith) and New Zealand (through Barbu Niculescu). It became very prominent in the 1980s in debates about student loans and graduate taxes, usually being traced to

Milton Friedman, but the debate promoted in Australia by the Wran Report and the work of Bruce Chapman especially, and in New Zealand in the *Report of the Working Group on Post Compulsory Education and Training* (the 'Hawke Report', 1988),5 descended directly from the concept of human capital rather than from overseas discussion of student loans. (In both countries, as elsewhere, the international literature, especially that culminating in Nicholas Barr, was informative.)6

So the concept of human capital is and was well established in the literature of the economics of education. But the economics of education is not prominent in the thinking of education theorists and practitioners. Sociologists (and other disciplines) are inclined to see and regret a dominance of economists but they have succeeded in largely insulating educational theory from economic thinking.7 Education as a process of human capital formation is not much discussed in the education sector. It is likely to provoke objections about 'reductionist' thinking and emotional objections that education is not just about creating abilities valued in the labour market. That is perfectly right, but there is nothing in the economic concept of human capital which limits it to labour market returns. It relates to future returns relative to current costs in relation to whatever is valued. The words quoted from Wilson and Destremau about social investment – 'measurable improvement in a dimension of policy interest' – apply equally to human capital. The educational discussion plays well as political rhetoric but segregates educational thinking from policy development.

Whether 'skills' are best related to training dogs, while education develops 'competences' or 'capabilities', is no more than semantic quibbling. We could evade both by returning to the much favoured formulation by C. E. Beeby as he sought to capture the thinking of Peter Fraser, Minister of Education and then Prime Minister:

> The Government's objective, broadly expressed, is that every person, whatever his level of academic ability, whether he be rich or poor, whether he live in town or country, has a right as a citizen, to a free education of the kind for which he is best suited and to the fullest extent of his powers.8

(Beeby was later embarrassed by the sexist language he adopted without question in 1938.) The phrases 'fullest extent of his powers' and 'for which he is best suited' are usually understood as an ambitious objective, and that is what Beeby and Fraser intended, but as Beeby almost certainly also understood, many in 1938 would have understood them in the sense of a recently adopted resolution of the Wellington Chamber of Commerce, that there was no point wasting public money on the higher education of many with limited abilities who should be moved to productive employment as soon as they exhausted their limited learning powers:

> It is a matter for serious consideration whether having passed the fourth standard, children of but moderate mental development should not be definitely prepared for the type of work for which their mental capacity and natural ability make them best suited. It might be that further education along general lines would not fit them for the modest role nature intended them to play in life.9

Such sentiments are unlikely to be expressed so openly now, but as we shall see below, they are far from absent. It is probable that Beeby's 'idea' persists partly because it can be interpreted in accordance with very different preconceptions. It persists because it opens debate, not because it clearly defines a role for education which guarantees that it is a successful investment. But the usual progressive interpretation of the 1938 statement is entirely consistent with conceiving education as the process of building human capital, that is, as the result of some sense of social investment.

Furthermore, the core idea of investment, the reservation of resources from contemporary consumption and their use to achieve greater consumption possibilities in the future, is closely related to another very important concept in all disciplines which explore child development. That is delayed gratification, the self-discipline which permits rejection of immediate consumption in return for greater consumption later. Intensity of ability to exercise delayed gratification is widely recognised as a predictor of intellectual development in general.

Despite the important role of the concept of human capital, the education sector remains separated from discussion of social investment.

THE NEW ZEALAND CURRICULUM

The New Zealand Curriculum identifies five key competencies:

- Thinking
- Relating to others
- Using language, symbols and texts
- Managing self
- Participating and contributing

The acronym is unfortunate. 'TRUMP' should be related to the educational value of schooldays spent playing cards and not to contemporary U.S. politics. The New Zealand Curriculum is now widely accepted, within the education sector as well as elsewhere, as a leading-edge document identifying an appropriate conception of the sector's aim. My recollection is that initially it attracted much opposition to change, including allegations that it downplayed the core of traditional learning and leant too far towards social indoctrination. But the majority view now is that the sector immediately recognised successful encapsulation of its purpose and promptly welcomed the revised curriculum. In any case, the curriculum leaves no doubt that the relevant returns to education are much wider than workforce skills.

In particular it looks to the future needs of citizens and not only those of employees. Citizens' need for ability to discriminate between knowledge and misleading information is unlikely to decline and the curriculum aims at the right target. At the same time, it focuses on the 'soft skills' which employers say they most seek from the education sector. For example, 'managing self' and 'relating to others' lead to an ability to make good judgments about when initiative is appropriate and when the right course of action is to seek advice and guidance.

Criticisms of the education sector nearly always relate not to the structure of the curriculum but to the content of subjects through which the curriculum is delivered. Indeed, the most common complaint is that some specific content is not taught, whether it be driving qualifications, Asian languages or mental arithmetic. Subject content is a vehicle for learning, not the final outcome, and the content of learning is not necessarily what is taught. (Most complaints that when they were at school the speaker was not taught something they now value should be understood as acknowledgments that they were not learning when it was taught.)

Students learn both subject knowledge and general skills and capabilities. Subjects have evolved, and continue to evolve. Their content may be interesting and directly useful. They have also proved to be vehicles for learning general skills and capabilities. While the general and the subject-specific are interdependent, they should sometimes be distinguished. The recent decision to expect greater digital fluency from students should not be understood as introducing a new subject into the teaching programme.10 Rather it requires teaching to include opportunities to master different ways of building and using knowledge. Similarly, observing that skills in science, technology, engineering and mathematics are increasingly sought by employers should not be confused with thinking that the STEM subjects of science, technology, engineering and mathematics should occupy more teaching time.

The education sector rightly continues to emphasise enabling students to develop their capabilities for all aspects of citizenship and individual satisfaction. Education outcomes exist at several levels – which is why teaching is a complex operation, far removed from the simple transmission of information.

Nevertheless, the education process is essentially developing future capabilities by devoting current resources of time, effort and educational equipment to the education sector. The New Zealand Curriculum spells out how it should be done. There is no inherent conflict with the concept of social investment.

EDUCATION POLICY

Education policy has had a remarkable consistency since the 1980s, despite changes in the political affiliation of governments and despite variations in priorities and initiatives for specific objectives. Headline issues have certainly varied. There have been continual efforts to fine-tune the division of responsibility between central agencies and educational institutions. An especially obvious one related to the school system drew on international evidence to advocate a 'tight-loose-tight' structure of central specification of curriculum, devolved management of learning processes, and central specification of assessment and accountability mechanisms. It was seen as a politically inspired effort to impose bulk funding and managerialism. Another is the current development of communities of learning, Kahui Ako, which can be seen as a renewed attempt to realise the Picot conception of 'local autonomy within national guidelines'. (Brian Picot, whose experience included management of a network of franchised grocery stores, never intended an atomised system of antagonistic schools. That evolved from misguided implementation at both central and local levels.) But within changing emphases, the enduring themes of education policy have been learning for life for all, and recognition of achievement rather than selection of an elite.

The latter has always been controversial. It necessitated the building of the New Zealand Qualifications Framework. In schools it led to the creation of the National Certificate for Educational Achievement, which in turn induced significant change in how assessment was conducted. While this all required a great deal of development work, the principal causes of controversy lay elsewhere. Seasoned teachers found that the skills they had acquired by years of practice in predicting examination results and ensuring that parents were prepared for the results of their offspring were no longer required or valuable. And parents and caregivers found that their own experience, often remembered in only a partially accurate way, no longer gave guidance for contemporary educational experience. The former assessment system of School Certificate and University Entrance with accreditation, each element of which had on its introduction been controversial and seen as undermining traditional values, was suddenly invaluable. There were comparable developments in the early childhood services and in tertiary education, most obviously in the former in debates about what achievement should take priority and how to assess and report achievement to parents and caregivers who wanted to know about standing relative to peers when developmental variation is wide and has many reasons. In tertiary education, the tasks were to keep the syllabus aligned with changing knowledge and reporting assessment to audiences not only unfamiliar with contemporary learning but over-confident in their ability to know what should be achieved. Nostalgia for the past was often cloaked in the belief that failure rates are a direct measure of maintenance of 'standards'.

There was always plenty for debate within the sector and between the sector and its stakeholders. But in the context of social investment, the most significant point is that the objective aims at inducing and reporting achievement by all learners. It is not about targeting social services more effectively. Those words, 'people who rely on public services', are universally understood to relate to selection and targeting.

This is also clear in the objective of 'lifelong learning for all'. The 'lifelong learning' component is often hard to sustain against the demands for focus on education institutions, whether schools or tertiary, but the 'for all' element is seldom questioned explicitly. A former Minister of Education, Hekia Parata, frequently identified a 'worldclass' education system with one which generates achievement by all students, and few teachers would now suggest to her that some students are incapable of learning. There are, however, remnants of the thinking of the 1938 Wellington Chamber of Commerce in recommendations about the appropriate subject content for disadvantaged students, and more among tertiary teachers and stakeholders in suggestions about appropriate courses of study. Policy, however, is firmly focused on 'all students'.

It is often appropriate to vary the context of learning according to the background of specific students. Any teacher knows that the first step towards learning is to connect with the student's interests. But that is very different from constraining the range of any student's learning. There have been successful innovations in schools such as trades academies which teach the New Zealand Curriculum by engaging interest in technical education, but perhaps the biggest change in public attitudes has related to early childhood education. In the early 1990s, Education Minister Lockwood Smith avoided conflict with what he saw as a significant lobby for direct parental control of young children. Now the Better Public Services targets include 98 per cent participation in early childhood education.

Emphasis on achievement by all students is fundamentally an educational objective. Cynics relate it to employment needs, and there are certainly good grounds for thinking that future employment requirements include an increase in the average level of cognitive abilities among employees. But there is surely no lack of evidence that societies will require greater average abilities to discern knowledge among information of all levels of quality. The role of 'fake news' in recent political events is sufficient to establish that. For a more specific example, we can look to the need for public understanding of risk, uncertainty and statistical distributions. Perhaps the biggest challenge to the education sector is giving students the statistical understanding they will need throughout their lives while operating with a teaching workforce which is itself woefully deficient in the area and among a set of stakeholders who are no better informed. We might see a clear case for social investment in an ordinary language sense, investment where the returns for society as a whole exceed the sum of returns to individual beneficiaries.

The objective of achievement by all students has been pursued with various instruments. In schools, the main one is the creation of national standards, tied to learning progressions derived from the New Zealand Curriculum and consistent with the Better Public Services target of 85 per cent of the age cohort achieving level 2 NCEA. That sounds simple but it poses a number of major professional challenges. Even more, it challenges the understanding of many teachers and more parents, caregivers and other stakeholders.

In particular, it relies on the capability of teachers to form professional judgments, overall teacher judgments or OTJs in the jargon. There are two important aspects to this. First, contrary to much commentary, it is not the same as enthusiasm for national testing as practised in either the US or the UK. It relies on teacher capability, not on external monitoring of teacher performance, something which has required enormous investment in teacher ability to make consistent judgments of student performance. The introduction of national standards is a mechanism for strengthening the teaching profession, as indeed is the creation of the Education Council, which is intended to increase the role of teachers in striking the right balance between local autonomy and central guidelines. Second, national standards are not a system for assessing teacher performance. This is obvious, since if they were, the focus would be on the change in the performance of students for whom an individual teacher is responsible. National standards are essentially a diagnostic tool, enabling teachers to assess the progress of individual students towards desired levels of achievement and generating teachers' enquiry into what interventions are most likely to put the student on a path towards greater achievement.

DATA MANAGEMENT

Education policy is about the performance of all students but achievement of policy objectives requires teachers to track the paths of individual students. Achievement of policy objectives requires identification of students not on a path to a target level of achievement, and mobilisation of teaching resources to restore specific students to a required path.

More concretely, achieving the Better Public Services target of 85 per cent achievement of NCEA level 2 requires identification of students who are not on an appropriate pathway of learning, and selection of interventions that bring them to such a pathway. Furthermore, as the target is written in terms of an age cohort and not of the group of students in particular classes at school, it requires finding young people not in education, employment or training (NEETs) and bringing their learning to the required level of achievement. There is therefore an element in education policy of the 'targeting' which is inherent (and controversial) in the social investment initiative in social service delivery. But it is targeting or 'customisation' within service delivery for a whole age cohort.

In earlier times, there was debate about a 'universal' or 'selective' approach to welfare benefits. It usually amounted to an attempt to avoid 'stigma' by distributing indiscriminately or to 'targeting' a specific group. In practice, there was only variation around a theme of making a welfare benefit available to everybody who satisfied the criterion of eligibility for a specific benefit (and withstanding claims by activists to widen that criterion.) Especially when benefits take the form of tailored interventions or services, there is little room for manoeuvring. Education policy, however, is different. It is concerned with all students; the element of targeting is in supplementary services for students whose learning would not otherwise reach desired levels.

GOVERNANCE/CO-PRODUCTION

Promoting achievement by all students is a shared responsibility of central agencies – especially Ministry of Education, Education Review Office, Qualifications Authority, Careers Service – and education institutions. Problems are most obvious in schools. Many teachers have little management capability; it is not taught in most initial teacher education programmes, and systematic facilitation of on-job learning is at best erratic. Efforts to strengthen the profession through the Education Council are at an early stage, and giving emphasis to management capability is not universally welcome. The clearest illustration of the sector's weakness is the almost total absence of any instinct for managing resources, and the prevalence of belief that there should be a distinct funding source for every activity required in schools.

The Better Public Services target for level 2 NCEA is therefore seen not as a standard management tool but as a political imposition without educational validity. Within the sector, it is often seen as a stick with which to belittle teachers for failure. Outside observers complain that it results in misguided choices of what should be assessed, selection of 'easy options' rather than steps towards 'proper' learning. It is assumed that the outdated University Entrance requirement has 'real' standards when it is actually over 50 years past its use-by date.

Using a target is a standard management tool. Ensuring that monitoring includes checking that the outcomes compared with the target are properly measured is even more standard. Furthermore, while many commentators seem to claim originality in claiming that targets become obsessions, 'Goodhart's Law' to that effect – 'Any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes'11 – was a new name for an old observation when it was created in 1975. The appropriate response is to regard all 'indicators' as having temporary validity. The objective, achievement by all students, is enduring; the indicator of 85 per cent of the age cohort achieving level 2

NCEA is transitory. An easy prediction is that when a different indicator is promulgated, there will be enormous resistance from the sector on the grounds that it has invested a great deal in generating the current target.12 \Demanding distinct funding streams rather than managing resources is entrenched. It arises not only from a desire to shift responsibility to central agencies and protect teachers from critical parents and caregivers. It also reflects struggles within the teaching profession over whether control should rest with principals and teachers with specific management responsibilities or with individual teachers. The division between central agency and institution is more often conceived as a political contest between teachers and politicians than as an issue in the design of management systems. There have been several attempts to change this, most recently in the conception of the ministry as 'stewards' of the system while the 'leaders' of the sector are to be found in institutions, and there are variations in practice. But finding a sensible and acceptable meaning of co-production is no easier in the education sector than it is in social services generally.

SCHOOLS AND THE EDUCATION SECTOR

For clarity and simplicity much of this discussion has focused on schools. But the principal themes can also be developed with reference to early childhood education and tertiary and non-institutional education. There is a very large element of path-dependence in the conventional divisions of the education sector. Their main impact on education policy is to necessitate a great deal of attention to managing transitions for individual learners, and creating pathways which enable students to acquire the learning they need or want.

Throughout, the role of the state is concerned with all learners, rather than identifying needs and responding to disadvantage. Within that comprehensive goal, there is intent to provide customised services that make opportunities for achievement open to all, and to use modern data management systems to make the whole endeavour more effective. There are therefore some elements common to social investment, but education policy as a whole is not part of the social investment initiative.

PROSPECTS

There is little prospect of the education sector embracing the social investment initiative. Regrettably, this means there will be little thinking about the returns to resources devoted to education. However, there are real prospects that modern data management will impact on the sector.

In early childhood, it is likely that 'participation' will give way to 'quality participation'. Improved data management will permit the monitoring of learners in more than one service and allow analysis of how participation in specific services impacts on later achievement in schools. In schools, there will be improved ability to track achievement, including pathways to lifelong learning. And in tertiary education, there will be ability to relate specific courses of learning to lifetime experience. Conventional, outdated rhetoric about STEM subjects will give way to how different subjects generate the important key competences and how these relate to later experience.

There will be new controversies but there is a genuine potential for them to be progressive rather than repetitive. In particular, we must anticipate new debate about how we monitor and assess the role of the education sector in changing social and political trends outside the workforce. But we can also expect to develop better ways of measuring returns to expenditures at all levels of education.

When 'social investment' joins PPBS and SRAs and KRAs among the relics of past thought, then data availability and management, combined with genuine policy analysis, will be informing the social and economic role of the education sector.

References

Barr, Nicholas, *The Welfare State as Piggy Bank: Information, Risk, Uncertainty, and the Role of the State*, Oxford University Press, Oxford, 2001

Becker, Gary S., *Human Capital: A Theoretical and Empirical Analysis, With Special Reference to Education*, National Bureau of Economic Research, New York, 1964

Beeby, C. E., *The Biography of an Idea: Beeby on Education*, NZCER, Wellington, 1992

Blaug, M., 'The Empirical Status of Human Capital Theory: A Slightly Jaundiced Survey', *Journal of Economic Literature*, 14, 3 (1976)

Goodhart, Charles, 'Problems of Monetary Management: The U.K. Experience', in Anthony S. Courakis (ed.), *Inflation, Depression, and Economic Policy in the West*, Rowman & Littlefield, 1981

Hawke, G. R. et al., *Report on Postcompulsory Education and Training in New Zealand*, Cabinet Social Equity Committee and the Working Group on Post Compulsory Education and Training, Office of the Associate Minister of Education, Wellington, 1988

Irwin, Neil, 'What if Sociologists Had as Much Influence as Economists?', *New York Times*, 17 March 2017

Mincer, Jacob, 'Investment in Human Capital and Personal Income Distribution', *Journal of Political Economy*, 66, 4 (1958)

Mincer, Jacob, 'On-the-Job Training: Costs, Returns, and Some Implications', *Journal of Political Economy*, 70, 5, 2, Supplement (1962)

Mincer, Jacob, *Schooling, Experience, and Earnings*, National Bureau of Economic Research, New York, 1974

Reddell, Michael, 'A Question for the Minister of Education', croaking.cassandra.com, 29 June 2017

Schultz, Theodore W., 'Investment in Human Capital', *The American Economic Review*,

51, 1 (1961)
Udahemuka, Martine, *Amplifying Excellence: Promoting Transparency, Professionalism and Support in Schools*, The New Zealand Initiative, Wellington, 6 July 2017
Wilson, Peter, and Killian Destremau, *Defining Social Investment, Kiwi-Style*, NZIER Working Paper 2016/5, Wellington, December 2016

Notes

1 The author has drawn on his engagement in education debates since 1987 and thanks all – ministers, officials, academics, teachers and others – who have participated in those debates. The opinions expressed in this chapter are the sole responsibility of the author and do not reflect the views of the IGPS or NZIER.

2 Peter Wilson and Killian Destremau, *Defining Social Investment, Kiwi-Style*, NZIER Working Paper 2016/5, Wellington, December 2016, p.2, n.9.

3 Ibid., p.11.

4 M. Blaug, 'The Empirical Status of Human Capital Theory: A Slightly Jaundiced Survey', *Journal of Economic Literature*, 14, 3 (1976), pp.827–55; Theodore W. Schultz, 'Investment in Human Capital', *The American Economic Review*, 51, 1 (1961), pp.1–17; Jacob Mincer, 'Investment in Human Capital and Personal Income Distribution', *Journal of Political Economy*, 66, 4 (1958), pp.281–302; Jacob Mincer, 'On-the-Job Training: Costs, Returns, and Some Implications', *Journal of Political Economy*, 70, 5, 2, Supplement (1962), pp.50–79; Jacob Mincer, *Schooling, Experience, and Earnings*, National Bureau of Economic Research, New York, 1974; and Gary S. Becker, *Human Capital: A Theoretical and Empirical Analysis, With Special Reference to Education*, National Bureau of Economic Research, New York, 1964.

5 G. R. Hawke et al., *Report on Postcompulsory Education and Training in New Zealand*, Cabinet Social Equity Committee and the Working Group on Post Compulsory Education and Training, Office of the Associate Minister of Education, Wellington, 1988.

6 Nicholas Barr, *The Welfare State as Piggy Bank: Information, Risk, Uncertainty, and the Role of the State*, Oxford University Press, Oxford, 2001.

7 Neil Irwin, 'What if Sociologists Had as Much Influence as Economists?', *New York Times*, 17 March 2017.

8 C. E. Beeby, *The Biography of an Idea: Beeby on Education*, NZCER, Wellington, 1992, p.xvi.

9 Ibid., p.126.

10 Cf. Michael Reddell, 'A Question for the Minister of Education', croaking.cassandra.com, 29 June 2017.

11 Charles Goodhart, 'Problems of Monetary Management: The U.K. Expe-

rience', in Anthony S. Courakis (ed.), *Inflation, Depression, and Economic Policy in the West*, Rowman & Littlefield, 1981, p.116.

12 This was written before the announcement in the 2017 Budget of revised Better Public Services targets, with a school target written in terms of literacy and numeracy achievements. The prediction made here has yet to be fully tested. It is easy to formulate another prediction: literacy and numeracy requirements will be wrongly treated as *subject* requirements rather than learning, which might be demonstrated through many parts of the curriculum.

Chapter 16
A social investment approach for research funding and impact

Verna Smith, Ben Apted, Holly Briffa and Alex Collie

> *At its core, social investment is a more rigorous and evidence-based feedback loop linking service delivery to a better understanding of people's needs and indicators of the effectiveness of social services. This needs to take account of the long term – including those benefits that might take years to be delivered.*
>
> *Bill English1*

INTRODUCTION

New Zealand's social investment approach has involved 'calculating the future welfare liability … of particular categories of people … via an actuarial analysis and then using such calculations to guide or inform the selection and targeting of interventions … based on an expected reduction in the Crown's liabilities'.2 This requires agencies to have reliable evidence about which interventions are likely to be most cost-effective, and have the greatest potential to reduce liabilities; and for decisions to be based on this evidence. Without this basis for decision-making, there is no assurance that the interventions selected will maximise net returns.

This chapter discusses the benefits of a social investment approach for the evidence-gathering phase of decision-making, with specific application for investment in applied research, where research is commissioned to support the identification and development of interventions to improve service delivery outcomes. Through the use of a case study of the Neurotrauma Research Programme, which supports the Transport Accident Corporation in Victoria, Australia, two components of this approach are described:

- a process of research funding prioritisation, using a model of forward liability benefit assessment to demonstrate potential for return on investment to inform decision-making;
- a process of research impact assessment, the SPP Research Impact Framework, applied to quantify the actual and projected impact of research out-

comes.

These two processes have involved the calculation of actuarial impact (and, in the case of the SPP framework, broader impact) of the new models of treatment or care delivered as a result of successful research translation, enabling a direct relationship between the commissioning of research and the projected social investment outcomes. The use of actuarial models to guide research funding prioritisation decisions strengthens this relationship and enhances the likelihood that research investment will have positive social outcomes.

This chapter contributes to the literature on research impact evaluation by describing an explicit process of ex ante assessment of potential returns of research investment decisions as part of a funding prioritisation process.

RESEARCH PRIORITISATION CHALLENGES

A core challenge in attempting to quantify the potential impact of any translational research project is uncertainty. Particularly in the early stages of the project, there are many risks that the intended outcome of the research will not be achieved. Banzi et al. identify research as a crucial investment to foster social and economic development, but acknowledge that research activities are risky, that returns are highly unpredictable, and that there is considerable competition for limited funding.3 These factors have resulted in the generation of many frameworks and methodological approaches for the ex post measurement of research impact and returns, including payback, cost-benefit and other research impact models. Such models might, for instance, justify spending on research, assist with prioritisation of future expenditure or indicate ways to improve research to increase the likelihood of beneficial consequences.

The evidence base for research funding policies was assessed by Hanney et al. to be very weak.4 They also identified that views about what works best and which types of projects have most impact are largely based on impressionistic knowledge rather than systematic enquiry. Hanney et al. found that the Health Technology Assessment Programme Payback Model was most widely used to evaluate the impact of interventions in the health sector. The model describes a sequence of steps from identification of the topic or issue, to consideration of primary outputs from the research project, and secondary outputs indicating influence on policy-making, through to adoption of the results by practitioners and the public. This in turn leads to final outcomes including changes in health and health service costs. There are two important decision points at interfaces where evidence of potential for impact is beneficial: the point where an identified topic or research need turns into a specific project and produces a commissioning brief, and the transformation of that brief by researchers into a research proposal.

Cost-benefit analysis or estimated cost savings is another common approach and covers both direct and indirect cost savings; for instance, non-medical direct costs such as care, transportation and community support programmes. This approach can be extended to economic benefits.

With tightening fiscal environments, the future research funding landscape will be largely dependent on the ability of researchers to demonstrate potential for return on investment to funding bodies. However, this goes beyond economics – a holistic view of research impact would also take into account social and environmental benefits. In addition to the inherent uncertainties when quantifying the financial impact of research projects, research stakeholders also face challenges in developing an evidence base for communicating non-financial benefits.

APPLYING A SOCIAL INVESTMENT APPROACH TO RESEARCH

A social investment approach to research funding and impact is able to not only estimate and quantify potential financial benefits of a research project, but also provide a more holistic assessment, capturing and communicating broader qualitative and social benefits of the research.

The benefits of such an approach are particularly apparent when applied to the service delivery investment for programmes which treat people with severe disabilities, as complex health conditions often carry high ongoing care needs, and require the development of innovative treatments and rehabilitation services.

The social investment approach can be applied just as effectively to decision-making about the funding of *research* to develop interventions to support the recovery and independence of patients with such needs, as to the funding of the *interventions* themselves, in cases where the research is directly translated to improved models of care.

An example of the use of this way of informing research funding decisions is the approach adopted by the Neurotrauma Research Programme 2011–15 in the state of Victoria, Australia.

THE NEUROTRAUMA RESEARCH PROGRAMME

The programme was developed by Victoria's Transport Accident Corporation (TAC), which has a statutory role as the insurer of third-party personal liability for road accidents in the state. It is a $20 million brain and spinal cord research programme that assists the TAC to support the recovery and independence of its clients.5 Traumatic brain injury and spinal cord injury, known collectively as neurotrauma, are debilitating injuries that have lifelong impacts on the injured party and constitute a significant proportion of the TAC's funding liabilities. These injuries constitute 3 per cent of claims but 66 per cent of outstanding liabilities. In 2011 these were $4.81 billion, with the vast majority in lifetime care costs.

The Institute for Safety, Compensation and Recovery Research (ISCRR), a research-policy partnership between Worksafe Victoria, the TAC and Monash University, managed a research fund that sought to develop treatment interventions by taking a social investment approach to its decision-making, and requiring research proposals to show demonstrable benefits for people with severe brain or spinal cord injuries which were realisable within five years.

In 2014, Strategic Project Partners (SPP) reviewed the programme using a proprietary Research Impact Framework to determine the significance and reach of the research.

The programme's social investment approach

Many dimensions of the social investment approach, as set out by Boston and Gill, were prominent in the approach to manage the programme and allocate research funding.6 Most important, the approach *measured social return* against targets using *proxies and data.* For instance, lifetime care cost was a proxy used to measure client outcomes. Where these were reduced, or predicted to be reduced, it was inferred that increased independence had resulted or would result from improved treatment or rehabilitation, and therefore that a beneficial client outcome was achieved. These inferences could be made due to the direct link between the financial proxy and client outcomes, which is of critical importance when applying proxies to inform decision-making.7 Research funding decisions were informed by these measures of the potential social, financial and actuarial returns from the research investment.

Specific return-on-investment calculations were developed for several of the most costly projects to inform research funding *decision-making*. In order to be funded, proposed research projects had to demonstrate social returns by development or validation of interventions that were *effective* in improving client outcomes and reducing actuarial liability. In summary, ISCRR developed a model of forward liability benefit assessment for its research funding decisions made for the programme.

Meeting Boston and Gill's other dimensions of a social investment approach, the programme had a clear *intertemporal* dimension, because returns were expected to be delivered over the lifetime of clients with neurotrauma, to both the client and the TAC. Second, a primary purpose of the funding was to deliver new *evidence* to inform treatment and rehabilitation service provision and delivery. Third, the *focus* of the programme was on interventions that could be implemented as soon as possible in the period following a diagnosis of neurotrauma. Furthermore, the programme developed, funded and utilised large databases of administrative *data* from the TAC and clinical sources, which detailed the trajectories of treatment and rehabilitation and outcomes for people with neurotrauma in Victoria. This data was examined to establish the need for research and the potential benefits of new treatment and rehabilitation, and to track actual benefits once implemented.

There was considerable competition among researchers for funding under the programme. The social investment criteria, particularly the use of lifetime care cost as a proxy for client outcomes, constituted a significant factor in making choices in several cases between high-quality projects. For example, an early decision was taken to focus the funding for brain injury on research to ameliorate behaviours of concern rather than other sequelae (though some research projects to address these sequelae were funded). Those who interact with individuals following brain injury,8 including family, friends and employers, consistently rate behaviours of concern as 'the most problematic consequence of the injury', and in 2012 the TAC estimated expenditure attributable to managing or supervising behaviours of concern across all 625 brain-injured clients with this level of disability to be $7.8 million (21 per cent of the group's annual lifetime costs expenditure).

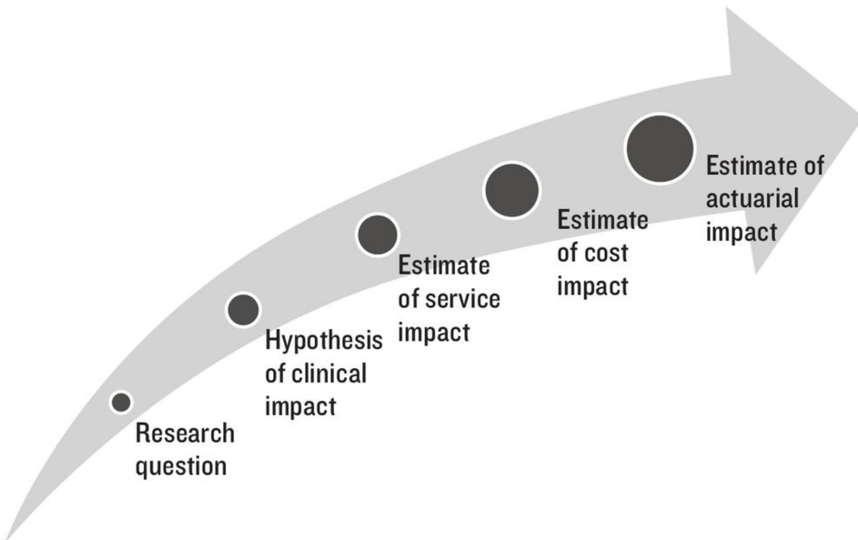


Figure 16.1: Calculating the return on investment hypothesis. Source: Verna Smith.

Research has also identified that people with spinal cord injury with disorders of bowel and bladder function have lower levels of satisfaction with family life, friendships and free time than those with normal function. Bowel dysfunction is rated as having the greatest impact on their life in comparison to other complications of spinal cord injury.[9] Although proposals were received for research into a wide range of other disorders, including sleep disorder following spinal cord injury, the analysis of potential return on investment led to the decision to focus funding on research to improve bowel and bladder management as a priority.

Calculating potential actuarial impact: forward liability benefit assessment

Forty-two projects were funded in the three-year period of the programme's implementation. As part of the process of prioritisation, programme managers developed a logic model to identify the impact of research. The ISCRR model was a five-step process, as shown in Figure 16.1 above, which included identifying the research need and research question; sourcing evidence for a hypothesised clinical impact; and estimating a resulting service impact. The process of estimating the service impact on current and projected treatment and service costs and on lifetime costs was then completed by TAC actuaries utilising models developed to understand the fiscal liabilities of the TAC for this cohort of neurotrauma clients.

While ISCRR's model of forward liability benefit assessment was not able to be used for all decision-making, it provided the rationale for decisions on the programme's largest projects. Two examples of the way in which this was done are set out below.

Improving health after spinal cord injury: bowel management

A major problem identified in spinal cord injury (SCI) is an inability to empty the bowel when needed and a leakage of bowel contents at inappropriate times.[10] It was proposed that the programme fund rigorous clinical testing of colokinetic drugs with the aim of restoring bowel control, thus significantly reducing attendant care requirements and the eventual need for surgery. Treating failure of bowel-emptying in people with SCI has the potential to greatly improve their quality of life and ability to participate in society, delivering a measurable improvement in their experience of incontinence. There is a direct relationship between reduced duration of bowel care, which is clearly documented in studies as reducing life satisfaction, and reduced forward liability. In the case of the colokinetic drug trial, clinicians estimated the effect (up to ten years post-injury) as:

- the care need of 40 per cent of people with SCI will reduce by one hour per day;
- the care need of another 40 per cent will reduce by half an hour per day;
- 20 per cent will have no reduction of care needs.

The return on investment hypothesised for this trial was calculated as follows:

- around 150 spinal-injured clients receive 1:1 attendant care;
- this equates to reduction of 90 hours of attendant care per day;
- this results in reduced expenditure of $1.3 million per annum; and
- an estimated reduced liability impact of $55 million was predicted.

Immediate cooling and emergency decompression for the treatment of spinal cord injury

Limiting secondary forms of injury following traumatic damage requires therapeutic approaches including immediate cooling and early decompression (ICED), which are time-critical.[11] These can substantially improve the prognosis following spinal cord injury. A study between 2002 and 2009 found that 20 per cent of patients receiving early decompression of their spinal injuries showed a 2-grade improvement in their American Spinal Injury Association impairment scale. In some cases, this could mean recovery of normal motor and sensory function, and in others, recovery of higher levels of motor functioning than were present immediately following injury.[12] It was proposed that funding be allocated for the logistical and paramedic studies necessary to permit a multi-centre clinical trial of ICED. The trial was expected to determine whether this would improve outcomes in patients with severe spinal cord injury located in the neck. The calculation of impact on liability for this funding allocation was based on the evidence that early decompression could reduce levels of disability in up to 20 per cent of people with SCI. Where this resulted in paraplegia rather than quadriplegia, lifetime care costs would consequentially be calculated at $3 million rather than $6.1 million per annum.

REVIEW OF THE NEUROTRAUMA RESEARCH PROGRAMME

In 2014, an independent review was commissioned from Strategic Project Partners (SPP) to assess the value and potential future value of the research activity initiated under the programme. To conduct this review, SPP applied its proprietary Research Impact Framework, which assesses the direct impact of research projects and social goods, including both quantifiable outcomes and qualitative benefits. In the context of this programme, impact was identified in the form of advances in clinical treatment methods, improvements to the quality of life and level of independence of TAC neurotrauma clients, and potential reductions in cost of lifetime treatment and care for people with major brain and spinal cord injury.

The financial impact of six research projects was modelled. Inputs regarding potential outcomes from stakeholders, clinicians and TAC project sponsors were combined with current cost and liability data from the TAC to inform the approach. Actuarial methods were applied to estimate and quantify the potential financial impact of these projects. This was expressed in terms of the potential reduction in cost to the TAC of lifetime treatment and care for major brain and spinal cord injury clients, resulting from the identified interventions.

These projects, representing a total TAC investment of $4.2 million, were modelled to have the potential to yield a total financial benefit to the TAC of up to $83.4 million, with benefits starting to emerge within two years.[13]

Application of actuarial approaches for quantifying research impact

As outlined earlier, a core challenge in attempting to quantify the potential impact of any translational research project is uncertainty. Particularly in the early stages of the project, there are many risks that the intended outcome of the research will not be achieved. Given this uncertainty, actuarial techniques provide a basis for quantifying research impact.

To estimate the financial impact of the selected projects, three broad models were applied, based on how researchers and clinicians were able to articulate the expected benefits of each project:

- Model A: Reduction in expected lifetime cost per client
- Model B: Perpetuity of total expected benefit per annum from reduction in hours of care
- Model C: Perpetuity of total expected benefit per annum from reduction in costs per client

These models are illustrated below through case studies.

Model A

The first model quantifies financial impact in terms of a reduction in the expected cost to support a neurotrauma client over their lifetime. This approach was applied to the ICED project, which was assessed to have the potential for major impact by substantially reducing the level of damage between time of injury and surgery. This intervention was estimated to have the potential to reduce the expected lifetime costs to the TAC of supporting a quadriplegic client by 60 per cent for suitable candidates. At the time, the current expected lifetime cost was $6.1 million, and two cases per annum were expected to benefit. Adjusting for risk, and the time value of money, the total financial benefit of this project was estimated to be approximately $49.7 million.

Model B

The second model quantifies financial impact in terms of a reduction in the annual cost to support a neurotrauma client through a reduction in hours of care, recognised in perpetuity. This approach was applied to quantify the impact of the project to develop the faecal incontinence drug for people with spinal cord injury. It was determined that successful application of the colokinetic drug could improve bowel management and allow clients to reduce dependency attendant care.

At the time of the assessment, the TAC supported 466 spinal cord injury clients, 25 per cent of whom were estimated to be suitable candidates for the bowel management intervention. Successful use of the medication developed from this research, Capromorelin, was expected to reduce attendant care by one hour per day (at $42.15 per hour) for suitable clients. Adjusting for risk, and the time value of money, the total financial benefit of this project was estimated to be approximately $9.9 million.

Notably, this estimate differed from the forward liability estimate obtained at the funding prioritisation stage. The difference was due to a refinement in the assumptions applied at this later stage, as well as the discounting and risk-adjustment methodology applied as part of the independent review. Ultimately, this shows that the approaches working together achieve an improved assessment of the potential impact of the intervention as additional information is obtained and uncertainties are clarified.

Model C

The final model quantifies financial impact in terms of a reduction in the annual cost per client to support a neurotrauma client, recognised in perpetuity. This model was applied to quantify the combined impact of two additional projects, ‘Slow Stream Rehabilitation for acquired brain injury (Phase 1)’ and ‘Rehabilitation after acquired brain injury (Phase 2)’. These projects identified and assessed the organisation and models of health care services for people with a severe acquired brain injury, and established a state-wide, evidence-based specialist rehabilitation service for them. By providing targeted rehabilitation services and community-based care for patients who would otherwise experience extended stays in acute hospital settings, these projects were found to have a major impact on improving quality of life.

In December 2014, the TAC was actively supporting 1,348 acquired brain injury clients. It was estimated that each year, the ten most severe cases would be suitable candidates for the slow-stream rehabilitation model. At the time, the median total annual cost of supporting a TAC severe acquired brain injury patient was $280,732, and this initiative was estimated to have the potential to reduce the annual cost of care for these clients by 10 per cent. Adjusting for risk, and the time value of money, the total financial benefit of these projects was estimated to be approximately $3.4 million.

THE SPP RESEARCH IMPACT FRAMEWORK

The research community, especially those involved in translational research, is increasingly required to understand and report on how its work has translated to real-world impact. In the case of the neurotrauma programme, while actuarial modelling could be used to estimate and quantify potential financial benefits, in isolation this approach understates the true impact by failing to consider the social impacts of the research (including improvements in client outcomes and the quality of life).

Accordingly, in line with social investment theory, the application of the SPP framework enabled the identification of the broader qualitative and social benefits of the research for the TAC. The intent of the framework is to assist decision-makers considering a portfolio of possible investments. The approach provides a common language for research impact assessment, and allows a decision-maker to consider the potential impact of public goods and research projects in a way that can be compared across a portfolio.

Direct research impacts are commonly measured across three categories: economic, social and environmental. The SPP framework provides an approach to reporting impact in each category. In applying it, a guiding principle in determining where impact should be captured is that impact should be direct, meaningful and measurable. The framework is most applicable for organisations looking to make decisions relating to translational research, or projects which are relatively ‘closer to market’.

A five-step process used to capture impact is summarised in Table 16.1.

MEASURING ECONOMIC IMPACT

In the context of the SPP framework, economic impacts14 are measurable financial changes occurring as a result of a research initiative or social good. This impact may benefit the defined target audience, a funding partner or the broader society. Generating additional funding for further research projects is not considered a direct economic impact (additional funding is channelled towards new or extended research, which may itself generate future impacts).

Step	Description
1. Select projects	Select the research or social enterprise projects that will be reviewed. This may depend on considerations such as whether the

	stage at which the project is at justifies a review, among other factors.
2. Interview stakeholders	Capture data on the selected projects through interviews with project stakeholders, including beneficiaries of project benefits. • F or financial impact, expected dollar value figures are captured in three categories – ‘to date’, ‘next two years’ and ‘potential future’ (everything beyond the next two years). • F or social and environmental impact, data is captured for two categories – ‘to date’ and ‘potential future’. For each identified impact, a score between 1 and 5 is provided for both ‘rating’ (breadth/reach of project impact) and ‘weighting’ (depth of project impact).
3. Normalise	To ensure consistency in the treatment of individual projects, the data on project impacts is analysed and subjected to a normalisation process. Normalisation is important to ensure consistency across evaluation of the impact of each project, particularly when relying on a range of different stakeholders to provide information for the assessment.
4. Analyse and map impacts	Analyse and map project impact data to produce a list of ‘to date’ and ‘potential future’ impacts.
5. Consolidate project impacts	While all impacts are captured at a project level, consolidation of all impacts within a project and across projects requires an amalgamation methodology. The approach taken to provide a consolidated view of impact for each project is to highlight the maximum impact achieved – defined as the combination of the rating (breadth/reach) and weighting (depth/profoundness).

Table 16.1: Five-step process to capture impacts. Source: Strategic Project Partners (SPP), 2017.

Impact type	Description
To date	Dollar value of all direct impacts that have accrued to date.
Expected in next two years	Dollar value of all direct impacts that are expected to be delivered across the next two years (probability adjusted for the likelihood of success).
Potential future	Dollar value of all direct impacts that are expected to be delivered beyond the next two years (probability adjusted for the likelihood of success).

Table 16.2: Economic impact. Source: Strategic Project Partners (SPP), 2017.

To provide clarity on the timing of benefits delivered, the framework captures economic impact under three categories: 'impact to date', 'expected near future impact (next 2 years)' and 'potential future impact'. These categories are described in Table 16.2.

To determine the economic impacts of a research project or social good, an appropriate modelling approach must be determined. In the case of the programme, given the high level of uncertainty surrounding future economic impacts, an actuarial approach was applied (as described in the previous section). However, other financial modelling approaches are valid and the preferred approach should be determined based on the nature of the expected benefits and the available information. A summary of the approach to calculate economic impact is shown in Figure 16.2.

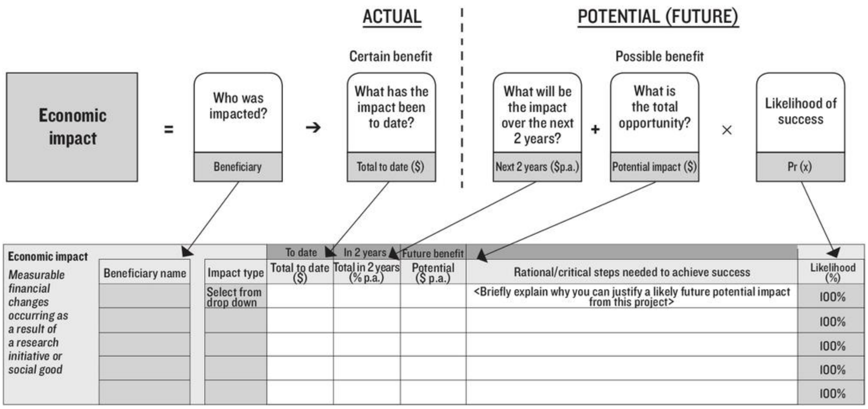


Figure 16.2: Approach to calculating economic impact. Source: Strategic Project Partners (SPP), 2017.

Measuring social and environmental impact

Social impacts include knowledge improvement through the extension of subject matter expertise, community development, and improvements to the health and well-being or quality of life of social groups. Common social impacts are shown in Table 16.3.

Environmental impacts affect the natural environment and either improve the condition of an existing natural environment or protect it. Common environmental impacts are shown in Table 16.4.

To capture social and environmental impacts, both breadth (how wide-reaching the impact is) and depth (how profound a change is caused) are considered. A rating scale is applied to determine the breadth (for example, local community reach compared to global reach), and a weighting scale is applied to determine the depth (for example, insignificant change compared to profound change). A score of between 1 and 5 is applied across each dimension, as defined below.

It is recommended that the rating and weighting scales be redefined to suit the needs of the specific assessment, and that the criteria be articulated in terms of quantifiable thresholds where possible (for example, the rating scale can be defined using thresholds for the number of individuals impacted).

Impact type	Description
Improved health and well-being	Improvement, maintenance and promotion of health or medicinal benefits. Improvement, maintenance and promotion of conditions of existence, happiness or welfare that influence the well-being of people.
Provision of education and training	Training and education that improves business methods or processes, supplies new knowledge to other stakeholders (for example, improved dietary advice to the community), and/or assists with the development of subject matter expertise.
Community development	Empowerment of individuals or groups through the provision of skills and/or knowledge required to effect change within their community.
Improved safety	Improvement, maintenance and promotion of practices that directly improve the level of safety of a group of people.

Table 16.3: Common social impacts. Source: Strategic Project Partners (SPP), 2017.

Impact type	Description
Greenhouse gas reduction	Reduction in greenhouse gas emissions.
Reduction in pollutants	Improvement in waste management practices, reduction of pollutants or toxins released into the environment.
Reduction in water use	Reduction in water usage/consumption.
Reduction in energy use	Reduction in electricity or energy usage/consumption.
Protection of the natural environment	Protection of areas of the natural environment, reduction in environmental damage, maintenance of biodiversity, improved environmental education.
Environmental rehabilitation	Rehabilitation of areas of the environments, protection of endangered species, habitat improvement, increase in biodiversity.

Table 16.4: Common environmental impacts. Source: Strategic Project Partners (SPP), 2017.

Rating	Description
5	Significant global application which has led to direct, measurable and wide-reaching impacts.
4	Some global application which has led to direct, measurable and wide-reaching impacts.
3	National application which has led to direct, measurable impacts.
2	Local (state or regional) application which has led to direct, measurable impacts.
1	Community application which has led to direct, measurable impacts.
NA	No application delivered to date.

Table 16.5: Rating scale – breadth of impact. Source: Strategic Project Partners (SPP), 2017.

Rating	Description
5	Profound change in the way that the stakeholder conducts their activities (for example, fundamentally improving the drinking water quality).
4	Significant change in the way the stakeholder conducts their activities across their business (for example, improving salinity of water).
3	Modest change to the way the stakeholder conducts their activities across a functional area (for example, inventing a supporting process to assist with current methods to filter water).
2	Marginal change in the way the stakeholder conducts their activities (for example, improving water testing techniques).
1	Insignificant change on a small part of the way the stakeholder conducts their activities (for example, adding a minor clause to a policy document with little to no change to the outcome).
NA	No impact on the way the stakeholder conducts their activities.

Table 16.6: Weighting scale – depth of impact. Source: Strategic Project Partners (SPP), 2017.

Rating	Description
200%	Impact item is heavily undervalued when factoring in the underlying assumptions.
100%	Impact has been accurately valued.
1%	Impact item is heavily overvalued when factoring in the underlying assumptions.

Table 16.7: Normalisation scale. Source: Strategic Project Partners (SPP), 2017.

Finally, given the potential for subjective assessments of ‘ratings’ and ‘weightings’, a normalisation process is undertaken to ensure consistency in scoring across all projects. It is recommended that the process be conducted by individuals with oversight of the portfolio of projects being considered. At this stage, each impact is assigned a percentage value between 1 and 200 per cent to attempt to align the underlying rating and weighting assumptions. The normalisation scale is defined below.

While all impacts are captured at a project level, their consolidation within a project and across projects requires an amalgamation methodology. The approach applied to provide a consolidated view of the identified social and environmental impacts of a project, or across projects, is to highlight the maximum impact achieved – defined as the combination of the rating (breadth/reach) and weighting (depth/profoundness). However, alternative amalgamation approaches are valid.

Visualisation of impact measures

The output of the framework is a visualisation of the research portfolio across breadth and degree of impact. The review adopted quality-adjusted life years (QALYs) and other measures to determine the weighting or depth of impact, and found substantial social benefits which were expected to improve the quality of life for people with brain and spinal cord injury. Most of the research projects were found to have potential impact beyond the TAC’s Victorian area of responsibility, and four projects were also expected to have major client impacts globally within ten years. This is shown in Figure 16.4.

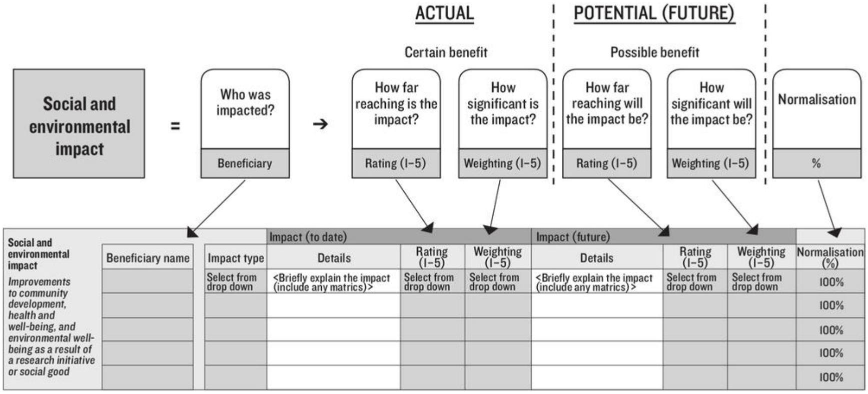
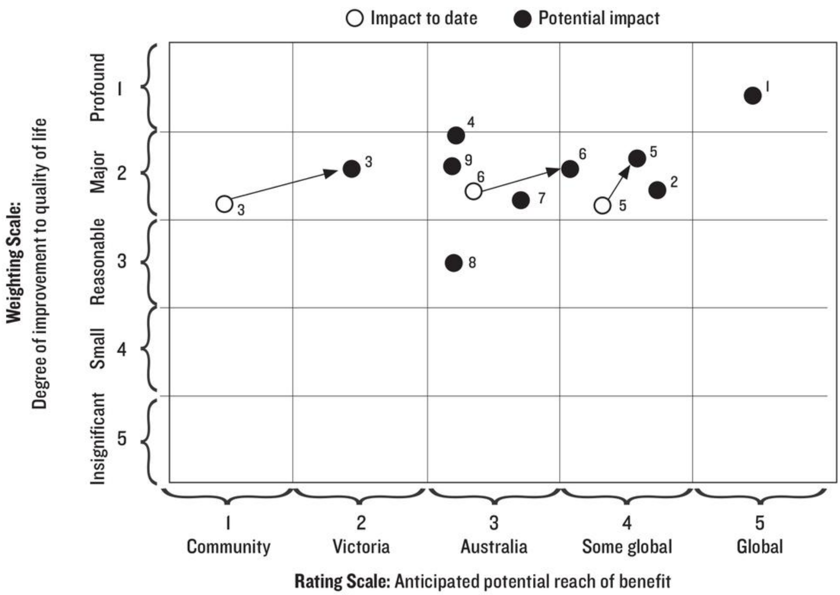


Figure 16.3: Approach to calculating social and environmental impact. Source: Strategic Project Partners (SPP), 2017.

Advantages of the SPP Research Impact Framework

Given the current challenges faced by the research community in communicating research impact, the framework offers many advantages. The framework:

- can be used as a planning tool to help researchers frame areas of potential impact and identify potential partners;
- can be used by funding groups to inform decisions on investments in research and social goods, based on rating and weighting of future impact;
- encourages greater ongoing engagement with research stakeholders in monitoring continuing impacts delivered by research projects;
- captures information on research impacts that will allow research organisations to swiftly respond to any shift in the way governments or other funding bodies allocate research funding;
- provides research organisations with a transparent approach that can be used in discussion with other institutions and partners;
- is applicable to capture social and environmental benefits across a wide range of disciplines, including science, technology, social sciences, health and commerce;
- provides a consistent definition of outputs, knowledge exchange and impacts for all stakeholders; and
- has been designed to be simple to use for all stakeholder groups, and complements existing measures.



PROJECT KEY

1. Restoration of upper limb function with nerve transfer surgery
2. Post-traumatic amnesia early treatment
3. Slow-stream rehabilitation for acquired brain injury – Phase 1
4. Rehabilitation after acquired brain injury – Phase 2
5. Monash-Epworth Rehabilitation Research Centre (MERRC) Longitudinal Head Injury Outcome Project
6. Residential Independence Pty Ltd (RIPL) – accommodation guidelines
7. Developing and maintaining person-centred active support (PCAS): a pilot project in supported accommodation for people with neurotrauma
8. Spinal cord injury bowel management
9. ICED for treatment of spinal cord injury

Figure 16.4: Output for the SPP Research Impact Framework applied to the Neurotrauma Research Programme. Source: Strategic Project Partners (SPP), 2017.

In applying the framework, SPP has found the approach to be particularly valuable in helping academia to understand and articulate the difference between actual and potential impact (where the latter requires adjustment for risk).

CONCLUSION

A key objective of research is to inform action. This chapter has described two methods to increase the likelihood of research being translated into action. The ISCRR forward liability benefit assessment model provides a logic model for the selection of projects competing for research funding by identifying those with greatest likelihood of delivering reduced forward liability. The SPP Research Impact Framework offers a methodology to validate these funding decisions and consider broader impact through an independent analysis of economic, social and environmental impacts. The social investment approach described here exemplifies a process to allocate research funding based on the ability to generate benefits and meet social needs, acknowledging that some benefits may only be delivered in the 'long term'.15 Ultimately, the social investment approach applied to research funding adds value through the creation of an evidence-based feedback loop linking research outcomes to social needs, and hence providing a case for investment.

The ISCRR model and the SPP framework are complementary ways to assess the actual and potential benefits of research and social enterprise programmes in many areas including health, sustainability, crime and microfinance. The authors of this chapter put both methods forward for use and critique by the broader research community. We envisage that a collaborative approach to defining mechanisms for communicating research impact will raise awareness of the importance of doing so, and result in the development of a number of complementary approaches. Ultimately, this will increase the capability of research organisations to communicate impact and attract investment; and provide the best opportunity for society to continue to benefit from highly valuable translational research.

References

Banzi, R., L. Moja, V. Pisotti, A. Facchini and A. Liberati, 'Conceptual Frameworks and Empirical Approaches Used to Assess the Impact of Health Research: And Overview of Reviews', *Health Research Policy and Systems*, 9, 26 (2011)

Boston, Jonathan, and Derek Gill, *IGPS/SoG: VUW & NZIER Project on the Social Investment Approach: Project Scoping*, Wellington, 2016

Bragge, P., L. Piccenna and R. Gruen, 'Developing Research to Address Behaviours of Concern Following TBI: Briefing Document', NTRI Forum, Melbourne, 2012

Department of Education and Training, 'Report of the Review of Research Policy and Funding Arrangements', Commonwealth of Australia, Canberra, 2016

Ellis, A. G., P. T. Zeglinski, D. J. Brown, A. G. Frauman, M. Millard and J. B. Furness, 'Pharmacokinetics of the Ghrelin Agonist Capromorelin in a Single Ascending Dose Phase-I Safety Trial in Spinal Cord-Injured and Able-Bodied Volunteers', *Spinal Cord*, 53 (2015)

English, B., 'Speech to the Treasury Guest Lecture Series on Social Investment', presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015

Fehlings, M. G., A. Vaccaro, J. R. Wilson, A. Singh, D. W. Cadotte, J. S. Harrop, B. Aarabi, C. Shaffrey, M. Dvorak, C. Fisher, P. Arnold, E. M. Massicotte, S. Lewis and R. Rampersaud, 'Early versus Delayed Decompression for Traumatic Cervical Spinal Cord Injury: Results of the Surgical Timing in Acute Spinal Cord Injury Study (STASCIS)', *PLoS ONE*, 7, 2 (2012)

Hanney, S., M. Buxton, C. Green, D. Coulson and J. Raftery, 'An Assessment of the Im-

pact of the NHS Health Technology Assessment Programme', *Health Technology Assessment*, 11, 53 (2007)
Institute of Safety Compensation and Recovery Research, *Neurotrauma Research Strategy 2011–2015*, Monash University, Melbourne, 2011
Piccenna, L., N. Dodge, P. Bragge and R. L. Gruen, *Briefing Document: Emerging Approaches for Bowel and Bladder Management Following Spinal Cord Injury*, NRTI, Melbourne, 2014

Notes

1 Bill English, 'Speech to the Treasury Guest Lecture Series on Social Investment', presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015.

2 Jonathan Boston and Derek Gill, *IGPS/SoG: VUW & NZIER Project on the Social Investment Approach: Project Scoping*, Wellington, 2016.The authors would like to express appreciation to Monash University, the Institute for Safety, Compensation and Recovery Research (ISCRR), and the Transport Accident Commission (TAC) for supporting the Neurotrauma Research Programme, and for approving the use of the programme as an example of the application of the SPP Research Impact Framework methodology; and to the two anonymous reviewers who commented on the first draft of this chapter. Professor Collie and Dr Smith declare their employment at ISCRR between 2012 and 2015 and their role in commissioning the research that is the subject of this chapter, acknowledging any conflict of interest that arises from the performance of these roles.

3 R. Banzi et al., 'Conceptual Frameworks and Empirical Approaches Used to Assess the Impact of Health Research: And Overview of Reviews', *Health Research Policy and Systems*, 9, 26 (2011).

4 S. Hanney et al., 'An Assessment of the Impact of the NHS Health Technology Assessment Programme', *Health Technology Assessment*, 11, 53 (2007), pp.1–180.

5 Institute of Safety Compensation and Recovery Research, Neurotrauma Research Strategy 2011–2015, Monash University, Melbourne, 2011.

6 Boston and Gill, *IGPS/SoG*.

7 When applying financial proxies, it is important that there is a direct link between the financial measure and the outcome it seeks to represent. This is generally true for the use of lifetime care cost as a proxy for beneficial client outcomes, as a reduction in cost due to a reduction in the intensity or frequency of care requirements is directly associated with an improvement in patient health in the majority of cases. However, in cases where the lifetime care cost decreases due to factors unrelated to client outcomes (for example, a reduction in the unit cost of providing a service), or factors associated with negative client outcomes (for example, death of a client), it is not appropriate

to make inferences based on this proxy. Critical judgment must be applied when using and interpreting proxies.

8 P. Bragge, L. Piccenna and R. Gruen, 'Developing Research to Address Behaviours of Concern Following TBI: Briefing Document', NTRI Forum, Melbourne, 2012.

9 L. Piccenna et al., *Briefing Document: Emerging Approaches for Bowel and Bladder Management Following Spinal Cord Injury*, NRTI, Melbourne, 2014.

10 A. G. Ellis et al., 'Pharmacokinetics of the Ghrelin Agonist Capromorelin in a Single Ascending Dose Phase-I Safety Trial in Spinal Cord-Injured and Able-Bodied Volunteers', *Spinal Cord*, 53 (2015), pp.103–8.

11 M. G. Fehlings et al., 'Early versus Delayed Decompression for Traumatic Cervical Spinal Cord Injury: Results of the Surgical Timing in Acute Spinal Cord Injury Study (STASCIS)', *PLoS ONE*, 7, 2 (2012), e32037.

12 Ibid.

13 Financial benefits refer to the expected reduction in cost to the TAC of lifetime treatment and care for major brain and spinal cord injury clients. They have been adjusted for both risk and time. Present value as at December 2014.

14 Note, under the framework, 'economic impacts' include both financial impacts, which are the direct effects on the cash flows of the organisation under consideration, and broader monetary impacts, such as the benefits and costs to the third parties or the external community.

15 English, 'Speech to the Treasury Guest Lecture Series on Social Investment'.

Part 4
Critical Perspectives

Chapter 17
A social democratic critique

Michael Cullen

BACKGROUND

Over the last few years the National-led government developed what it called the social investment approach. Insofar as it had any big idea, the social investment approach was it. It is certainly big enough to have generated some considerable dispute as to what it actually is.

My fundamental conclusion is that it is not a big idea at all but a little one masquerading as a big one. That little idea is that using massive data will enable a better focusing of social spending and, therefore, improved social outcomes.

Nevertheless, the idea has already led to some significant changes in social policy. In a few circles it has also generated something of a messianic fervour that a new age of social service efficiency is upon us, akin to the introduction of robots into the manufacturing sector.

The idea that better data, particularly quantitative data, will lead to better policies and better government is far from new. My own doctoral thesis dealt with the flowering of this idea in early Victorian Britain.

Then, as now, it is often linked in some way to substantially predetermined understandings about the nature of the issues to be addressed and the fundamental framework within which they should be addressed.

Those understandings are often not made explicit because they are largely unconscious. They are, to put it another way, assumptions which are not challenged internally by either the individual or the group. As a result, they can sometimes lead to a naive dogmatism which fails to see alternative assumptions, explanations or similarities. And that can lead, in its turn, to suboptimal solutions being adopted.

Language, too, can become the master rather than the servant of thought. Values, not necessarily originally intended, can become embedded in the language, which makes it difficult for alternative language or values to be seen as legitimate.

I will argue, therefore, that the investment approach needs to be considered with a great deal of caution; that its application so far has produced outcomes which vary between the questionable and the downright dangerous; and that we would be better to start from an exploration of the idea of a partnership society and how evidence-based social policies may be consistent with that.

RECENT GOVERNMENT REPORTS ON THE INVESTMENT APPROACH

My entry point into such a discussion is via a critical review of the investment approach as exemplified by the recent Expert Panel's report *Investing in New Zealand's Children and Their Families.*[1]

Finally issued in December 2015, that report was preceded by a number of similar reports, including the Productivity Commission's *More Effective Social Services* (August 2015) and the Ministry of Social Development's *Community Investment Strategy* (June 2015).[2]

The term 'investment' as it is used in this context has major differences from its common-language use. The latter would imply the belief that an injection of a lump sum of capital (whether financial or otherwise) will lead to better results in the long term. That lump sum is higher than normal expenditure, with the expectation that, over time, it will be repaid by lower expenditure on a range of social problems which will have reduced in size.

In the new use of the term 'investment', spending is certainly expected to be higher in a specific priority area than hitherto. But this is achieved, at least in part, by more closely targeting that expenditure. In other words, more expenditure on a fairly narrowly defined set of, say, 'vulnerable' children will be associated with reducing expenditure on the less 'vulnerable'. Expenditure on that cohort of more 'vulnerable' children will be expected to reduce over time, thus generating fiscal savings.

It does seem, however, reasonable to argue that 'investment' used this way does not differ in substance from the more established term 'spending'. Indeed, the use of the term 'investment' has always been slightly slippery in a fiscal context. This is just one aspect of the problems associated with applying accounting rules developed essentially for the private sector to government finances.

Other fundamental issues arise out of the two reports I have referred to, both of which were issued before the Expert Panel's final report. The Productivity Commission's report has some interesting and valuable ideas. But, despite its broad title, it ends up focusing on a subset of a subset of the users of social services – namely, those people with 'multiple, complex needs and little capacity to access services'. That is, indeed, a worthy cause to take up. It is a group which historically has not been well provided for. The fundamental answers lie in more spending, better training for support staff and, where possible, much better recognition of the 'voice' of the users of the services.

The real issues then are, first, whether that is provided out of new resources, or by reallocation of existing ones. The second issue is how to recognise that 'voice', and how to partner with the users and the wide range of service providers they may be accessing. These are issues which can be made overly complicated.

MSD's *Community Investment Strategy* is, in some ways, a more complex document, but one largely overtaken by the Expert Panel's final report just six months later. (Without wishing to comment too much on the quality of the broth, there do seem to have been a lot of cooks about at the same time.)

Looking at the MSD report from the outside does raise some further basic questions. As the report says, it 'sets out the priority for investment within a "Results Measurement Framework"'. The five 'purchasing' principles are sensible and all can be regarded as nigh universal in their application: better outcomes; better value for money; accountability, transparency and integrity; flexible service design; and 'measure, learn and improve' (though 'assess' might be preferable to 'measure').

It is when the report goes beyond these worthy principles that things become more problematic. Paragraph 11 tells us that 'The best and most important measure of success will be improved results over time for vulnerable people in priority areas such as child maltreatment, youth offending, and family violence.'

The immediate questions that follow from that statement are around how those priority areas are to be measured and over what time span. The latter is especially pertinent for a measurement-based 'investment' approach. Putting aside the question of measurement itself, the question of the payback time is also crucial to any investment decision. Is this to be measured in months, years or decades?

For, by their very nature, programmes addressing social issues of these sorts may take a long time to have significant impacts. They are about changing cultures and often deeply inbuilt attitudes. A good example is sex-education programmes for the young. When these were introduced there was an expectation that, for example, teenage pregnancy, abortion and venereal disease rates would quickly drop. It was more like a generation before the real benefits were realised. This, and even much shorter time-frames, fits uneasily into the new investment approach, whose political success will be, at best, measured in electoral cycles, not decades.

Teenage pregnancy rates, certainly with respect to those pregnancies proceeding to term, are relatively easy to measure. But at least two of the three key result measures for the Community Investment Strategy – child maltreatment and family violence – do not meet that criterion. Both are subject to serious definitional and reporting issues.

We still do not know, for example, whether the large increases in reported family violence incidents over the 1990s and 2000s were due to higher rates of family violence or higher reporting of it, owing to the many public campaigns on the matter and the associated changes in attitudes. Most of us suspect that the latter is the more important factor. Certainly, withdrawal of funding from existing services addressing family violence on the basis of their 'failure' (as measured by the number of reported incidents) would have been absurdly counterproductive.

Yet, if funding is not able to be shifted away from apparently 'failing' services within a reasonable space of time (whatever that may be), then much of the investment approach collapses. Moreover, in some of these services, even if all the data is accurate and internally comparable, this does not address the really tough question of what 'failure' means in terms of, say, repeated family violence.

It is too easy to say that any 'failure' in this sense is 'unacceptable', even though most people would probably say it is. To expect either government or non-government social service providers to achieve 100 per cent 'success' is utterly unrealistic (putting aside, also, what is meant by success). Yet governments will be reluctant to be publicly associated with some estimate of what an acceptable failure rate would look like in this kind of area.

Finally, the commitment in paragraph 33 of the MSD report to reducing the compliance requirements placed on social service providers might have been warmly welcomed were it not for the fact that there is very little sign of this happening and much that points in the opposite direction. Indeed, it seems likely the investment approach will be associated with an increase in those compliance requirements.

THE EXPERT PANEL'S FINAL REPORT

Some of these methodological pitfalls, and others, are to be found in this report, which in many respects presents an extraordinarily ambitious agenda. Its central purpose is no less than 'to ensure that all children and young people are in loving families and communities where they can be safe, strong, connected and able to flourish.'3

It is hard to disagree with such a lofty and emotionally appealing aim. But even the American Declaration of Independence, justifying a full-scale revolution and a whole new political system, only (and wisely) promised the *pursuit* of happiness, not its attainment. And the potential date for achieving such an ideal state as the Expert Panel envisages must be so far into the future that there is no danger of success or failure in that respect having to be measured.

Almost immediately, in fact, this purpose is boiled down to 'reduce the over-representation of Maori and the forward costs of maltreatment and vulnerability for all children by 50 per cent over a generation. This translates to an indicative overall liability reduction of 20 per cent over five years, once the operating model is in place.'

It would perhaps be unkind, but nevertheless necessary, to point out that the targets become less comprehensive the closer they are to the present time. Even then, it is clear from the multiplicity and breadth of the recommendations that the 'new operating model' will not be in place 'for some considerable time' (at least to be measured in years).

The primary thrust of the report is to prioritise a group of children and young people who are 'vulnerable', that is, who meet two or more of four key criteria, a reduction from nine used in the panel's interim report.4

The panel clearly takes the view that Child, Youth and Family has 'failed'. Again, in making that assessment it gives little consideration to what failure in this context means. More seriously, it takes little account of the impact of the current level of funding on the service's performance – its high caseloads, the turnover of its staff, the adequacy of training, the ability to properly resource family group conferences and the ability to form effective partnerships with iwi and other social service providers.

Nor does the panel take account of other easily remediable problems, such as the incapacity to contract and oversee services from other government agencies. Instead, the service has been declared guilty without a real trial and condemned to a kind of living death sentence, in that its current staff and funding have been transferred to the Ministry for Vulnerable Children.

Worse still, the problem of cross-agency cooperation is supposed to be solved by the creation of the new ministry, leaving undefined functions in relation to non-'vulnerable' children in MSD. The panel expects the new ministry to find sufficient 'home for life' caregivers to provide loving homes to cater for a much larger number of children placed in such care (the report clearly promotes the view that too many such children have been left in family/whānau care or placed in institutions).

The report indeed places great faith in professionals to make these decisions accurately, a strange echo of the Children and Young Persons Bill 1987, which was radically amended after the 1987 election, in part because of widespread criticism, particularly from a Māori perspective, on just that point.

In placing such emphasis on supposedly objective criteria for targeting, and on professional infallibility in applying them, the panel is not just ignoring more distant history but also the cautions that ought to be applied to such data. The 'Limitations and Caveats' expressed by the authors of Treasury Analytical Paper 16/01 are worth briefly summarising in that respect.5 They include 'the nature and breadth of the data collected'; the 'population coverage errors, linkage errors and biases present mean that the results are indicative only'; and the estimates of future outcomes and costs 'should be viewed as indicative and not as forecasts of the actual outcomes and costs that will be incurred'.

Given these limitations and caveats the methodology seems too fragile a basis on which to turn upside down much of the current structure and practice, especially since the well-recognised failures laid at the door of CYF can credibly be substantially ascribed to major under-resourcing.

Of course, as the Treasury paper notes, the characteristics that the Expert Panel's final report highlights 'are highly correlated with poorer outcomes as young adults'. They are also highly correlated with general social and economic deprivation or, to use its common term, poverty. As a number of critics have already noted, the report fails to emphasise the broader social context in which much family and personal dysfunction occurs. There are, of course, passing references to 'underlying circumstances' but these are given little weight compared with individual factors.6 No one would claim that dealing with the issues of poverty will solve all associated problems. But neither will focusing on a few key indicators.

Indeed, as Michael O'Brien has noted, Treasury's analysis in the February 2016 paper demonstrates that 'the number of children who experience poor outcomes but do not have the risk factors are [*sic*] greater than the number who have poor outcomes and the risk factors. Second, of those who do have the risk factors, over one-third have none of the poor outcomes.'7

In other words, the number of false negatives exceeds the number of positives while, of the latter, one-third are false positives. Or, to put it another way, the new ministry may be wasting up to one-third of its resources while dealing with less than half the real target population. This concentration of somewhat misplaced effort may achieve some results, but at unknown cost in terms of other needs not being met, including the need to deal with the level of poverty in New Zealand.

At the same time, the approach will carry the risk of stigmatising particular individuals or groups in society. That risk is underlined by MSD's introduction of Individual Client Level Data collection, an idea which is arousing growing protest in the not-for-profit sector in particular. That sector sees itself being turned into an arm of the state on matters with strong privacy implications.

Finally, it is hard to see the new ministry succeeding, much as any of us would wish it to, at least if it tries to implement all of the agenda *Investing in New Zealand's Children and Their Families* envisages. This includes a new technology system, a substantial broadening of the age range of the young people within oversight, replacement of the case management system, whole new purchasing responsibilities, a new child advocacy system, and revision of the principal legislation.

All this is to be carried out on the basis of net new funding by 2019/20 of $103 million on the existing base of $783 million. The rest of the new funding comes from reallocation, though it is not clear whether all of that is required for purchasing services previously funded from the existing host/providers. It seems very unlikely this will be enough. It is even more pertinent to ask how much improvement could have occurred if CYF had received that extra funding and been given the capacity to contract from related service providers such as DHBs.

The reason for spending so much time raising critical questions about the particular application of the investment approach is not (I hope) that I was the minister that carried out the post-1987 election reconstruction of the Bill that became the Children, Young Persons and their Families Act 1989 and also fought a bitter battle in Cabinet to get additional resources to support it. It is rather that the evidence suggests that an excessive adherence to the investment approach and its accompanying methodology has buried the good things that are in the Expert Panel's final report and which should be acted on.

But they should be acted on in digestible pieces, preferably, in many cases, with pilot studies to see what does work in practice. The panel's view is that its operating model can only achieve the required response 'if all the operating model components are complementary, driving towards a common set of objectives, and made in concert'. This is such a big ask that it can only be hoped the statement is largely rhetorical in its intent, as otherwise the model is almost certainly being set up to fail.

GENERAL CONCLUSIONS RELATING TO THE RECENT REPORTS

There are some more general conclusions I wish to draw from looking at these three reports. The first is that the investment approach should be seen as no more than a useful way to organise thinking about government spending. It is not, or at least cannot be, a fundamental change in the whole Budget process. As noted above, simply substituting the word 'spending' for the word 'investment' in much of what has been written does not change the meaning in any significant way.

Rather, the use of the term 'investment' simply serves to emphasise that the spending is being undertaken in the expectation of actually achieving some desirable ends (not exactly a new idea!).

It is to be noted, nonetheless, that the current use of the term in government circles is substantially more restricted in its underlying ambitions than the more commonly used term 'social investment' in discussions elsewhere. For example, in Morel, Palier and Palme's *Towards a Social Investment Welfare State?* the 'social investment approach rests on policies that both invest in human capital development … and that help to make effective use of human capital … while fostering greater social inclusion.'[8]

The implication is that a social democratic investment approach will tend to lay more stress on universality, on things that bind together a common citizenship, and less stress on targeting, which in many instances creates division. The distinction is far from absolute but it is a serious one in terms of perspective, philosophy and results. A recent survey of the use of the term 'vulnerable' in social services and social work literature shows that its use in a narrow sense (as by the Expert Panel) tends to be 'tied to paternalism and individualism', whereas its use in a broader sense 'leads to development of universal, socially transformative programmes'.9

The second conclusion is that the investment approach needs to be tempered by a recognition of the frailty of the data. Apart from the criticism made above, the calculation of the future liability created by vulnerable children depends on a somewhat heroic projection of the probabilities of various forms of anti-social behaviour from the 1978–79 cohort of New Zealand-born children. Small changes in assumptions can easily add or subtract hundreds of millions of dollars to or from those numbers. Even then, it will be no more than a tiny fraction of the total future liability for New Zealand superannuation.

The third conclusion, indicated already, is that such data should not be used to justify root and branch changes, but used more safely to indicate directions for change and possible initiatives to be trialled. The risks of failure in such root and branch change are measured in a lot more than money. Caution is entirely appropriate.

My fourth conclusion, or perhaps a new assertion, is that the investment approach needs to be clearly separated from the issue of short-term fiscal savings. It may well be that, in the long term, investment or spending may reduce costs in a particular area. But that is to be differentiated from targeting spending to that area at the expense of other areas. The 'investment' should stand on its own merits and not lead to 'disinvestment' (that is, cuts) elsewhere unless that can demonstrably be done without damage to other important areas of spending. Hard choices do need to be made sometimes. But there is more than a passing suspicion that investment can become not a lot more than a code word for fiscal tightening.

OTHER PROBLEMS OF LANGUAGE

'Investment' is not the only, or possibly most important, example of language which can be misleading. Another is the terminology around 'customers' and 'clients'. The latter now seems to be edging out the former. But they have the same difficulties. Thus people dependent on working-age benefits are described as 'clients' or 'customers' of Work and Income New Zealand (WINZ).

This is a nonsensical use of language. A customer is somebody who pays somebody else for a service. They usually have the option of going elsewhere for that service and may even be able to bargain over the price. Much power lies with the customer or client (this, after all, is usually argued by the proponents of the market to be one of its most powerful moral justifications).

To attempt to disguise the fact that, in the case of WINZ and a beneficiary, the power relationship is overwhelmingly one way does not fool anybody, least of all the ‘customers’. The ‘customer’ does have ‘rights’, which points to the fact that the appropriate language to use is that of the ‘citizen’. Thinking in terms of citizen-based relationships starts to create a different, more honest, yet strangely more equal framework. It moves relationships away from being essentially around a cash nexus to being those between people with at least nominally equal status in society.

Let me be clear. I am not arguing that there is no utility at all in trying to judge social policy proposals in the light of their capacity to improve social outcomes, which is the underlying rationale for the investment approach. But however useful such an approach may be, it should not be allowed to dominate the analysis. As always, new tools may add much, but old skills and old tools will retain their capacity to deliver both insights and results consistent with whatever a government’s objectives may be. Most important, skills and tools should not be confused with values.

TREASURY AND THE APPLICATION OF THE INVESTMENT APPROACH

If we turn to the agency with the greatest responsibility for applying the investment approach, Treasury, we tend to find a somewhat inconsistent picture emerging. On the one hand it is clear that the approach is now dominating discussion during the annual Budget cycle. On the other, Treasury has for some years been developing and promoting a broader agenda around the concept of a Living Standards Framework.

What this serves to emphasise is that under current Treasury and Cabinet philosophy the investment approach is part of a complex of attitudes and frameworks which include such matters as Budget priority-setting, the Living Standards Framework and other matters. How easily these all fit together and whether they form an indivisible package are debatable.

A Treasury Board briefing in June 2016 noted that the ‘key shift for Treasury [is] broadening our perspectives beyond fiscal impacts and cost control’.[10] Arguably this is not easily made consistent with the investment approach.

The same briefing tries to resolve this by arguing that the first imperative is to achieve a situation where ‘investment priorities [are] set by cross-system impact and risk analysis’. The paper notes that proposals for change are largely driven from within sectors of government. The desired framework would be one where Cabinet asks for investment and review proposals based on advice from officials taking what is called a ‘citizen-impact and fiscal perspective’ in the light of ‘long term fiscal drivers’.

If I understand this somewhat turgid language correctly, this amounts to a process whereby by 2020 (the third year of development of this new annual Budget and Performance cycle) options are analysed on the basis of what is known as return-on-investment analysis, taking into account social impact measures. Treasury further argues that no 'initiatives that [have not been] invited or previously signalled' should be advanced.

The major flaw in this construct is that it attempts the impossible – to take the politics, particularly short-term politics and the exigencies of MMP-style politics, out of the equation. In any case, few Cabinets will be satisfied with just input at the strategic level. And issues arise which inevitably lead to the 'need to be seen to be doing something' (the eight most dangerous words in politics).

The second leg of Treasury's 2020 ambitions is 'Agencies understand, manage and improve [the] impact of baselines, and identify strategic choices for Ministers.' This would be a significant improvement, with or without dependence on the investment approach. The central challenge, as in much else, lies in the fact that it requires broad cross-sectoral approaches, which runs heavily against how New Zealand governments have worked for a very long time – a tradition which was further entrenched by the State Sector Act and the Public Finance Act.

The third leg is that ministers will be 'presented with investable propositions and change proposals'. The aim, again, is that change proposals will consider the 'base settings and levers'. My scepticism on the former aspect (base settings) is profound, since the notion of completely unpicking expenditure areas such as health or education on an annual basis is, in practical terms, an absurdity. Anything like a pure zero-based investment approach is totally impractical, with or without the political dimension added in.

Nevertheless, it is important to recognise the merits of a much stronger focus on a strategic approach; ministers and their officials have to be moved out of their silos and encouraged to take more of a helicopter view of the priorities. The system does need redesigning in order to underpin these objectives. The main actors should be encouraged to take a longer-term view of the challenges and priorities (a view recently argued by Jonathan Boston).

TREASURY'S LIVING STANDARDS FRAMEWORK

To some extent the investment approach is designed to achieve the outcomes fore-shadowed in Treasury's Living Standards Framework. But the framework is in many respects more broadly based and less loaded with hidden preconceptions.

It is configured as a pentagon framing the ultimate objective of policy: higher living standards. The five points of the pentagon are Economic Growth, Sustainability for the Future, Increasing Equality, Social Cohesion and Managing Risk. It is arguably a construct that both actually and potentially is more transformative and better capable of generating consensus support than the investment approach.

One of the reasons for that is that the pentagon allows for a wide range of interpretations and options. The one point where some, including me, would have reservations is the use of the term ‘Economic Growth’ rather than, perhaps, ‘Economic Development’. The more eco-conscious tend to bridle at the first, whereas the second seems to be less provocative to any particular point of view.

But as Treasury’s July 2015 *Introduction to Using the Living Standards Framework* implies, the pentagon of concepts has the ultimate goal of the building of the ‘Four Capitals’: Natural Capital, Financial and Physical Capital, Social Capital and Human Capital.11 The points of the pentagon are there because each of them, in one way or another, can affect, negatively or positively, the Four Capitals.

The guide makes the very important argument that the discussion in relation to the points is about both the trade-offs and synergies. Historically, Treasury has concentrated on the trade-offs. That mirrors its traditional tendency to focus on the risk side of the risk/opportunity equation.

In other words, the Living Standards Framework reinforces two significant shifts in the traditional Treasury approach. The first is to broaden the base of the discussion, to move into new areas which stand alongside the purely financial/fiscal/economic frame of reference. The second is to open up discussion to a much greater emphasis on opportunities and synergies.

This dual shift has a further implication which is more than touched on in a number of recent Treasury documents and which may be controversial to some degree. The commitment to moving from a ‘welfare state’ to a ‘well-being state’ is a potential concern for many on the left (and populist right) of politics if this is seen as a cover for what is loosely called the ‘privatisation’ of social services in particular. That concern is exacerbated by recent very mixed results in that regard (Serco; the less than stellar record of charter schools despite much better resourcing; lower regulatory requirements; and so on).

I think it is important to separate out the two elements – the shift to a well-being state and a citizen-centric focus on the one hand, and ‘privatisation’ on the other.

THE WELL-BEING STATE AND SOCIAL DEMOCRACY

The truth is that the shift to well-being as the guiding perspective, with the emphasis on the needs of the citizen, ought to be welcomed by more progressive elements on the left. The concept of a well-being state does not require any government to abdicate its social responsibilities, cut social spending or introduce harsher regimes for beneficiaries. These are political choices. It seems reasonable, however, to argue that the opposite choices are much more aligned with the concept of a well-being state. And for those on the further left it is worth remembering that it was Karl Marx – not David Ricardo or John Stuart Mill – who, utterly unrealistically, foresaw the 'withering away of the state'.

The other related aspect of this problematic shift in perspective is the explicit recognition that many services are not best delivered by the state. It needs to be said that there is nothing new about this in New Zealand. The long-standing existence of such organisations as St John Ambulance and IHC (now usually referred to as Idea Services in its delivery functions) and many others is testament to that. Nobody in their right mind would suggest, for example, that women's refuges should be run directly by the government. Equally, I would argue nobody in their right mind would expect a women's refuge to have to hand over significant private data to the state in return for funding, since that could well discourage women from using its services.

As demands grow from a wide variety of citizens for a greater say in the control of their own lives, whether it be iwi/hapū, people with disabilities, or many others, so, inevitably, more of the focus of the *delivery* of services will shift to various forms of partnerships. That does not necessitate the state withdrawing, in whole or in part, from the funding of services.

What cannot be avoided, however, is some form of political accountability for how well such services function. One of the least convincing sights is that of a minister trying to wash their hands of responsibility for a poor outcome which is not in their direct control.

Which, therefore, leads us to the thorny issue of how, in partnership arrangements, there is a sufficient level of accountability and assurance of good service delivery. At the basest level this is about keeping the minister's nose clean. More fundamentally it is about whether all these changes amount to what is truly a well-being state, or, instead, an ill-being one, to coin a neologism. The jury is very much out on that at the present time, as there are many grand ideas but little actual performance. It's worth remembering, however, that one of the great lessons of the twentieth century was how easily utopias turned out to be dystopias.

Ensuring accountability brings its own set of major challenges in a partnership/well-being society. We all recognise an almost inevitable tendency to generate high compliance costs, especially in relation to funding applications, reviews of contracts and reporting on contracts. There is a tension also between a need for stable, ongoing relationships (not least in the interests of those receiving the services) and the drive towards more effective delivery, which tends to be taken to imply not merely an occasional need but an imperative to make way for new providers.

These tensions are, in essence, a tension between trust on the one hand and the desire for certainty on the other. Every time there is some 'failure' in the system, particularly one that attracts media attention, ministers will tend to re-weight towards certainty.

The new investment model has the serious capacity to raise costs all round – the cost of creating, collecting and analysing much more data (for both providers and the state), the cost of other forms of compliance and capacity creation, the costs of contracting itself, and the costs of state supervision.

TOWARDS A PARTNERSHIP STATE

A true partnership state would need to move well beyond the traditional concept of a funder–provider split with its emphasis on close specifications of a contract and the associated compliance structures and costs. A vision orientated to well-being can be underpinned by a multiplicity of partnership arrangements between government and citizen groups. To achieve that we need to move mentally and emotionally beyond the funder–provider split model with its accompanying baggage of an essentially unequal employment relationship.

Partnerships with the state can never be truly equal, at least in the great majority of respects. But a true partnership still involves a much closer ongoing relationship than we are accustomed to. It implies the partners working together, encouraging each other, exchanging ideas and experiences, and seeking an ongoing association for mutual benefit. The state will still hold the purse-strings but much else can change.

For example, instead of thinking in terms of monitoring units and form-filling and review at a distance we would need to be thinking in terms of more frequent and informal contact, building relationships based on trust. At the same time potential difficulties in the relationships can be identified early and remedial actions agreed on.

Without such attitudinal changes, the investment approach could well collapse into one of high cost and low trust.

The key word in much of this is flexibility. Rigid bureaucratic mechanisms – however much backed by better data and clearer purposes – will not lead to the kind of citizen-centric revolution that has been envisaged.

Having said that, and with no clear suggestions to make, it might be desirable to consider how some general rules around the contracting-out of service delivery could be written into the State Sector Act and the Public Finance Act. If developed in consultation with the peak organisations for the NGO sector, such rules could go a long way to calming well-founded fears about the current direction of travel.

This should be part of a root and branch review and reform of the twin underpinnings of much of our public administration system: the State Sector Act and the Public Finance Act. Those Acts have created a siloed, poorly communicating, mistrusting bureaucratic structure which is the antithesis of what we need for a true partnership society, a twenty-first-century social democracy.

In such a society, as well as developing better-tailored programmes to suit the needs of individual citizens, and groups of citizens, it is crucial that there are still universal programmes of social (and economic) action that serve to bind us together as citizens of a single nation. While sometimes more expensive (compare universal versus income/asset-tested New Zealand superannuation), these programmes have far lower transaction costs. They need less state intrusion into the lives of the citizenry. There is demonstrably a lower risk of abuse. These are virtues whose contributions cannot be measured by simple algorithms. They nevertheless have value.

In terms of the major outcome so far from the investment approach, that means if we have to have a new ministry it should be the Ministry for Children, not the Ministry for Vulnerable Children, an almost Orwellian concept pregnant with the potential to repeat, in new forms, many of the mistakes of the past.

More generally, at one level nearly all of us will reject the proposition that only those things which can be measured have value. Conversely, not all things which we value can necessarily be measured numerically in any meaningful, objective sense. But carrying that insight through into practice is far harder, especially for an organisation like Treasury, whose very core has been about measuring, assessing and reporting on quantifiable matters, pre-eminently financial ones.

The challenge for social democrats, in particular, is not to simply reject the investment model and its operational outcomes. All too easily those on the left of politics simply reach out for the much overused neoliberal label for any such ideas. Such a reaction becomes a substitute for thinking. Instead, there is a need to develop an alternative evidence-based model that draws on the many rich traditions which address the nature of the good society. A good place to begin would be to consider what true partnerships between the state and the citizenry might look like.

References

Aotearoa New Zealand Social Work, 28, 2 (2016)

Boston, Jonathan, *Safeguarding the Future: Governing in an Uncertain World*, Bridget Williams Books, Wellington, 2017

Cullen, Michael J., *The Statistical Movement in Early Victorian Britain: The Foundations of Empirical Social Research*, Harvester Press, Brighton, 1975 (republished 2016)

Ministry of Social Development, *Community Investment Strategy*, Wellington, June 2015

Modernising Child, Youth and Family Expert Panel, *Interim Report*, Wellington, 31 July 2015

Modernising Child, Youth and Family Expert Panel, *Investing in New Zealand's Children and their Families: Final Report*, Wellington, December 2015 (published April 2016)

Morel, N., B. Palier and J. Palme (eds), *Towards a Social Investment Welfare State?:*

Ideas, Policies and Challenges, Policy Press, Bristol, 2012
New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015
O'Brien, Mike, 'The Triplets, Investments in Outcomes for the Vulnerable: Reshaping Social Services for (Some) New Zealand Children', *Aotearoa New Zealand Social Work*, 28, 2 (2016)
Sawyers, Lynda, 'Finally Accountable?: Social Work and the Community Investment Strategy', *Aotearoa New Zealand Social Work*, 28, 2 (2016)
State Services Commission, *Better Public Services Advisory Group Report*, Wellington, 2016
Treasury, *An Introduction to Using the Living Standards Framework*, Wellington, July 2015
Treasury, *Characteristics of Children at Greater Risk of Poor Outcomes as Adults*, New Zealand Treasury Analytical Paper 16/01, prepared by the Analytics and Insights team, Wellington, February 2016
Treasury, *Briefing to the Treasury Board*, Wellington, June 2016, http://www.treasury.govt.nz/downloads/pdfs/investment-approach/tsy-investmentapproach-jun16.pdf

Notes

1 Modernising Child, Youth and Family Expert Panel, *Investing in New Zealand's Children and their Families: Final Report*, Wellington, December 2015 (published April 2016).
2 New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015; and Ministry of Social Development, *Community Investment Strategy*, Wellington, June 2015.
3 Modernising Child, Youth and Family Expert Panel, *Investing in New Zealand's Children and their Families*, p.56.
4 Modernising Child, Youth and Family Expert Panel, *Interim Report*, Wellington, 31 July 2015.
5 Treasury, *Characteristics of Children at Greater Risk of Poor Outcomes as Adults*, New Zealand Treasury Analytical Paper 16/01, prepared by the Analytics and Insights team, Wellington, February 2016.
6 Modernising Child, Youth and Family Expert Panel, *Investing in New Zealand's Children and their Families*, p.32.
7 Mike O'Brien, 'The Triplets, Investments in Outcomes for the Vulnerable: Reshaping Social Services for (Some) New Zealand Children', *Aotearoa New Zealand Social Work*, 28, 2 (2016), p.17.
8 N. Morel, B. Palier and J. Palme (eds), *Towards a Social Investment Welfare State?: Ideas, Policies and Challenges*, Policy Press, Bristol, 2012.
9 K. Brown, *Vulnerability and Young People* (2015), quoted by O'Brien, 'The Triplets, Investments in Outcomes for the Vulnerable'.

10 Treasury, *Briefing to the Treasury Board*, Wellington, June 2016.

11 Treasury, *An Introduction to Using the Living Standards Framework*, Wellington, July 2015.

Chapter 18

Corked wine in a cracked bottle

The long-term fiscal redistribution model and recent reforms in the New Zealand welfare state

Simon Chapple

INTRODUCTION

This chapter examines the introduction and operation of the 'investment approach' in the New Zealand welfare system, in the context of recent welfare reforms.[1] It focuses on those on a working-age welfare benefit, and eschews the important and related issue of vulnerable children.[2]

The term 'investment approach' is used here in speech marks. The reason for doing so is that the use of investment terminology is, from an economic perspective, seriously misleading as a description of the new welfare model. A previous article has argued that the approach, based on actuarially assessing the current and future fiscal costs of those in the welfare system in the past year, is not about the efficient intertemporal allocation of resources to people in or at risk of being in the welfare system, which is the way that welfare economics thinks about investment.[3] Rather, given the constraint of existing working-age welfare benefit rates, it makes spending decisions designed to redistribute income intertemporally from net beneficiaries to net taxpayers.

In a version of the classic trickle-down hypothesis, the 'investment approach' posits that this distributional shift from the poorest to the richer members of society creates behavioural responses which benefit net beneficiaries. There was little hard empirical evidence for this trickle-down proposition when the model was introduced. None has since been presented. Most damningly, there is no constituency within government proposing that the proposition be empirically tested. Consequently, the 'investment approach' should more accurately be described as a long-term fiscal redistribution model.

The critical approach taken in this chapter, as in previous work, draws directly on perspectives of mainstream public economics and the labour economics of the evaluation of active labour market programmes. These bodies of intellectual endeavour have been in possession of a well-established and coherent model – social cost-benefit analysis – which can more truly be described as an investment model, seeking to allocate resources efficiently in the welfare sector, as in other sectors of government.4 As economists trained in mainstream public economics have long known, however, efficiency in the allocation of scarce resources is not the only important criterion in making investment decisions. Resources may also be allocated for reasons of equity, which itself has multiple possible conceptions.

The social cost-benefit approach and the fiscal redistribution model are contrasted in Table 18.1. They converge only insofar as they intertemporally discount monetary (or monetised, in the case of some social cost-benefit analysis) flows over time to arrive at calculations of present value.

In terms of the depth of the intellectual base for each approach and how well-tested each is as a decision-making tool, there is no serious comparison to be made. The 'investment approach' is a pygmy. The idea of actuarially assessing welfare liability to aid policy decisions dates to 2011 in New Zealand – apparently a world first – when it was cooked up in a report by the Welfare Working Group. It has not been subject to years of academic scrutiny or debate. On the other hand, cost-benefit analysis originates in the nineteenth century with French public sector economist Jules Dupuit, whose ideas were developed by British neoclassical economists Alfred Marshall and A. C. Pigou in the early twentieth century. Cost-benefit analysis, deriving primarily from Marshall and Pigou, forms the foundation of an extensive and detailed international body of public economics literature from the 1950s onwards. Its strengths and limitations as a decision-making tool are academically well-tested, well-taught and well-understood, and have been explored in public policy over decades. The notion that these two approaches stand side by side, or are somehow complementary, as some have suggested, is intellectually untenable.

The chapter begins by summarising the key welfare reforms in New Zealand over the period 2010 to 2016, of which the introduction and acceptance of the 'investment approach' is part. It then critically examines strategic explanations given by government officials and ministers about what the 'investment approach' does.

Following this consideration, it addresses how the approach was incorporated into the former National-led government's overall strategic plan and performance targets. The focus then shifts to the empirical evidence. First, consideration is given to whether the reforms have reduced the number of beneficiaries and whether there is evidence of a stronger focus on long-term beneficiaries. Empirical attention then shifts to what is happening to benefit exit rates, especially into employment, pre- and post-reform.

REFORMS TO THE WELFARE SYSTEM, 2010–16

In 2010, the National-led coalition government embarked on an ambitious programme of welfare reform – the largest such programme since major cuts to welfare benefit rates in the early 1990s. The first phase was the Future Focus initiative. From late September 2010, unemployment beneficiaries were required to reapply for their benefit, as well as complete a new work assessment interview, after every 52 weeks continuously on benefit. Forty-three thousand sole parent beneficiaries with a youngest child six or older were newly subject to a part-time work test. Before this, there was only a full-time work test imposed when the youngest child reached 18. Income sanctions were introduced for people who failed the work test, a tighter reassessment process was put in place for the sickness benefit, and a new requirement to be in employment, education or training was created for those under 18 on an independent youth benefit.5 The higher compliance costs of this and subsequent reforms – shoe leather, time used up and greater stress – on those who were already compliant have not been calculated.

	Social cost-benefit analysis	The fiscal redistribution model
Intellectual origins	Neoclassical public economics	Fiscal accountancy
Outcome to optimise	Efficiency in the use of scarce societal resources at the margin	Intertemporal income redistribution to net taxpayers from net beneficiaries within the constraints of the current tax/benefit rules
Treatment of positive employment outcomes	Valued at gross dollar earnings, or more broadly all net personal and family well-being gains resulting from better employment outcomes	Not valued
Treatment of economic efficiency	Explicitly efficiency focussed	Implicitly claims that the resulting income redistribution from net beneficiaries to net taxpayers results in significant trickle-down efficiency gains, especially accruing to otherwise long-term welfare beneficiaries
Treatment of marginal utility of income	Can value income gains to poorer people above those to richer people to re-	Income payments to beneficiaries are valued at zero, while income losses to net taxpayers are valued dollar for dollar. In other words, the welfare liability is as-

	flect a declining marginal utility of income	sumed to have had no corresponding asset, begging the question of why the government holds any welfare liability
Treatment of distributional issues	Explicit information provided to investment decision makers about distributional winners and losers, or explicit distributional weights	Tacit value judgment that transfer income accruing to net taxpayers is valued above transfer income accruing to net beneficiaries. Allows no additional quantitative or qualitative consideration of distributional issues beyond consideration of these two groups
Treatment of welfare benefits	Re-distributional. Costed at tax deadweight	Treated as a dollar-for-dollar cost. No tax deadweight
Treatment of costs	At opportunity cost, including tax deadweight	At accounting cost. No tax deadweight
Treatment of flows over time	Intertemporal discounting to a present value	Intertemporal discounting to a present value

Table 18.1: Contrasting social cost-benefit analysis and the fiscal redistribution model in the welfare system as investment models. Source: The author.

As part of the Future Focus reforms, a Welfare Working Group (WWG) was initiated to review the benefit system. Its final report, entitled *Reducing Long-Term Benefit Dependency*, was published in February 2011.6 Its major theme was the need to take a long-term view of the social, economic and fiscal costs of benefit dependency. The report recommended adopting an actuarial approach to measuring the long-term fiscal liability associated with the benefit system. This measure would then be used as a performance management and resource allocation tool.

In practice, the liability is calculated by forecasting future benefit payments up to age 65 for all working-age people who have received a benefit at any time over the year before valuation. These payments are then discounted back to the valuation date, using risk-free interest rates. Future benefit rate indexation, the current and future cost of employment services, and administrative costs are also included in the liability measure.7

The Welfare Working Group identified the main policy problem as 'long-term welfare dependency', the title of its report. It did not address the broader social and economic circumstances of which long-term welfare dependency may simply be a symptom. An apt metaphor here may be conceptualising long-term hospitalisation as a policy problem, rather than in terms of the health conditions that led to it. This framing of the issue in terms of what may be a symptom rather than a cause has had a major impact on post-2011 strategic considerations.

The Welfare Working Group acknowledged that, along with long-term fiscal costs, being on a benefit is correlated with considerable social and economic costs to the people who find themselves in this state.8 However, despite this acknowledgement, the group put no effort into measuring these non-fiscal costs. Furthermore, it made no recommendations to work on quantifying them in the future. Nor did it make any effort to consider or set up processes to examine the extent to which any of these social and economic costs are ameliorated when a person shifts off a benefit because of policy treatments. Again, picking up the hospitalisation metaphor, the model arising out of the group's report focuses on getting people out of hospital (or stopping them getting in). It is uninterested in measuring whether people's health improves once they are out (or when they are prevented from getting in). Any hospital exit (or entry deterred) is a win.

There are three major logical flaws in the report. These flaws explain much of the lack of ongoing logical rigour in government strategic explanations of the 'investment approach'. The first flaw is the notion that long-term fiscal liability is the best measure of long-term welfare dependence. In fact, the best measure of long-term welfare dependence is exactly that – the proportion of people who are currently on a long-term spell on a benefit. The second is the presumption that policy-induced reductions in long-term fiscal liability are synonymous with employment gains.9 Contrary to the group's suggestions, (1) employment gains are entirely possible while people remain on a working-age benefit (and/or in receipt of an in-work tax credit – from an economists' perspective, tax credits are just another transfer, conceptually identical to welfare benefits), and (2) many exits from working-age welfare benefits are not into employment. The third flaw is the belief that the main way to monitor and evaluate the welfare system is via a unitary performance measure – the impact of policy on the long-term fiscal liability.10 This fiscally focused recommendation ignores the possibility of associated social and economic costs for beneficiaries which may not necessarily be ameliorated by policies that shift them off benefits.

In November 2011 the government announced that this long-term fiscal liability focus, or 'investment approach', would underpin its future welfare reform programme. In addition, post-2011 reform has included merging benefit categories, significantly extending work tests in several steps, introducing new work preparation and other obligations, and funding a more active approach to helping people who need more assistance to find work. A key tool in managing the benefit system has been an actuarial valuation and reporting framework to provide various measures of long-term fiscal liability.

From May 2012, sickness benefit monitoring was tightened further. Beneficiaries in continuous receipt of a sickness benefit (as it was then called) for 52 weeks were required to attend a reassessment interview. New clients were required to undergo an additional medical assessment eight weeks after the initial benefit grant, and were shifted to regular reassessments every 13 weeks thereafter. Anyone with a medical certificate indicating a capability to work between 15 and 29 hours weekly had a new part-time work test.

From October 2012 a new work-focused case management system was introduced with ‘more of the spend on services and interventions … directed towards activities such as employment assistance and providing services to people appropriate to their circumstances, with increased numbers of case managers working one-to-one with clients’.[11]

From July 2013, the system was simplified to three main benefit types – Jobseeker Support (127,000 people in June 2013), Sole Parent Support (82,900) and the Supported Living Payment (91,900). At the same time, people on a sole parent or related benefit with a youngest child over 14 had their work test shift from a part- to a full-time work requirement, and part-time work expectations were extended for sole parents with a youngest child aged five.

The last tranche of welfare reforms was introduced from April 2016, as part of a Child Hardship Package in the 2015 Budget. For sole parents, part-time work obligations were imposed on those whose youngest child was three (as opposed to five before), and the part-time work obligations were increased from 15 to 20 hours weekly. Sole parents also had a new obligation to reapply for their benefit annually, matching that of Jobseeker Support.

Application of the ‘investment approach’ thus needs to be considered in a broad context of significant systemic changes likely to have been pushing welfare beneficiaries off benefit and deterring entry. Thus, in examining changes since 2010, it is likely to be exceedingly difficult to attribute them to the ‘investment approach’ in isolation.

STRATEGIC EXPLANATIONS OF THE MODEL BY MINISTERS AND OFFICIALS

Since the introduction of the ‘investment approach’ there have been ministerial statements and commentary by officials that have described its strategic functioning. It is worthwhile examining these public statements to get an idea of the extent to which the fundamental flaws of the initial WWG report have been systemically perpetuated.

In 2011, the then Minister of Social Development, Paula Bennett, stated that the purpose of an investment approach is ‘to make the long-term costs transparent and to guide investments to improving employment outcomes and reducing long-term benefit dependency’.[12] At the same time, she acknowledged the overriding importance of social costs, as opposed to fiscal costs, for those in receipt of a benefit long-term: ‘It is the accompanying social costs that we see alongside the financial costs that are the real concern.’[13] Bennett’s is not a good description of what the system does, as the sole transparent cost has been a fiscal one, not the social and economic ones. If employment gains are the aim, and the social costs of not having employment are the real concern, where is the programme to measure employment gains and reductions in social cost when people exit benefits due to policy change?

Since the Welfare Working Group report in 2011, the Ministry of Social Development (MSD) has written two briefings to incoming social development ministers.[14] The purpose of such briefing documents is to set out the ministry's own – as opposed to the minister's or the government's – strategic view of the big policy issues and offer free and frank advice to an incoming minister. One would therefore expect the documents to be free of ambiguity and a model of clarity about what the 'investment approach' does and doesn't do. One might also see them as good opportunities to state the strategic importance of measuring the generally acknowledged but unmeasured social and economic costs facing people on benefits, and addressing whether those costs are ameliorated when policy treatments shift people off a benefit. But the free and frank opportunity was unfortunately not taken up by the ministry.

In its 2014 briefing, in relation to the 'investment approach' MSD makes the problematic claim that it is using 'a people-centred operating model' in the welfare system.[15] Strategically conceptualising and managing New Zealanders in need of income support as a 'liability' is not obviously people-centred. Additionally, a model of the welfare system that systemically values the social and economic costs experienced by people on welfare at zero is not especially people-centred either.

The same MSD briefing states that adopting the 'investment approach' puts 'a stronger focus on those most at risk of becoming welfare dependent and who would benefit from intensive training or employment support'. It argues that the actuarial valuation of the estimated long-term liability 'allows better decisions to be made on where and who to focus on for the greatest return'.[16]

Consistent with the initial Welfare Working Group error, MSD axiomatically equates policy-induced long-term exits from welfare with gains in employment to the beneficiary. However, beneficiaries may – and do – exit the benefit system for reasons other than work. Indeed, the ministry collects information on these causes of benefit cancellations – only a minority of which occur because of employment gains. Furthermore, even when people exit into employment, they may lose that initial employment and not return to the benefit system. From a social cost-benefit investment perspective, all employment is not created equal. Some jobs pay more than others. Other things being equal, more investment should rationally go into finding these better jobs. Some jobs have hours, commutes and other conditions which are better suited than others to mental and physical health, family life and children. Rational investment to generate the 'greatest return' would push in the direction of investing more in these sorts of jobs. The 'investment approach' does not take these dimensions into account.

Since 2013, MSD has also regularly published annual reports by its actuarial staff on the benefit system. These reports take it for granted that the system's performance can be sufficiently summarised using a single monetary metric – the long-term fiscal liability. They also take it for granted that resources can be efficiently allocated via use of this metric, and that benefit exits equate to employment gains.[17] The equation of policy-induced benefit exit with employment gains is tacit in a great deal of the literature on the 'investment approach', but is well put by Ernst and Young:[18]

> The investment approach implemented for the Work and Income model used an actuarial model that was benefits based. The relationship between the target outcome of employment and the payment of benefits were closely aligned.

The lack of clarity among ministers and MSD officials over what the approach does in the welfare system extended into other arms of government. For example, Treasury summarises it thus:[19]

> The investment approach looks to identify welfare recipients who are most likely to benefit from being helped back into the workforce because they are at higher risk of remaining on a benefit in the long term. Once identified, those recipients receive more support.

But in practice of course the approach does not identify welfare beneficiaries 'who are most likely to benefit from being helped back into the workforce'. Rather, it identifies interventions having the biggest net fiscal redistribution.

In a 2015 speech to Treasury the then Minister of Finance (and subsequent Prime Minister), Bill English, again tacitly conflated the fiscal model with the well-being of welfare beneficiaries:

> For example, the investment approach to welfare means we can now look out 20 or 30 years and model the costs of dysfunction, and the benefits of intervention, for particular communities and populations.[20]

In the 'now' to which English refers, all that's available when looking out 20 or 30 years to measure the costs of dysfunction and the benefits of intervention is the fiscal liability measure. English then addressed some of the challenges around the investment approach:

> Fiscal costs have been used in welfare as a proxy for the economic and social benefits of getting people back into employment. But we also measure broader results – capturing the wider social outcomes that we ultimately

> care about…. That's not to say potential fiscal savings aren't an important consideration in their own right, because they are. But measuring the return on investment in social services makes sense whether it is fiscal costs or wider social benefits that are being considered.21

But contrary to what English implies, the government does not currently 'measure broader results' in working-age welfare space.22 Additionally, there is no coherent government programme to measure the social outcomes that society ultimately cares about in analysing the impact of welfare reforms, nor any plan to make them central to the social investment decision-making process. And it is untrue, at least in an efficiency sense, to claim – as English does – that fiscal savings are an important consideration *in their own right.* In fact, in an efficiency sense they are important only when taken *in conjunction*, and appropriately weighted, with all other relevant costs and benefits. *In its own right*, fiscal liability is accurately analysed as distributional, in terms of an intertemporal redistribution of income *between the poorest New Zealanders and the better-off net taxpayers*. These distributional issues are moral, not technical, but they are being presented as technical.

English's political commitment, in terms of the 'investment approach', is to smaller government, which for him is synonymous with better outcomes for people:

> When government does it job well and intervenes effectively it enables vulnerable people to increase their resilience and social mobility, and it helps them make positive changes to their lives. It also reduces the demand for public services in the medium to long term, and therefore saves the taxpayers money. What works for the community works for the government's books.23

The logical problem for English is that his belief that approaches that address smaller government cause better social outcomes is not, in fact, inevitably true. The issue is an empirical matter, not an ideological one. Empirical matters, surely, should be addressed empirically, not left as a matter of ideological belief.

A representative indication of where officials are at regarding social investment came in a 2015 Cabinet paper recommending the creation of a Social Investment Unit to coordinate the 'investment approach' across government.24 The paper kicks off promisingly by claiming that 'Social investment is about improving the lives of New Zealanders by applying rigorous and evidence-based investment practices.'25 However, what is involved in 'improving the lives of New Zealanders' remains elusive. The only explicit measurable outcome that the SIU is working towards remains clearly fiscal:

> The SIU has the potential to provide government with the ability to look across the social sector, and examine particular population groups from a life-course perspective. This will enable a greater focus on the longer-term drivers of fiscal costs, by identifying the connection between some of those cost pressures and particular at-risk groups.26

It is surely telling that this joined-up fiscal approach is characterised in the Cabinet paper as an ideal '*full* cross-sector analysis' (emphasis added) which will 'take some time … to mature' and towards which the SIU should be strategically working.27 Relatedly, the unit is given a central role in 'ensuring consistency in [fiscal] valuation activity by social sector agencies', which will require further heavy investment in actuarial resources, again suggesting a central intertemporal fiscal focus.

Equally telling, there is no recommendation of a central role for the SIU in building a coherent picture of non-fiscal outcomes of government investment – the economic and social outcomes of social investment – and making them central to the cross-sectoral investment process. In other words, between the Welfare Working Group and the formation of the SIU – six whole years – there was almost no progress towards the incorporation into the investment calculus of non-fiscal factors, which everyone at least pays lip service to as important.

The Social Investment Unit was replaced in mid-2017 by the Social Investment Agency, whose first publication, on social housing – not directly related to working-age welfare performance – was tellingly entitled 'Measuring the fiscal impact of social housing services'.28 Promisingly, the report concludes that future work needs to focus on measuring the economic and social returns of social housing.29 A conclusion obvious to many in 2011 has finally been acknowledged – but not yet put into practice – in mid-2017. However, the notion that such approaches 'complement fiscal insights' elevates the fiscal side far beyond its due (and relatively modest) role in making investment decisions. Surely outcomes for people invested in are central, not simply a useful complement to a fiscal measure. And it is still unclear from this publication whether the agency has yet internalised the distinction between valuing an economic cost and an income transfer.

The final piece of evidence on official views comes in the government (Treasury's) responses to the Productivity Commission's report on more effective social services:

> The government's view is that the welfare future liability model provides an adequate proxy for the outcomes that the government is trying to achieve in welfare. Where a fiscal liability is likely to be a less reliable proxy for outcomes then the government will take into account wider costs and benefits.30

In other words, a strong proxy relationship between future liability changes induced by policy changes and people's well-being in the working-age welfare system is taken to be axiomatically true, on the basis of no empirical evidence. One might accept this axiom as a starting point, and then proceed to empirically test the central assumption. But empirical testing is not a strategy with which Treasury seeks to engage.

The strong emphasis on fiscal outcomes and the payment of lip-service to non-fiscal outcomes signifies (1) a conscious ideological decision to frame long-term fiscal redistribution as helping the disadvantaged, which obviates a need to acknowledge and examine the classic efficiency–equity policy trade-offs which public economics believes are ubiquitous, and/or (2) cognitive bias, with politicians and officials having made – and being reluctant to own – a poor set of policy and resource allocation decisions from the 2011 Welfare Working Group onwards.

BETTER PUBLIC SERVICES GOALS AND THE 'INVESTMENT APPROACH'

For the five years from 2013 to 2018, the former government set ten Better Public Services (BPS) goals. The first is pertinent to discussions of welfare reform and the 'investment approach'. The goal is to 'reduce the number of people who have been on a working-age benefit for more than 12 months'.[31] This goal, which is still current, is consistent with the Welfare Working Group's brief to address long-term benefit dependence.

It is noteworthy that the BPS goal is about reducing benefit dependence, rather than the larger goal of raising the well-being of those who are long-term-benefit-dependent or at risk of ending up in such a state. In other words, the goal has a measurable focus on welfare benefits, rather than on the well-being of beneficiaries once they have been managed out of the system. Despite engaging rhetoric about social investment policy being people-focused, it is and can be so only insofar as treating people as such is an input into the goal of reducing long-term benefit dependence.

However, putting aside these criticisms, the goal implies a clear target. A quantitative target was set in July 2012. The aim was to reduce the stock of people continuously receiving Jobseeker Support for more than 12 months by 30 per cent, from 78,000 in April 2012 to 55,000 by June 2017.[32] This measure possesses the obvious limitation, in terms of the BPS target, that it does not count long-term beneficiaries in other working-age benefit categories.

While the goal – 'Reduce the number of people who have been on a working-age benefit for more than 12 months' – didn't change, its jobseeker performance target was abolished in June 2015 and subsequently replaced with two new performance targets.

The first new target was to reduce *all* working-age beneficiary numbers by 75,000 from 295,000 in June 2014 to 220,000 in June 2018. By creating a target relating to all beneficiaries, irrespective of their benefit duration, the core duration dimension of the BPS goal and the connection with the Welfare Working Group – people on the benefit 12 months or more – disappeared. Achievement of the target is looking unlikely, as the number of working-age beneficiaries as at March 2017 stood at 278,000 – only 17,000 under the figure from 11 quarters previously. There are currently five more quarters available to MSD to reduce numbers by a further 58,000.

The second target introduced in 2015 was to achieve an accumulated (and wonderfully named) 'actuarial release' of $13 billion by June 2018 from 2015. An actuarial release is defined as:

> an estimate of the change in long-term liability of the benefit system resulting from changes in the number of beneficiaries and their likelihood of long-term benefit receipt. The measure attempts to isolate the impact of collective government activity on beneficiary numbers.[33]

In other words, actuarial release is the raw change in liability not due to revisions and changes in assumptions. It includes changes in liability due to changes in demographics, social conditions and the labour market and broader economy. The Ministry of Social Development actuaries claim that 'Actuarial release is intended to broadly represent the government's impact on the benefit system',[34] but given that demographic change, social change and labour market performance are all due to circumstances outside government control, this claim appears naive. Again, it looks unlikely that this target will be achieved, as the figure was $2.3 billion in 2014–15 and is forecast to be only $6.1 billion by 2017–18, well short of the $13 billion target.[35]

According to MSD actuaries, managing the new twin performance targets for assessing achievement of the BPS goal creates serious challenges. It is suggested that the two targets may conflict with one another:

> A numerical target may drive a focus on supporting those closest to the labour market. However, a focus on the liability requires support to be directed towards those with greatest barriers to employment.[36]

Again, this paragraph reveals that the MSD actuaries don't appear to fully grasp the incentives underlying their redistributive model. A focus on liability causes resources to be directed to those people with the largest potential *net* reduction in liability. The actual reduction depends not only on fiscal costs associated with a person's likely future benefit duration, but also on how much needs to be spent to re-direct them from this course. Those with significant employment barriers may have a larger liability attached to them, but they are also likely to require a larger spend to shift them off benefit. Thus, MSD actuaries to the contrary, there is no inherent guarantee in the liability model favouring investment in the hard-to-place or the long-termers.

Because of the two conflicting targets, the actuaries recommend that to 'ensure focus is directed towards reducing long-term benefit dependency, ensure priority is given to the actuarial release target'.37

There is a considerable puzzle both in these comments by the actuaries and in the current BPS model. Long-term benefit dependency – the BPS goal – is directly measurable as a target in virtually real time (weekly) and at virtually zero cost (a little one-off programming time) from MSD's administrative data set. Why not then have it as the performance target? Why chose actuarial release as the measure when it is available (1) only annually, (2) with a considerable production lag (at the time of writing, the latest valuation is almost two years old), (3) costs tens of millions of dollars' worth of internal and external actuarial and other resources to produce and, most tellingly, (4) is an imperfectly measured proxy bearing an uncertain and unexamined relationship to the BPS goal, which can be directly and cheaply measured? One can only conclude that either there is a significant failure to apply basic logical principles, or that the true intended target is in fact an intertemporal fiscal one, not helping long term-beneficiaries.

INCONSISTENCY WITH THE SOCIAL SECURITY ACT 1964

The 'investment approach' to managing the welfare system, and indeed the BPS goal as well, are seriously at odds with the Social Security Act 1964, the law that primarily governs the operations of MSD. The Act has as its purpose a very strong focus on two dimensions: income maintenance and helping people into paid employment. There is nothing in it about a focus of getting people off a benefit or reducing the future fiscal liability. For example, its stated purpose is:

(a) to enable the provision of financial and other support as appropriate –

(i) to help people to support themselves and their dependents while not in paid employment; and

(ii) to help people to find or retain paid employment.

The Act further states that:

> Every person exercising or performing a function, duty or power under this Act must have regard to the following general principles:
>
> (a) work in paid employment offers the best opportunity for people to achieve social and economic well-being;

(b) the priority for people of working age should be to find and retain work.

The inconsistencies between the Act's purpose and the fiscal redistribution model are obvious. The latter favours incentives for getting people off a main benefit without any special regard to their employment. It is clear from a long-standing body of research which has matched benefit and tax data that benefit exits do not equate to employment gains. In fact, this body of work, which has been available for more than a decade, shows that typically only a minority of benefit exits occur because people obtain work.38 Equally, administrative data on reasons for benefit exit collected by MSD show similar patterns (see Table 18.2). Finally, it has always been possible to be in employment, even at substantial levels, while still on a main benefit.

Benefit duration	Less than or equal to one year	More than one year
Obtained work	38.6%	27.2%
Transferred to another benefit	19.6%	33.3%
52-week reapplication/annual review	1.5%	4.9%
Full-time student	10.2%	3.5%
No further medical coverage provided	5.6%	3.4%
Left New Zealand	2.9%	3.2%
Failed obligations/to re-comply	3.1%	2.6%
Imprisonment	1.5%	1.9%
Excess income	1.5%	1.3%
Other	15.6%	18.7%
Total	100.0%	100.0%

Table 18.2: Most working-age beneficiaries do not leave the benefit for work, 2004–16 data on reasons for benefit cancellations. Note: Due to rounding of components, columns may not sum exactly to 100. Source: The author.

POST-REFORM PATTERNS OF DECLINE IN BENEFIT RECEIPT

The proportion of the working-age population receiving benefits in the short and long term is shown in Figure 18.1. In both cases, the proportion in 2016 was around the historical lows (i.e., since the 1980s) experienced during 2008. Unsurprisingly, there seems to be a strong relationship between the state of labour market slack and the rate of benefit receipt. Despite the unemployment rate being two percentage points higher currently, rates of receipt in 2016 for both short- and long-term benefit durations are like those in 2008. This concurrence suggests that benefit receipt has declined post-reform, given the level of unemployment – a perspective confirmed by the slightly more sophisticated regression examination in Table 18.2. This finding is also consistent with actuarial assessments which show lower long-term fiscal liability.39

The aim of welfare reform, according to the Welfare Working Group, was to create a system which would place more emphasis on reducing long-term welfare dependence (as has been shown above, officials have continued to claim that the 'investment approach' puts a stronger focus on the hard-to-place long-termers). It is thus appropriate to consider the success of the reform process in terms of long-term welfare beneficiaries, which was also the original BPS goal discussed above. The intervention logic suggests that it should lead to a decline in the total *proportion* of beneficiaries who are long-term. To consider success on these terms, long-termers are defined here as people who have been continuously on any working-age benefit for more than a year, which is how MSD defines long-term.

Figure 18.3 shows the primary outcome variable – the proportion of long-term beneficiaries in total working-age numbers over the longest period for which MSD has been able to supply these data. The proportion has varied considerably over time, from a low of 60 per cent to a high of 76 per cent. There is a clear relationship between the state of the aggregate labour market as measured by Household Labour Force Survey unemployment and the proportion of long-termers. As the unemployment rate declined between 1997 and late 2008 there was a considerable rise in that proportion. This rise was most probably because short-termers were in a more work-ready situation, allowing them to take advantage of the improving labour market. Following the onset of the Global Financial Crisis in late 2008 there was a sharp fall in the proportion of long-termers, as more people flowed into the welfare system due to the weakening labour market. Thereafter, as the economy has recovered from the crisis, the proportion has again risen.

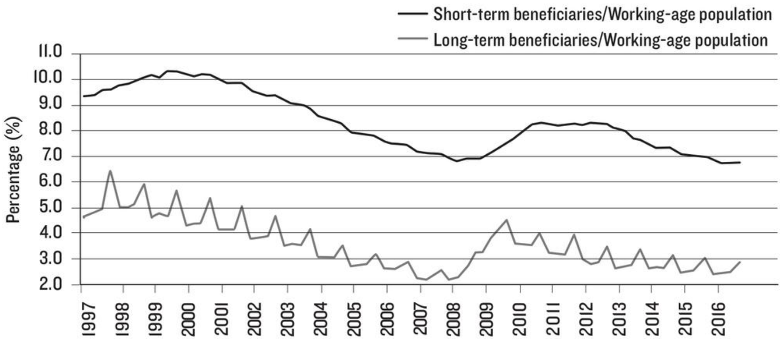


Figure 18.1: Working-age benefit receipt rates by short- and long-term duration. Source: The author.

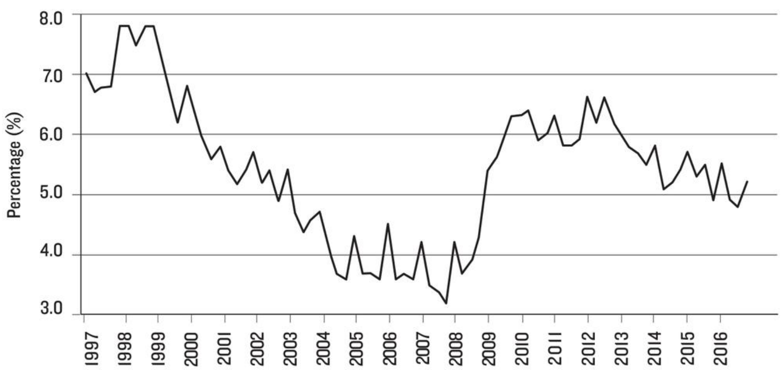


Figure 18.2: The state of the labour market (HLFS unemployment rate). Source: The author.

If 2012 is again chosen as an obvious breakpoint – this was when the new benefit categories were implemented with a much wider work-test and when future-focused case management concentrating on long-term beneficiaries was introduced – the average proportion of long-termers was higher at 73 per cent from the last quarter of 2012 onwards than its prior level of 70 per cent. This average comparison suggests that the reforms were markedly unsuccessful in focusing on the needs of long-termers. However, this conclusion may be confounded by changes in the aggregate labour market which, as shown above, seem to have had a considerable effect on the proportion of long-termers. Table 18.2 also shows the effect of dummy testing for the unemployment rate. Dummy testing for a shift in behaviour in 2012 shows the same conclusion as the simple comparison of averages – the system is now generating a higher, not lower, proportion of long-term welfare beneficiaries. While there is evidence that the overall number of beneficiaries is lower post-reform, there is no empirical evidence that the introduction of the 'investment approach' (in its 2012 variation) and other welfare reforms has resulted in a successful stronger relative focus on long-termers.

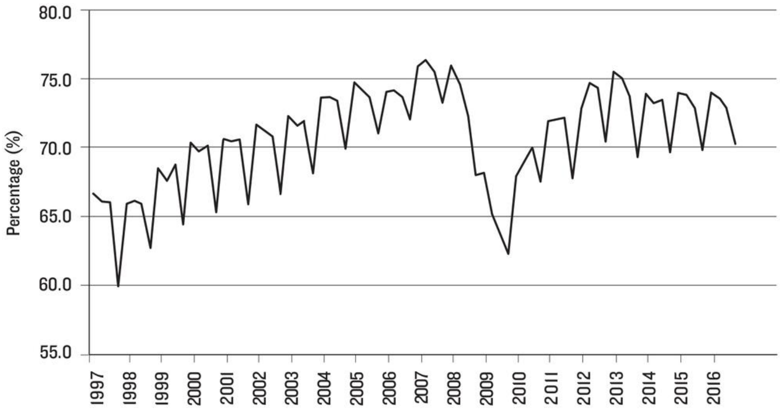


Figure 18.3: The share of long-term beneficiaries in total working-age welfare benefits. Source: The author.

BENEFIT ENTRY AND EXIT RATES BEFORE AND AFTER REFORM

Statistics New Zealand's linked employer-employee data (LEED) can be used to examine benefit entry and exit rates and beneficiary employment and non-employment destinations over the pre- and post-reform period.40 All data are based on the tax (March) year. The income transition tables are based on classifying taxpayers according to their main source of income, defined as the source of income which gave the taxpayer their highest cumulative income in that tax year.41 Thus the income states, and hence flows between income states, are longer-term flows, rather than shorter-term churn.

Short-term welfare receipt as a proportion of the working-age population

Intercept	Coefficient	S.E.	T statistic
Intercept shift from 2012.4	0.011	0.002	4.245
Unemployment rate	-0.011	0.001	-8.134
R^2	0.607	0.046	13.118
	0.783		

Long-term welfare receipt as a proportion of the working-age population

	Coefficient	S.E.	T statistic
Intercept	0.056	0.004	12.630
Intercept shift from 2012.4	-0.013	0.003	-6.068
Unemployment rate	0.580	0.078	7.477
R^2	0.553		
The share of long-term benefit recipients			
	Coefficient	S.E.	T statistic
Intercept	0.778	0.011	73.037
Intercept shift from 2012.4	0.029	0.005	5.557
Unemployment rate	-2.029	0.185	-10.987
R^2	0.745		

Table 18.3: Regressions considering shifts in relationships from the fourth quarter of 2012. Notes: The quarterly numbers of short- and long-term working-age beneficiaries were calculated from data kindly provided by the Ministry of Social Development. The working-age population was the number of 15-to-64-year-olds, taken from the Household Labour Force Survey. The unemployment rate was the official rate from the survey. The regression was estimated using OLS. The specifications also included seasonal dummies. All regressions have 80 observations. Source: The author.

There are seven different sources of income considered, as follows:

1. Wages and salaries
2. Self-employed income
3. Paid parental leave
4. Accident compensation
5. Student allowance
6. Working-age income-tested benefit
7. New Zealand superannuation

There is also an ‘absent’ category, for people who had not previously appeared in the income source data (new inclusions), or who had ceased to appear (newly absent). New inclusions absent in the previous period could be, for example, immigrants (both old and new New Zealanders) entering the workforce for the first time, or people returning to the workforce after being supported by other family members. The newly absent will include emigrants, those who have died and people exiting paid forms of support into other forms, including being provided for by other family members or by the prison system, or moving into the grey or black economies.

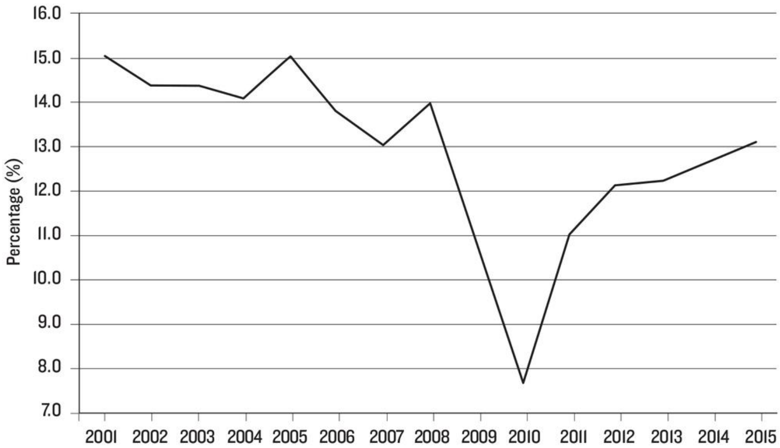


Figure 18.4: Flows from working-age benefits to jobs. Source: The author.

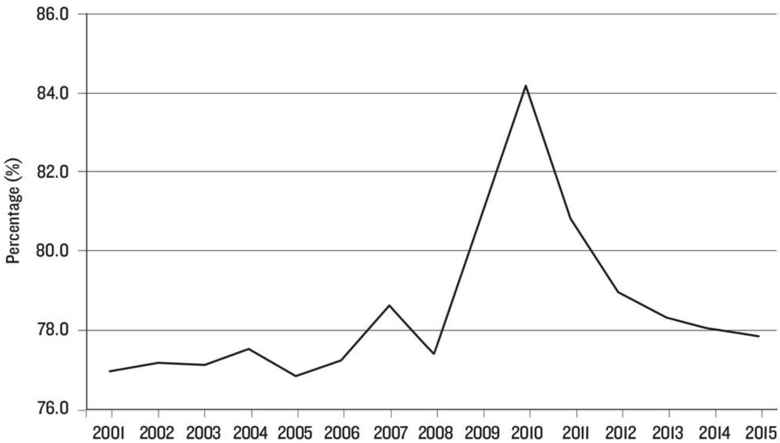


Figure 18.5: Flows from working-age benefit to working-age benefit. Source: The author.

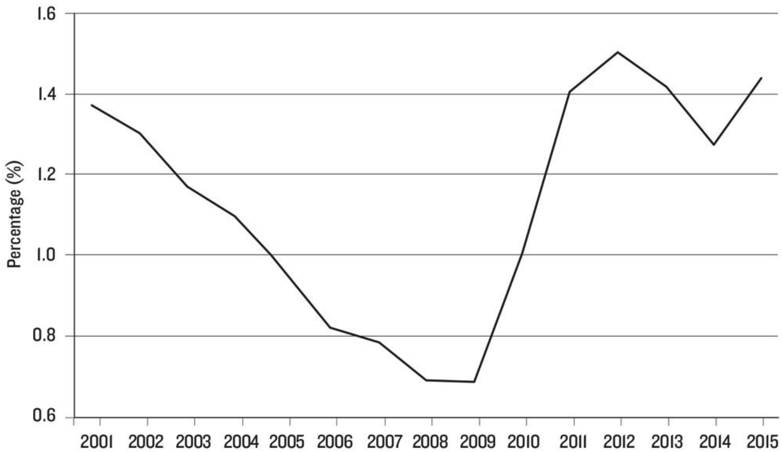


Figure 18.6: Flows from working-age benefit to student allowance. Source: The author.

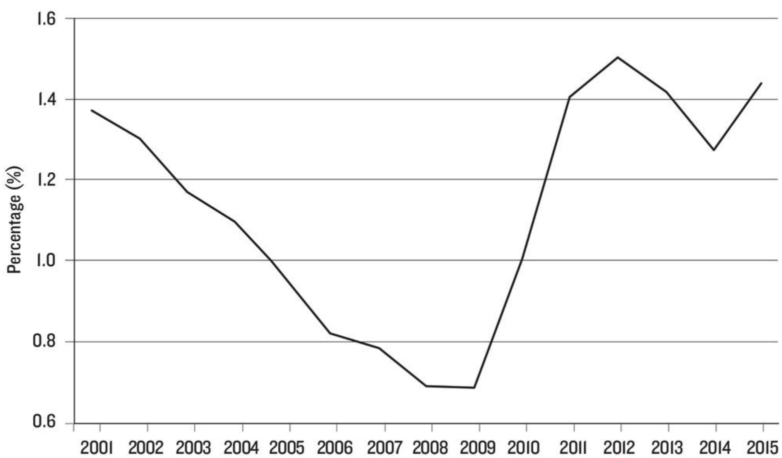


Figure 18.7: Flows from working-age benefit to absent from the tax system. Source: The author.

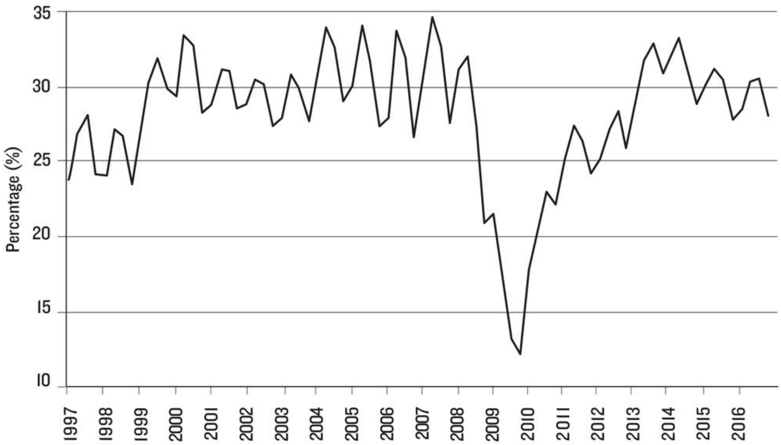


Figure 18.8: Share of long-term beneficiaries in WINZ cancellations due to jobs. Source: The author.

In terms of the analysis, the first four categories – wages and salaries, self-employed income, paid parental leave and accident compensation – are defined as jobs (employment). In practice, numbers transitioning in the latter two categories are very small. While transitions to and from self-employment are more important, the wage and salary category accounts for most transitions from and to jobs.

Outflows from working-age benefits are first considered. Figure 18.4 shows that flows to jobs in 2014 and 2015 were still below average rates over the 2001–8 period. They have, however, recovered considerably from lows experienced during the recession in 2009 and 2010. There is no evidence of a sea change associated with welfare reform. The annual flows from working-age benefit to working-age benefit – a measure of benefit persistence – are shown in Figure 18.5. The sharp spike in 2009 and 2010 is again evident. Once more, there is no evidence of a post-reform sea change. Indeed, average annual benefit persistence is higher in 2013 to 2015 than in the 2001–8 period. In terms of flows from benefits to student allowance, the data show a smooth decline from 2001 to 2009, followed by a strong period of growth to historic highs in 2012, which are broadly sustained until 2015. This suggests that some of the reduction in welfare liability can be attributed to the effective privatisation of living costs from the welfare system onto student debt. Flows from benefits to absent from the tax system, described in Figure 18.7, show fewer patterns. However, exit rates to absent in the 2013–15 period exceed previous averages, suggesting that some of the reduction in liability may be occurring via pushing people out of the tax system.

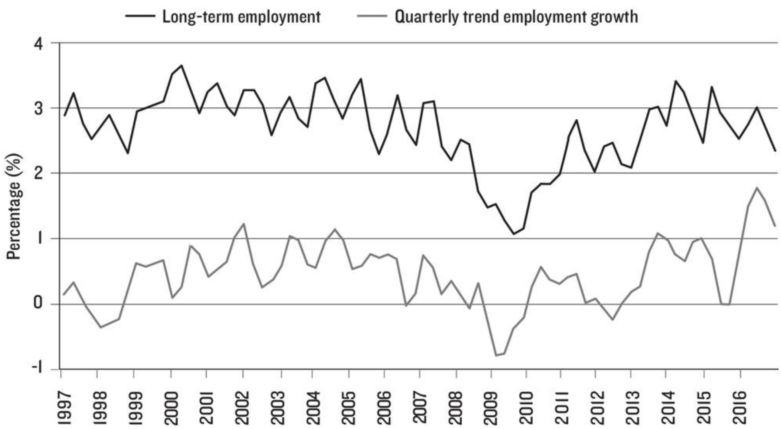


Figure 18.9: Rate of long-term benefit cancellations for jobs and HLFS employment growth. Source: The author.

Now consider inflows into working-age benefits (Figures 18.8 and 18.9). Figure 18.8 shows that inflows from employment, having risen greatly over the 2009–10 recession, have fallen below average 2001–8 levels.

Overall, while the LEED data are descriptive and low-frequency, they offer little evidence to support any sea changes in job prospects overall for beneficiaries. It may be that a longer time series and higher-frequency data will paint a different picture. However, taking the usual empirical economists' rule of thumb that if there are policy effects, a necessary condition for their existence is that they should be obvious in the raw data (sophisticated econometric methods being simply thrown at the data to try and kill the raw effect), the initial omens are not promising.

A further source of information on job-related flows off working-age benefits is MSD administrative data on benefit cancellations due to people reporting getting jobs. The proportion of long-term beneficiaries (longer duration than one year) getting jobs is shown in Figure 18.8. There is no evidence of a greater proportion of them getting jobs post-reform compared to pre-2008 recession historic patterns. This suggests, again, that the investment model, along with other reforms, has not resulted in an effective increased focus on getting long-term beneficiaries off benefit and into work. Figure 18.9 graphs the rate of outflow of long-term beneficiaries to jobs against economy-wide employment growth. Again, there is no evidence that the rate has increased for a given state of the labour market.

CONCLUSION

A fiscal redistribution model has been institutionalised in the welfare system. But, as this chapter has argued, the strategic policy change has been no triumph. The performance system introduced, focusing on future fiscal liability, has inserted a uni-dimensional and overly simplistic performance model into the welfare system. This model is based on a trickle-down view, whereby income redistribution in favour of the advantaged is presumed to drive better outcomes for the disadvantaged. Furthermore, the model creates perverse incentives in terms of achieving efficient resource allocation. The 'investment approach' to welfare reform is not about new or old wine in new or old bottles, as some would debate it. Rather, it is better viewed as corked wine in a cracked bottle – a sour draught of little policy value.

Some have suggested that the social investment model has now moved away from a central fiscal focus. If there has been such a shift in the working-age welfare system, its speed has been glacial. The BPS targets for working-age welfare remain fiscally orientated. Despite widespread agreement that the social and economic costs associated with being on a benefit long-term are the major policy concerns, six years on from the Welfare Working Group's report there is still no strategic government work programme to measure these non-fiscal costs and to see if welfare benefit exit due to policy treatments has mitigated them or created positive gains. The fact that over six years there has been minimal effort to measure and value people's actual social and economic outcomes, while copious resource has been thrown at fiscal measurement, emphasises the ultimate motivation for adopting the model – namely, to redistribute long-term income, worth billions of dollars, from beneficiaries to taxpayers.

The original 'investment approach' to the welfare system was introduced at the same time as a much stronger and substantially enlarged work-testing, compliance and surveillance regime. Unfortunately, but perhaps unsurprisingly in light of the fiscal focus of reforms, there has been no outcome evaluation, beyond consideration of long-term fiscal gains. While there is empirical evidence that the overall number of beneficiaries has fallen relative to the working-age population, there is no evidence that resources have effectively been focused on reducing the proportion of long-term benefit recipients. What is more, LEED and MSD data offer no evidence to support any large-scale post-reform sea changes in overall job prospects for beneficiaries. Given that the fiscal redistribution model values redistribution from net beneficiaries to net taxpayers, it is unsurprising that beneficiary rates have fallen. It is also unsurprising that evidence of employment gains by beneficiaries, and long-term beneficiaries in particular, is minimal: employment gains for both categories are not *per* se incentivised by the fiscal redistribution approach.

To move forward in a productive fashion, there is a compelling need to take non-fiscal outcomes seriously and to enshrine them as central in making investment decisions. What is more, in designing a better performance management system for Work and Income, there is a need for government to foundationally acknowledge and value the multiple and sometimes conflicting aims of the welfare system, including both efficiency and equity goals and any other societal objectives such as child development. At the highest level, this list will of necessity generate a focus on performance in terms of the two major pillars of the Social Security Act – supporting people's living standards and getting them into jobs. A genuine model of investment can then be developed, which is based on mainstream social cost-benefit analysis tools and which makes clear the efficiency and equity outcomes generated by decision-making.

References

Bennett, Paula, *Welfare Reform: Increasing the Work Focus of the Benefit System*, Office of the Minister for Social Development and Employment, Wellington, 2011

Chapple, Simon, 'Forward Liability and Welfare Reform in New Zealand', *Policy Quarterly*, 9, 2 (2013)

Crichton, Sarah, and Dave Maré, *The Impact of Wage Subsidies on Jobseekers' Outcomes and Firm Employment*, Ministry of Business, Innovation and Employment (MBIE), 2012

De Boer, March, and Bryan Ku, *Effectiveness of MSD Employment Assistance: Summary Report for the 2014/2015 Financial Year*, Ministry of Social Development, Wellington, 2017

Dixon, Sylvia, and Sarah Crichton, *Successful Benefit-to-Work Transitions?: The Longer-Term Outcomes of People Who Move from a Working-Age Benefit to Employment Earnings*, Statistics New Zealand, Wellington, 2006

English, B., 'Annual John Howard Lecture to Menzies Research Centre', Canberra, 25 June 2015

English, B., 'Speech to the Treasury Guest Lecture Series on Social Investment', presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015

Ernst & Young, *Investment Approach for Vulnerable Children: Feasibility Assessment*, Final Report prepared for the Ministry of Social Development, 4 December 2015

Greenberg, D. H., V. Deitch and G. Hamilton, *Welfare-to-Work Program Benefits and Costs: A Synthesis of Research*, Manpower Demonstration Research Corporation (MDRC), February 2009

Greenfield, Alan, *Actuarial Advice of Feasibility: A Long-Term Investment Approach to Improving Employment, Social and Financial Outcomes from Welfare Benefits and Services*, Taylor Fry, Ministry of Social Development and Treasury, Wellington, 27 October 2011

Hyslop, Dean, Steve Stillman and Sarah Crichton, *The Impact of Employment Experiences and Benefit-Spell Duration on Benefit-to-Work Transitions*, Statistics New Zealand, Wellington, 2004

MacKenzie, Alex, 'Social Assistance Chronology: A Chronology of Social Assistance Policy and Programmes in New Zealand, 1844 to 2016', Ministry of Social Develop-

ment, 2016, www.msd.govt.nz/about-msd-and-our-work/about-msd/history/social-assistance-chronology-programme-history.html (accessed 7 September 2017)
Ministry of Social Development, *Delivering Better Public Services: Reducing Long-Term Welfare Dependence: Result Action Plan*, Wellington, August 2012
Ministry of Social Development, *Briefing to the Incoming Minister for Social Development*, Wellington, 2012
Ministry of Social Development, 'Cost-Effectiveness of Work and Income Employment Assistance', unpublished working paper, Knowledge and Insights, Wellington, 2013
Ministry of Social Development, *Briefing to the Incoming Minister for Social Development*, Wellington, 2014
Ministry of Social Development, *Strategic Intentions 2016–2020*, Wellington, October 2016, www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/corporate/statement-of-intent/2016/strategic-intentions-2016.pdf (accessed 8 September 2017)
Modernising Child, Youth and Family Expert Panel, *Investing in New Zealand's Children and their Families: Final Report*, Wellington, December 2015 (published April 2016)
New Zealand Government, *Government Responses to Recommendations from the Productivity Commission on More Effective Social Services*, May 2017, www.treasury.govt.nz/statesector/nzpcsocser/rec-response-nzpc-may17.pdf
Raubal, Herwig, Eric Judd and Dan Stoner, *2015 Benefit System Performance Report for the Year Ended 30 June 2015*, Ministry of Social Development, Wellington, November 2016
Social Sector Forum, *Briefing to the Incoming Government*, Ministry of Social Development, Wellington, 2012
Social Investment Unit, *Social Housing Technical Report: Measuring the Fiscal Impact of Social Housing Services*, Wellington, June 2017
Stillman, Steve, and Dean Hyslop, *Examining Benefit-to-Work Transitions Using Statistics New Zealand's Linked Employer-Employee Data*, Statistics New Zealand, Wellington, November 2006
Taylor Fry, *2015 Valuation of the Benefit System for Working-Age Adults*, Ministry of Social Development, January 2016
Taylor Fry, *Off-Benefit Transitions: Where Do People Go?*, Social Policy Evaluation and Research Unit (Superu), Wellington, February 2017
Treasury, *Affording Our Future: Statement on New Zealand's Long-Term Fiscal Position*, Wellington, July 2013
Treasury, *Guide to Social Cost Benefit Analysis*, Wellington, July 2015
Treasury, *He Tirohanga Mokopuna: 2016 Statement on the Long-Term Fiscal Position*, Wellington, November 2016
Welfare Working Group, *Long-Term Benefit Dependency: The Issues*, Summary Paper, August 2010
Welfare Working Group, *Reducing Long-Term Benefit Dependency: Recommendations*, February 2011

Notes

1 The author would like to express appreciation to participants in the third

roundtable of the project and to the joint-editors for their helpful comments on early drafts.

2 There is insufficient space here to address developments in the investment approach towards vulnerable children in detail. However, the final report of the Expert Panel (Modernising Child, Youth and Family Expert Panel, *Investing in New Zealand's Children and their Families: Final Report*, Wellington, December 2015 [published April 2016]) advised the creation of three measures to better invest in vulnerable children: a measure of fiscal liability, adjusted for mortality risk, a well-being development index, and a needs index. Vulnerable children's well-being is not however the central aim of the recommended investment system. Rather, well-being is suggested as a short-term, complementary proxy for fiscal liability ('it will complement the liability measure by acting as … a short-term measure', p.172) and it will additionally act 'as a risk factor that describes future liability and outcomes (over the lifetime)'. In other words, the investment model's ultimate outcome is still primarily cast in terms of fiscal liability. The report concedes: 'The investment approach should be supported by a series of monitoring frameworks … [to] appropriately mitigate any perverse incentives [it is unclear what these 'perverse incentives' might be, as they are not discussed] created by a financial measure of well-being [i.e., fiscal liability]. To support this, the methodology around the return on investment should seek to maintain consistency with full social cost benefit analysis to the extent possible, considering estimates of broader social and economic returns to the individual and society, in addition to the financial return to government' (p.175). To this concession, one would simply make the fundamental point that the actuarial approach adds nothing to a social cost-benefit analysis in considering efficient resource allocation (see Table 18.1). It does, however, syphon away considerable resources into paying expensive actuaries that would be much better allocated to measuring and valuing vulnerable children's well-being outcomes and considering the impact of policy choices on these outcomes, and to eliminate any perverse investment incentives.

3 Simon Chapple, 'Forward Liability and Welfare Reform in New Zealand', *Policy Quarterly*, 9, 2 (2013), pp.56–62.

4 Treasury, *Guide to Social Cost Benefit Analysis*, Wellington, July 2015.

5 Information taken from: New Zealand Government, *Future Focus*, 23 March 2010, www.beehive.govt.nz/sites/all/files/FutureFocus.pdf (accessed 8 September 2017).

6 Welfare Working Group, *Reducing Long-Term Benefit Dependency: Recommendations*, February 2011.

7 The official external evaluation of the welfare liability for the 2014–15 fiscal year, is $68.4 billion (Taylor Fry, *2015 Valuation of the Benefit System for Working-Age Adults*, Ministry of Social Development, January 2016).

Technically, the valuation is the estimated discounted cost of gross benefit payments (taxes paid by beneficiaries are not deducted) and related expenses from the valuation date until retirement for all recipients who received income support in the 2014–15 fiscal year. The cumulative impact on liability 2010–11 and 2014–15 considered to be under the influence of policy reforms and management decisions is about 15 per cent of the value of the 2010–11 liability, or $12 billion (Taylor Fry, *2015 Valuation of the Benefit System for Working-Age Adults*, p.6). Because this amount is measured as a residual, it also incorporates a great deal of measurement error, of an unknown magnitude. The most recent valuation – for 2015–16 – was released on 17 May 2017.

8 For example, Welfare Working Group, *Reducing Long-Term Benefit Dependency*, p.2.

9 For example, ibid., p.129.

10 Ibid., p.131.

11 Ministry of Social Development, 'Cost-Effectiveness of Work and Income Employment Assistance', unpublished working paper, Knowledge and Insights, Wellington, 2013, p.14.

12 Paula Bennett, *Welfare Reform: Increasing the Work Focus of the Benefit System*, Office of the Minister for Social Development and Employment, Wellington, 2011, p.1.

13 Ibid., p.5.

14 Ministry of Social Development, *Briefing to the Incoming Minister for Social Development*, Wellington, 2012; Ministry of Social Development, *Briefing to the Incoming Minister for Social Development*, Wellington, 2014.

15 Ministry of Social Development, *Briefing to the Incoming Minister for Social Development*, 2014, p.11.

16 Ibid.

17 For example, Herwig Raubal, Eric Judd and Dan Stoner, *2015 Benefit System Performance Report for the Year Ended 30 June 2015, Ministry of Social Development*, Wellington, November 2016, p.38.

18 Ernst & Young, *Investment Approach for Vulnerable Children: Feasibility Assessment*, Final Report prepared for the Ministry of Social Development, 4 December 2015, p.8.

19 Treasury, *He Tirohanga Mokopuna: 2016 Statement on the Long-Term Fiscal Position*, Wellington, November 2016, p.62.

20 Bill English, 'Speech to the Treasury Guest Lecture Series on Social Investment', presented at the Treasury Guest Lecture Series, Wellington, 17 September 2015, emphasis added.

21 Bill English, 'Annual John Howard Lecture to Menzies Research Centre', Canberra, 25 June 2015.

22 The closest we have in welfare space is De Boer and Ku (March De Boer

and Bryan Ku, *Effectiveness of MSD Employment Assistance: Summary Report for the 2014/2015 Financial Year*, Ministry of Social Development, Wellington, 2017), published well after English's speech. This research evaluates MSD's labour market programme investments in terms of employment gains. In the case of some programmes, they find evidence of possible perverse incentives from the perspective of investment, where both employment and fiscal liability rise following an investment intervention, opening the possibility of empirical evidence for the theoretical possibility outlined by Chapple (Chapple, 'Forward Liability and Welfare Reform in New Zealand') and found in practice in some US studies summarised in Greenberg, Deitch and Hamilton (D. H. Greenberg, V. Deitch and G. Hamilton, *Welfare-to-Work Program Benefits and Costs: A Synthesis of Research*, Manpower Demonstration Research Corporation (MDRC), February 2009, Table ES.1, p.11). Even then, De Boer and Ku do not evaluate MSD programmes in terms of PAYE earnings, which would lead directly to a cost-benefit consideration of investment. They examine programmes in terms of income (including PAYE earnings), net of some taxes and transfers. Both taxes and transfers are, however, re-distributional. Like the liability measure, but in different ways, the income measure combines efficiency and equity goals of investment. If the net income measure used by De Boer and Ku could be combined with missing IRD tax credits data, and a way found in the IDI to create families and measure equivalised net family income, then their method could be used to address the serious equity question of whether MSD employment programmes make families better off. The possible further efficiency implications of higher net family income on child developmental trajectories, say, could also be addressed.

23 English, 'Speech to the Treasury Guest Lecture Series on Social Investment'.

24 See Office of the Minister of Finance and Office of the Minister of State Services, *Implementing Social Investment*, December 2015, https://siu.govt.nz/assets/Uploads/Cabinet-Paper-Implementing-Social-Investment-Dec-2015.pdf (accessed 8 September 2017).

25 Office of the Minister of Finance and Office of the Minister of State Services, *Implementing Social Investment: Report-Back*, March 2017, p.1, https://siu.govt.nz/assets/Uploads/Cabinet-Paper-Implementing-Social-Investment-First-Report-Back-March-2017.pdf (accessed 8 September 2017).

26 Ibid., p.8.

27 Ibid., p.9.

28 Social Investment Unit, *Social Housing Technical Report: Measuring the Fiscal Impact of Social Housing Services*, Wellington, June 2017.

29 Ibid., p.7.

30 New Zealand Government, *Government Responses to Recommendations from the Productivity Commission on More Effective Social Services*, May 2017, p.18, www.treasury.govt.nz/statesector/nzpcsocser/rec-response-nzpc-may17.pdf
31 See 'Better Public Services: Results for New Zealanders', State Services Commission, 8 July 2013, www.ssc.govt.nz/bps-results-for-nzers (accessed 8 September 2017).
32 Ministry of Social Development, *Briefing to the Incoming Minister for Social Development*, 2012, pp.3–4.
33 See 'Reducing Long-Term Welfare Dependence', Ministry of Social Development, www.msd.govt.nz/about-msd-and-our-work/work-programmes/better-public-services/long-term-welfare-dependence/index.html (accessed 8 September 2017).
34 Raubal, Judd and Stoner, *2015 Benefit System Performance Report for the Year Ended 30 June 2015*, p.15.
35 Ibid.
36 Ibid., p.16.
37 Ibid., p.6.
38 Dean Hyslop, Steve Stillman and Sarah Crichton, *The Impact of Employment Experiences and Benefit-Spell Duration on Benefit-to-Work-Transitions*, Statistics New Zealand, Wellington, 2004; Sylvia Dixon and Sarah Crichton, *Successful Benefit-to-Work Transitions?: The Longer-Term Outcomes of People Who Move from a Working-Age Benefit to Employment Earnings*, Statistics New Zealand, Wellington, 2006; Steve Stillman and Dean Hyslop, *Examining Benefit-to-Work Transitions Using Statistics New Zealand's Linked Employer-Employee Data*, Statistics New Zealand, Wellington, November 2006; and Taylor Fry, *Off-Benefit Transitions: Where Do People Go?*, Social Policy Evaluation and Research Unit (Superu), Wellington, February 2017. Taylor Fry's 2011 feasibility report argued the fiscal liability framework generated 'a primary focus on employment outcomes', thereby tacitly treating policy-induced benefit exit as synonymous with obtaining work (Alan Greenfield, *Actuarial Advice of Feasibility: A Long-Term Investment Approach to Improving Employment, Social and Financial Outcomes from Welfare Benefits and Services*, Taylor Fry, Ministry of Social Development and Treasury, Wellington, 27 October 2011, p.3). Six years later Taylor Fry (Taylor Fry, *Off-Benefit Transitions: Where Do People Go?*) explicitly accept that the link between benefit exit and employment is not strong. Their 2011 report, therefore, was written in apparent ignorance of a body of local empirical evidence of Hyslop, Stillman and Crichton, Dixon and Crichton, and Stillman and Hyslop, which had been making this point well before 2011.
39 For example, Taylor Fry, *2015 Valuation of the Benefit System for Working-*

Age Adults.

40 All flow data used here comes from Statistic New Zealand's LEED data set, http://www.stats.govt.nz/tools_and_services/nzdotstat/tables-by-subject/leed-annual-tables.aspx. The data come from 'Table 2.1: Flows between main taxable income sources 1-year' for the 2001–14 period and a 2015 update was kindly provided by Statistics New Zealand. These tables can be found at: http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7109 (accessed 8 September 2017).

41 See 'LEED Annual Technical Notes', Statistics New Zealand, www.stats.govt.nz/browse_for_stats/income-and-work/employment_and_unemployment/leed-annual-technical-notes.aspx (accessed 8 September 2017).

Chapter 19

Social investment in a complex and radically uncertain world

Elizabeth Eppel and Girol Karacaoglu

We are concerned about three significant misconceptions or blind spots in the way the 'social investment approach' has been evolving in New Zealand. These concerns have been reinforced by the chapters in this volume, as well as the roundtable discussions that informed them.[1]

In this chapter, we do four things. First, we highlight, and elaborate on, the nature of these three concerns. Second, we emphasise that the social investment approach needs to recognise two unavoidable realities – complexity and uncertainty – and take account of their implications for designing interventions. Third, we outline the key features of a social investment approach that will work in a world that has these features. Fourth, we provide two examples of where and how it has worked. In the conclusion, we combine the lessons from these two examples with the implications of complexity and uncertainty, to make suggestions about how New Zealand should proceed.

CONCERNS HIGHLIGHTED

Our three concerns are as follows.

First, there seems to be the presumption that the standard private investment decision framework can be mapped to social investment decisions. In other words, we can simply replace the word 'private' in the standard 'private investment – private outcome' framework with 'social' and proceed. Allied to this concern is the apparent presumption that the availability of more household- or individual-level data will somehow automatically increase the likelihood of finding and implementing more effective and efficient solutions to social problems.

In private investment decisions (of the sort that a textbook profit- or wealth-maximising firm is faced with), the options are well defined (say, investing in one of four alternative factories in different locations), and the risky outcomes (profits) of each option can (within reasonable bounds) be represented by a probability distribution. The firm then chooses the option that has the highest expected present value of the profit streams generated by these investments across time.

Second, in social investment decisions, the choices are not well-defined (i.e., what to invest in, for whom, when and how), and the outcomes (which can only be defined in terms of the varied lives individuals and communities value) are realised in a complex world where there is ongoing evolution of the people targeted, and the communities and societies they live in as they interact with each other. That is, all the actors (government agencies and people targeted included) are constantly changing and the social, political and economic environment is always becoming something different from what it previously was, in sometimes unpredictable ways.2

Third, not only do information and knowledge deficits mean that not all outcomes can be identified, let alone their probabilities, there are also different views held by various actors about the nature of the problem, its causes and solutions. This substantive complexity that comes with problems to which social investment might be applied, cannot be resolved by collecting more information, because this complexity is not caused by information shortages but rather by the lack of a joint frame of reference and shared meaning among the various government and non-government actors, including the individuals who might be the target of the investment.3 The environment is substantively complex and subject to radical uncertainty characterised by the emergence of previously unknown events and phenomena.4

Under 'radical uncertainty',5 the set of possible states of the future world and/or their probabilities are unknown – we simply do not know what will happen. Under complexity, especially in a social context, actions and outcomes cannot be separated.6 This is because of the ongoing reflexive interaction which is changing the world constantly as the actors adapt to each other and co-evolve: there are no external (exogenous) factors independent of our actions; individuals' actions and interactions with others influence the social and economic outcomes that emerge, which in turn lead to reactions, and on it goes.7

By way of example, an airplane is a complicated system – you can disassemble and then reassemble an airplane. The living human body is a complex system – you cannot disassemble and then reassemble it as a living organism. A social system is an adaptive complex system: not only can you not reassemble it, every time you try to do so, it reacts and evolves, and emerges as something novel, in totally unpredictable ways.8

Under the conditions of substantive complexity and uncertainty we describe, household- or individual-level data, while extremely useful for detailed backward-looking analysis of the status quo, and a source of most useful insights about where investment might be needed, cannot provide a definite answer in policy design or implementation for future populations, because the people in these populations are no longer the same as they were when the data were collected. As Amanda Wolf (Chapter 9) has argued, individuals' life-courses are unique and the information that the government and its agents hold about them is historical, imprecise, partial and subject to errors.

In other words, yesterday's investment outcomes can only provide our best estimate of where tomorrow's good investment might be made. It cannot however provide a detailed guide for how that investment should be used in specific instances. Different points in time essentially mean the world is not the same and therefore the solutions cannot be the same. Jo Cribb (Chapter 12) describes this as an implementation gap because those deciding where to invest cannot possibly have the fine-grained understanding needed to deliver effective interventions. That is because effective interventions are a co-production between frontline professionals in delivery agencies (usually NGOs) and clients.

What the data may allow us to do through aggregation is predictive analysis about populations, locations and circumstances where, based on past occurrence, investment might be justified. With the use of aggregated 'micro-level data' built up from interactions with individual clients in the past, we can create a picture, with a reasonable degree of detail, of the characteristics of the types or groups of individuals who, based on past performance, are most vulnerable to suffering in one way or another in future years. While this is useful information for targeting where investment needs to be made, it does not help us design policies and implementation mechanisms to remedy the causes of vulnerability in sustainable ways.

Do the concerns we have identified mean that the whole 'social investment' approach is ill-construed and that we should give up? Absolutely not – what we should do is to focus our minds on designing public policy and public management in a way that faces and incorporates these two fundamental facts of social and economic life: substantive complexity and radical uncertainty. In the next section we elaborate on the implication of complexity and uncertainty for New Zealand's social investment approach.

PUBLIC POLICY AND MANAGEMENT

Public policy and management take place in a multi-centred and networked world in which what governments do is only one influence among many, and is arguably less influential than the multiplicity of ongoing interactions among government and non-government actors in producing the outcomes that result.[9] This multi-centredness creates institutional collective action dilemmas and fragmentation,[10] which makes governance inherently complex and the achievement of particular outcomes uncertain.[11] It is the interaction of a multiplicity of individual actors at the micro level that creates a desired macro-level pattern,[12] but it is also impossible for any actor to fully understand and control all the actions that will create that outcome. In short, you cannot draw up a plan, follow the steps and end up where you planned.

Derek Gill (Chapter 6) has used a broad brush to compare the archetypal features he has inferred from New Zealand's discussions of the social investment approach with an equally archetypal portrayal of the conventional, post-1990s approach to government intervention. This is not to say that all of these features currently exist in any planned or trialled intervention. We have taken Gill's table and used it as a convenient framework on which to draw out the implications of the challenges presented by complexity for the social investment approach as it is currently configured (Table 19.1). The complexity implications are largely drawn from Eppel, Turner and Wolf, who argue for pragmatism and an understanding of complexity implications for policy design and implementation.13

	Conventional approach	Social investment approach (inferred theoretical ideal and current reality)	Complexity-informed implications
Focus of decision-making	Programmes supplied by public agencies or private providers	People-centred problem-solving. The programmes are still supplied by public agencies or private providers; no obvious difference yet	Understanding what works for whom in what context is an ongoing adaptive, reflexive learning process. The provider learns from the client while doing; the client is helped to reflect on what is working for them or not in the context of their lived experiences of the service interacting with the rest of their life; and the service offerings are adapted accordingly to achieve an improved outcome.
Locus of decision-making	Ministers or public agency	Devolved decision-making. No obvious difference yet	Decision-making is not purely devolved or centralised; it takes place in a number of different arenas and these arenas are not fully independent (i.e., they are interdependent). Ministers or the government agency make a decision about where they want to invest based on data about future cost (e.g., forward fiscal

			liability, environmental or societal change). The decision is one to inform an investment portfolio decision but is not appropriate for the design or prediction of the success of a particular intervention. Therefore accountability might properly be at the level of performance of the portfolio as a whole, not at the level of the performance of every individual investment. At the service delivery end of the spectrum, decisions are made by experienced providers about who they accept into which programmes, and also by the client in seeking help or taking it when offered. Many NGOs act as collectives or umbrella contract holders for frontline service providers; there is another level of decision making at that intermediate level capable of adapting services as required but there appears to be no place for this level of knowledge in the SI approach.
Target group	Broad populations and some with complex needs	People with complex needs and poor outcomes and associated high costs	People with high and complex needs are not a discrete and unchanging population. The boundary between such a person and the family and community in which they live is not so separable – the sum of the parts doesn't equal the whole. Related to arguments about the level of social capital and resiliency available in the individual's immediate and known community.

Focus of analysis	Define problem(s) and select intervention(s)	Use data to identify target group	Target group can be identified in a global sense from macro-level data which might be aggregated from backward-looking transaction and outcome data. Thus analysis of system-level trends/locations/costs could be used to inform the shape/composition of an investment portfolio based on what is known from history. However, it would be wrong to assume that a macro-level analysis can be segmented among providers in a way that results in a simple addition of the parts to equal the whole. To do so would introduce information gaps and lags into the system that would result in the services available always lagging the real state of need.
Commissioning	Outputs	Dynamically evolving outputs informed by outcomes = the ideal	Is there even such a thing as an 'output' in the traditional sense, given the dynamics of the evolving nature of the client and their needs and the offerings of the provider? This would suggest that output measurements cannot be in the traditional easily quantified SMART form but rather need to be collected as time-series narratives or something similar that captures the richness of now-and-then change in circumstances for the individual client. This might also be accompanied by a meta-narrative level about what the provider has learned about the client group and how they have

			adapted their services accordingly. This meta-level system learning narrative could then be fed into the next round of commissioning.
Interventions	Standardised solutions	Tailored heterogeneous solutions. Some isolated examples in Social Sector Trials with youth and Whānau Ora	Can central government know enough to purchase ‘solutions’ given the adaptation and learning involved? We don’t think so. In short, no matter how much data government collects about what works, it will always be in the past tense (i.e., what ‘worked’), and the nature of the problems and the solutions that will work for the next set of clients require a new round of learning and adaptation
Monitoring	Output delivery and standards conformance	Iterative framework including outputs and impacts (the ideal)	See comment above about commissioning.
Learning	‘Set and forget’ (not always)	Iterative/recursive	This is another and/and. It’s a question of when the ‘fixed’ or perhaps better thought of a ‘frozen’ occurs and when the ‘unfreeze’ and iterative learning occurs. The central government agency/commissioning agent needs to freeze for the purpose of commissioning. Iterative learning and adaptation is needed from the moment the ink is dry.
Conformance	Contract escalation strategy	Joint problem-solving	Much of the emerging pattern will be poorly understood initially and there will be more than one perspective on prob-

			lem and solution.
Accountability	Vertical and hierarchical	Horizontal and mutual (evidence?)	Hierarchical and horizontal accountabilities are operating. The government agency is accountable for the portfolio performance and the service provider is accountable for the intervention's performance in terms of influencing individual outcomes.
Control	Approval through rules, policies and contracts coupled with internal and external audit	Approval of broad approaches to tailored heterogeneous solutions, ongoing professional checks	One conclusion of complexity is that it is impossible to know the whole or to control it. Indications to date suggest that the government agencies are under the impression that if they can only get more information, more finely grained, they will know the system whole and be able to solve the problems from the centre. This is not possible.

Table 19.1: Social Investment.14 Source: The author.

In social investment decisions, instead of a one-dimensional, and measurable, outcome, the outcomes are a co-construction produced through interaction between individuals and their diverse lives. Interventions only work as intended when they generate the desired behaviours in individuals and the choices they make in their everyday lives. People also adapt to and change the intervention as it plays out. And finally, some areas for potential social investment are far more complex than others. The example of early childhood vaccination might help us to illustrate this last point. Vaccination against a raft of diseases in early childhood, such as polio, whooping cough, mumps, measles and rubella, is relatively easy to argue for, on the basis of the evidence of the individual and collective longer-term benefits to individual and societal health, and to future costs. Investment in vaccination has been well justified, in New Zealand and elsewhere, and targets have been set for the DHBs. However, what all the DHBs have amply demonstrated, since vaccination of all children was made a health target, is that achieving the desired result is not straightforward and requires many actors to be involved to achieve a positive result.15 In this example, there is both a macro and a micro problem to be solved, and the knowledge and tools required at these different levels of complexity are different. At the macro or national policy level, clinicians, epidemiologists, policy-makers and so on can tell us what the level of vaccination in the community is, and at what level it is likely to be effective for lowering the risk and cost of disease to society as a whole. The macro problem analysis might give us a detailed map of the areas and populations where vaccination levels are too low for the avoidance of future risk and cost. It will not help at all with understanding the particularities and peculiarities of those areas and populations where the vaccination level is deficient.

For this, a more micro view at the level of the individual and their context is needed. What is influencing the individual parents and their decisions about whether or not to vaccinate their children and how does this vary across the areas of concern? This is likely to be a multi-causal and changing story over time, as past educative efforts take effect and new groups move into an area. Thus even when the micro analysis leads to an understanding of the values and behaviours in a particular community so that these might be influenced in favour of higher levels of vaccination, the community will continue to evolve and change in non-linear and unpredictable ways (e.g., new waves of immigrants or changes in the economic circumstances of an area).

As a result, ongoing achievement of higher vaccination levels cannot be assured. There is a need for co-evolution between the strategies of the providers of vaccinations, the various social and health professionals working on this problem, and the communities in question. Or to put it differently, as Cribb does, there is a need to span the implementation gap through for example more decentralised decision-making that allows for co-production in the achievement of vaccination targets involving health professionals, communities and individual families.

This general understanding of the macro and micro views of a problem area warranting government intervention is captured stylistically in Figure 19.1. A distinction is made between the macro policy/investment decision and the micro level one. Returning to the vaccination example, the macro level learning process can identify the populations and locations for particular investment focus based on available historic data. However, this level of information is useless for informing who and where the people most in need of the intervention are now and how they might be induced to participate in a vaccination programme. This needs a process of micro-level prospective learning about a particular community through engagement with and in that community by the professionals involved; understanding how it operates, what its values and fears are and so on will be necessary for vaccination rates to change.

Few public policy areas likely to be the target of social investment are as ‘simple’ as the vaccination example. In most cases the end point/outcome of the investment is less well defined and even more contested than the benefits of vaccination are for a minority who resist attempts to encourage vaccination. What then does this suggest for the public policy/management design of social investment approaches?

KEY DESIGN FEATURES

The key design features for public policy and management in such a radically uncertain and substantively complex world would comprise: allowance for uncertainty, contingency, co-evolution of problem and solutions, and planning for the emergence of novelty (surprises). Such a framework would draw on multiple perspectives and allow for knowledge to be always incomplete and action to be pragmatic. This suggests small-scale experimentation and constant reassessment of the design and its implementation (including cessation as an option), diversification of solutions, acceptance of local solutions rather than externally imposed ones, fertilising human inventiveness and adaptability, building resilience, and favouring reversibility.16

Using this framework, it might be possible to shift from solving the societal deficits created by yesterday's policies to a more future-orientated and adaptive approach, and more positive outcome trajectories. It also implies a more active role for non-government actors such as professionals involved in service delivery, as well as citizens, in envisioning what those trajectories should be and what the future might become through collective action. The main focus of the policy-maker is to identify areas in which potential investment could create more systemic resilience and future risk avoidance. That is, the future well-being of the individual and the society (broadly measured as subjective well-being and related metrics) is made less costly and more achievable through today's investments.

Bearing in mind that multi-actor interaction is the generator of future patterns/outcomes, micro-level data from today's interventions might be combined in ways to help form a macro picture of current and likely future deficits and risks. Such information does not contribute to any understanding of *causation* (push this button and you will get this predefined outcome in a mechanical way), or what will work as an intervention in a particular instance to *effect* a different micro outcome, trajectory of change and ultimately a different future pattern. There are many metaphors used for the role of the public official/policy-maker in such an environment. Instead of a rocket designer, launcher or mechanic, the policy-maker and manager is more like a gardener who creates the right soil conditions and puts the required protections (against the weather, germs etc.) around the garden. The volatility of the complex social environment and its susceptibility to sudden (large) disturbances also calls for the public manager to be an adept chaos pilot able to take advantage of opportunistic emergence that is consistent with some general desired pattern of change.17

The macro-micro levels involved in understanding the process of investing in complex problems captured in Figure 19.1 is informed by research into examples where New Zealand has tried investing in complex outcomes, with some success in the past. The nature and focus of the learning processes and what can be known are different at each level. At the micro level, providers of services to meet complex needs use knowledge of their clients in a prospective way to decide what to do next, and in all likelihood they involve the clients in those decisions reflexively.18 At the macro level, the policy arms of government making decisions about where to invest can only see the macro patterns created by past interventions. They might use these to form an investment portfolio but this knowledge should not be used to shape or determine the precise actions at the local level because of the time lags and deficits involved in the nature of the information.

There are implications for accountability when dealing with complex adaptive and multi-layered systems. The policy level should be held accountable for a macro shift in the outcome pattern brought about through the cumulative actions of the micro level. In practice, this should mean that the budget-holding government agencies and their ministers can be held to account by Parliament and ministers by the electorate, although the operation of these systems of accountability has often been noted as weak.19

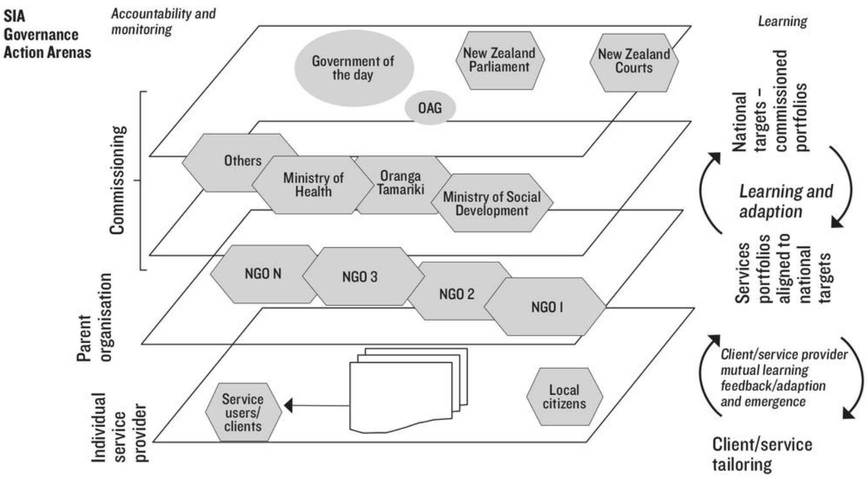


Figure 19.1: Investing in complex outcomes. Source: The authors.

The political and policy levels cannot however be allowed to direct the micro level, that is, the professional service providers, in ways that stifle adaptability, innovation and responsiveness. To do so would be an unjustifiable assumption of known causality. Intervention providers can be held accountable for how they have used their resources to create changes that contribute to the desired macro pattern. This is at variance with what appears to be happening now, where the accountability needs and performance requirements are driven from the top down through the system. That is, future performance is determined from an analysis of past performance and what are thought of as 'solutions' will therefore always lag behind because new learning, adaptation and innovation are stifled.

At the service delivery end of the continuum, accountabilities to clients and local communities also need to be considered and are likely to be part of the emergent sustainability of the solutions that are developed. An intervention usually requires the participation of the client to some extent in the co-production of the outcome: a type of bargain is struck between service provider and client with reciprocal accountability of the 'You do this, I will do that' variety. Inevitably, there will be adaptation and co-evolution between the service agent, the client and the wider community. That is, the solutions continue to evolve with the problems they target. In the following case studies, we illustrate the interaction of these different levels of decision-making, adaptation, co-evolution and learning.

EXAMPLES BASED ON PAST INVESTMENTS IN COMPLEX OUTCOMES

In this section we summarise two examples of investment in complex outcomes in the past: 1) family violence prevention, and 2) a schooling improvement initiative in south Auckland. These two cases are chosen because they have been documented in previous work. They also illustrate the importance of active policy and practice learning about the problem and its possible solutions through the processes involved. We could also have chosen some of the current examples raised by other authors in this volume. We chose not to do this because the early stage of these initiatives prevents the emergence of useful hindsights about the outcomes of these investment approaches. In our concluding section we will marry the experience of these cases with the implications of complexity and uncertainty to identify some of the lessons for the investment approach.

Example 1: Family violence prevention

Family violence is an ongoing concern for New Zealand society and it results in direct costs to individual families and the society as a whole. Growing concerns about it led government, in 2005, to establish a multi-agency taskforce, called the Taskforce for Action on Violence within Families. The chief executive of the Ministry of Social Development (MSD) chaired the taskforce throughout its first five years and reported to a ministerial group. This case study focuses on two related aspects of the government's investment in this area. One of these is the public information Campaign for Action on Family Violence which aimed to raise community awareness and action. The second was the process of learning about how to help prevent family violence, given that the context in which this occurs is often private.

Given the number of government agencies dealing with various aspects of the effects of family violence, a pan-government approach was seen as necessary. Yet making a multi-actor process work effectively is not easy, even for someone with a mandate from ministers, position authority and experience in leadership. As the first taskforce chair Peter Hughes said, he had to work hard on three levels to keep all the agencies focused on the goal and manage risks. He talked about managing upwards to ministers to keep them briefed on what was occurring and to feed them results. He also managed across the leadership in other government agencies to keep them working together collaboratively and he encouraged the people working in the field to identify risk, and maintain focus on their joint objectives.

Hughes was not risk-averse, but he was keenly aware that ever-present and real risks needed to be actively and constantly managed by timely responses at the right level. He tried to avoid the risk of responses that were 'too low and too slow'. He actively scanned the media for any sign that something was happening 'out there' which perhaps should not be, and trained people in his own agency to do likewise. He ensured there were plans in place on any given day to manage emergent risks and immediately brief his ministers.

Within Family and Community Services (FACS) at MSD there was a long-term interest in developing effective interventions against family violence, and research knowledge had been commissioned and compiled to inform policy development. Early on it was decided that dealing with family violence as a singular issue, with a singular response, would not be effective because it would not take into account, or focus on, the complexity of factors that have contributed to the problem.

One initiative developed by FACS became known as the 'Campaign for Action on Family Violence'. Its goal was to reduce society's tolerance of family violence and change people's damaging behaviour within families. The outcomes the campaign sought to achieve were:

- people motivated and supported to seek help and/or change their violent behaviours;
- influencers motivated and supported to encourage people to change their behaviours;
- communities providing an environment where family violence is not tolerated and people feel safe in their homes;
- society no longer accepting family violence;
- reduced incidence of family violence in the long term.

Research suggested that social marketing could change attitudes and behaviour in relation to family violence, and that media campaigns had been shown to be effective in increasing awareness, affecting attitudes and empowering people to act against issues of family violence. There was also compelling evidence to suggest that, to achieve effective long-term change, media campaigns needed to be supported by layers of activities and interventions, and use consistent messages that were communicated through multiple sources. The campaign was endorsed by the taskforce and ministers, and began in 2006 utilising a complex, layered, integrated approach based on the principles of community development.

In the early stages of campaign planning, formative research commissioned to help better understand family violence found that there was a lack of understanding in the community about its nature and scope. This research also suggested that it would be counterproductive to single out target groups and specific behaviours, such as male violence against partners, because it was likely to have them disassociate themselves from the intended messages. Therefore, the first phase of the campaign aimed to 'set the context' by defining family violence. In this phase, advertisements featuring local celebrities and ordinary New Zealanders gave short messages about examples of what is not OK – for example, *It's not OK to teach your kids that violence is the way to get what you want; It's not OK to blame the drink; It's not OK to punch a hole in the wall to show your wife who's boss.* These advertisements all ended with the positive message *Family violence. It's not OK. But it's OK to ask for help.*

This part of the campaign was designed to change social norms by drawing a clear line in the sand that violent behaviour towards others was not OK, and gave a strong message that perpetrators could ask for help to change. The basis for this approach was that violence and abuse exists in secrecy, that perpetrators have been allowed to exist in an environment that is implicitly (or sometimes explicitly) supportive of violence, and that there needed to be agreement about the types of behaviour that constituted family violence. The *It's OK to ask for help* message motivated help-seeking behaviours from a variety of people about a range of violent behaviours within families.

The second phase of the campaign six months later was aimed at addressing intimate partner violence, and took a more gendered approach, informed by research evidence about the perpetrators. Advertisements featured four men, not actors, telling their personal stories. Three talked about how they stopped being violent after many years of abusing partners and families. The fourth talked about how he convinced a friend to 'man up' and stop being abusive to his partner. The aim was to get perpetrators of violence to 'self-identify' by focusing on the damage their behaviour caused, rather than the behaviour itself. At the core of this phase was the idea that it is possible for perpetrators to change their behaviour and that help is available.

A third phase of advertisements in August 2010 focused on giving and receiving help – *Family violence. It's not OK. It is OK to ask for help*. These aimed at increasing people's ability and confidence to act, and at encouraging informal help and support from family, whānau and friends.

The campaign was deliberate in its intention to set up a dynamic interaction between the campaign and local communities. Thus, while the campaign would influence communities, the feedback from community action could continue to inform and influence the campaign. That is, the design was explicit in its allowance for mutual adaptation and co-evolution between community and solutions, and left space for learning from doing.

One of the senior managers involved in the design of the campaign said it was important when dealing with such a complex problem, to be 'tight on the goal and purpose, but loose on the means'. While the campaign team drew on much research from New Zealand and overseas, they also believed that they needed to learn about what happens in communities and families that helps to avert family violence, and to draw on this experience. Flexibility on means meant that the deep reservoir of community knowledge and action against family violence could be brought into play by the campaign.

The campaign comprised five strands:

1. mass media communications;
2. media advocacy;
3. a Community Action Fund (CAF) designed to support community initiatives that raise awareness of family violence and support social change in both geographic and identity communities;
4. partnerships with community, sports, business and government organisations; and
5. research and evaluation.

Figure 19.2: 'It's not OK' campaign structure. Source: Point Research, An Innovative Approach to Changing Social Values around Family Violence in New Zealand: Key Ideas, Insights and Lessons Learnt – The Campaign for Action on Family Violence, Centre for Social Research and Evaluation, Ministry of Social Development, Wellington, 2010, p.12.

In addition to strands 1–5, the campaign was supported by: 6) resources, including a toll-free information line that connects callers to local services (where appropriate); 7) a website (www.areyouok.org.nz); 8) an e-newsletter; and 9) free print resources (see Figure 19.2). One of the things the FACS team were very tight on was that they could not achieve a successful outcome from the campaign alone: 'We had to do it with others.'

One of the fundamental strands of the campaign was ongoing research and evaluation. One strand of this research programme was to understand the changes triggered in communities by the campaign. The community study that follows was part of this programme.

THE COMMUNITY STUDY

In 2008–9 MSD's Centre for Social Research and Evaluation undertook research to support the Community Study, the aim of which was to investigate and illustrate the impact of the Campaign for Action on Family Violence in selected communities. The evaluation team invested in ensuring that they understood the complex nature of the policy implementation that was under way. They worked closely with the FACS team involved in the campaign's design and implementation, co-locating one of their members with the FACS team.

The evaluation designers were cognisant that their evaluation design needed to match the complexity of the implementation and change processes which had been stimulated by the community development aspects of the campaign. They identified a set of principles or core understandings, based on complexity, which lay at the heart of both the campaign design and the Community Study. These were:

Subsidiarity – Most implementation decisions were likely to be made in communities. Therefore the Community Study would focus on communities most ready and willing, which for the most part had existing family violence prevention networks.

Empowerment – Recognition that local communities have the capacity and willingness to take action and make local decisions, resulting in shared ownership, expanded government access to local networks, increased prospects for shared learning and diffusion of innovation.

Collaboration – Each stage of the project was negotiated with multiple parties at multiple levels of social organisation (government organisations, national and local NGOs, activists, contracted researchers).

Partnership – Anticipating that Māori communities would be likely to introduce variations in local implementation based on their values and priorities, and being prepared to work together in this way.

Situatedness – Engagement is predicated and learning shaped by local history and events, demographic make-up, infrastructure, community-level norms and variations in the types of and access to activist family violence prevention networks (notwithstanding some cross-cutting patterns which also need to be discerned).

Holism – The requirement to understand and depict the interplay of events and family violence prevention activity and other salient influences within a 'family violence prevention-intervention system', and within a wider social ecology.

Values and ethics – In recognition of the value-centred and ethically sensitive nature of family violence prevention-intervention, the Community Study needs to work with and capture a broad spectrum of standpoints and experiences. Where this is not possible, the study needs to be transparent about under-represented groups and views.

Influence – The expectation that individual attitudes and behaviours, interpersonal behaviours and collective action would be influenced by the study design.

The evaluation design needed to recognise that:

- the campaign was directed at the whole system (individuals, families/whānau, communities, wider society);
- the mechanisms for intervention were open (e.g., providing resources, en-

abling capacity, delivering ‘a programme’ or combinations thereof);
- the processes and outcomes were non-prescriptive and emergent;
- learning happened along the way;
- the campaign was not the only intervention in the system;
- there was a history of comprehensive government and community action on family violence dating back to Te Rito: The NZ Family Violence Prevention Strategy, 2002.

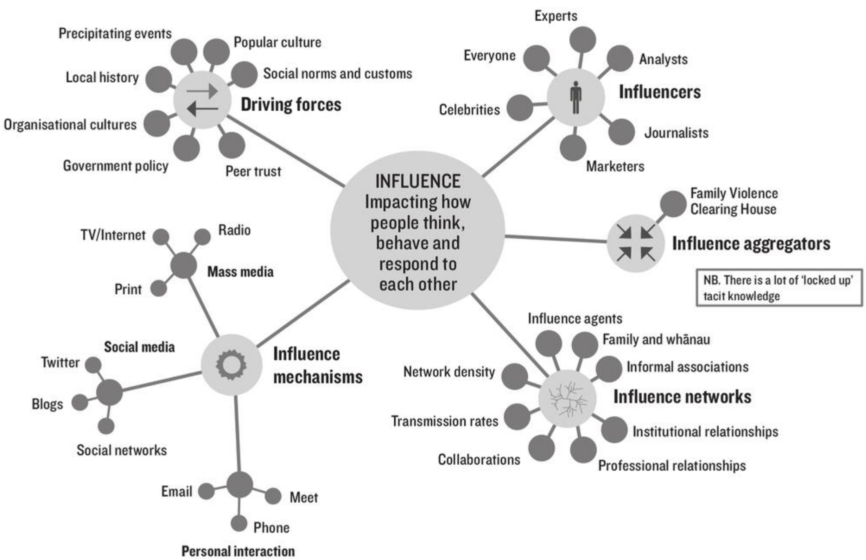


Figure 19.3: Evaluating complex implementation. Source: ‘Learning and the “Influence Landscape”’, The Lone Wolf Librarian, 27 May 2009, http://lonewolflibrarian.wordpress.com/2009/05/27/learning-and-the-influence-landscape-05-27-09 (accessed 8 September 2017).

The evaluators’ understanding of the complexity of the implementation suggested to them that there would be a web of influencers and influence networks affecting the campaign outcomes.

To take this complexity into account, and to understand whether and how a ‘big messy campaign’ with non-prescribed outcomes was working, the evaluators drew on a number of compatible research and evaluation methodologies – for example, ethnography and qualitative case study research; empowerment evaluation (promulgated by David Fetterman); illuminative evaluation (Malcolm Parlett and David Hamilton); developmental evaluation (Michael Quinn Patton);

'most significant change' technique (Rick Davies and Jessica Dart); decolonising methodologies (Linda Tuhiwai Smith). Their framing of the research design was deliberately loose, in order to catch most possibilities, influences and consequential factors of interest. At any time more serviceable coding categories could be negotiated. The point was to allow as much scope as possible for emergent new patterns while trying to identify and make sense of them.

In summary, the evaluation took what is often called a developmental, or constructivist, evaluation approach.20 It's 'a bit like a force field analysis' – the intervention and the evaluation were designed to 'build on what is already there, and make sure that new initiatives fit with what was already happening'. The evaluation designers commented that lots of issues government deals with are complex and require new research and evaluation approaches to support these interventions. The campaign is just one example of a complex initiative addressing a substantively complex or 'wicked' problem where the causes and solutions are contested even if the outcome of less harm from family violence is generally agreed.

As evaluation/research, the Community Study was a new way of informing implementation and building community capacity (and also, in the process, that of MSD). The methodology and research design made a deliberate attempt to recognise the complexity of the problem of family violence prevention and the complex implementation of the campaign. Because the understanding of the nature of its causes continues to evolve and communities change, family violence remains one of the less tractable issues government deals with, and ongoing learning is still needed to produce more sustainable responses. Ongoing research to this end is increasingly drawing on complexity theory.

The family violence problem was not 'solved' through the government investment that occurred in this period. Because the campaign raised awareness it is also widely accepted that it increased reporting of incidents. What this programme did do was increase community awareness and ownership of the problem. Arguably this part of the investment was successful because of the higher public profile and reporting of family violence that has eventuated over the last decade and evidence of changing community and official attitudes to the problem. The Community Study achieved something that government agencies could not do alone. It brought effective locally designed and owned solutions into play, and shared effective approaches across communities.

To our knowledge, however, the intervention was never evaluated for the effectiveness of the total investment nor compared with the cost of not having intervened. For example, 1) what did the campaign cost, 2) what was learned about working with communities and harnessing local innovation, and 3) how did the learning from this particular phase inform the next round of investment in family violence prevention?

Example 2: Schooling effectiveness in Mangere and Otara (SEMO)

The SEMO case study was originally part of the EIP Research Project *Better Connected Services for Kiwis: Joining up the Horizontal and the Vertical.*[21] It is retold here in summary form to illustrate the substantively complex nature of the problem and the role of uncertainty in finding some solutions that put the schools on a new, more successful trajectory. Looking back over the intervening 20 years, the example also illustrates that complex systems continue to evolve, and that without ongoing intervention some problems will not remain the same for long.

SEMO is an example of targeted government investment in under-performing schools to get a better educational outcome for hundreds of mainly Māori and Pasifika children in two clusters of south Auckland schools. It is a story of many actors at national and local level, none of whom at the outset could be credited with knowing how to achieve the success that began to emerge over the following eight years. It involves new ideas, innovation, creativity and system learning around a shared goal (passion) for children's rights to good schooling and successful learning.

The setting

In 1996 the Education Review Office (ERO) said that fifty primary and secondary schools in south Auckland were failing to help their students learn at an acceptable level. These were all low-decile schools. That is, the homes the children in them came from were among the most disadvantaged in the country, according to education outcome research. The newspapers said that Otara and Mangere children were illiterate. This incensed parents, who sprang to the defence of their children's schools. At the time the schools were fighting among themselves over zones and enrolments. The principals were slagging each other off in the media, rolls were falling and a significant number of children were being bussed out of the area to attend other schools. All the schools had fences built around them – if not physical fences, then metaphorical fences in that there was no communication between the schools, and little communication between the schools and their communities. There was also little communication between the schools and the Ministry of Education because, in the words of one participant, 'the ministry didn't know how to talk to the schools'. These fifty schools were part of what became known as the Schooling Effectiveness in Mangere and Otara (SEMO) project.[22] Different routes to improvement were taken in the two areas but there are some common threads which could inform a social investment and community collaboration approach.

The actors

- Ministry of Education national office (the CEO, deputy CEO, schooling improvement manager, Auckland-based project managers)
- Ministry of Education regional office (regional manager and staff)
- Education Review Office
- School boards of trustees
- School principals
- Parents
- Community groups in Mangere and Otara (e.g., Māori, Samoan, Fijian, Tongan, sports clubs, churches)
- External researchers

The story

In the beginning there was no detailed plan or plot outline. There was only a big, hairy and, what more than one person thought, achievable idea. The idea that the children were entitled to schooling as good as they would get anywhere in the country, and a realistic expectation of learning and achievement, drove a number of people's actions throughout this story. Telling the tale with hindsight makes achieving such a reasonably sensible and desirable outcome sound easy. It does not really give any sense of the conflicting understandings of the problem, and the unknowns and mistrust among the actors as the story was being created. It is also difficult, when a story concerns such a wicked problem as the underachievement of children in low socio-economic areas, to say that the story has ended, because the challenge continues even though significant progress has been made. The flow of new lower socio-economic families into these areas, and the loss of intellectual capital and leadership in the schools because of staff turnover, means that the problem of systemic underachievement needs ongoing attention.

One key decision made early on was to have expert education-observers work alongside the schools, the ministry and community actors in a trusted confidant role as external researchers and evaluators. These researchers became integral to recording the story as it emerged, and critiquing the actions of the actors and the results in terms of the overall goal of educational achievement. They helped the actors to learn as they tried to understand the various dimensions of a very difficult and entrenched problem, and tried out new things and new ways of working. They also became the source of externally validated evidence of success and change.

Different actors in Mangere and Otara meant that the story evolved along different lines in each community. The story also depends on which actors are telling it. Parents in these schools liked the fact that some of the schools had tried to reflect the Pasifika or Māori culture of the local community. Consequently they were initially angry that their children's schools were being publicly shamed and damned. They were also angry when they came to know that their children were not progressing as well as they might in other schools.

The SEMO principals and their staff blamed their failure on government and the Ministry of Education for not giving them sufficient resources to do a difficult job. Some of the schools' board members and the parents were sure the schools could do better and that it was not just a case of inadequate resources. The quick and acceptable remedy from the schools' and the communities' perspectives was for government to immediately make some new resources available to help them 'fix' the problem.

The portfolio manager in the ministry was not content to take this same old approach and give extra resources without a plan for how the quality of education the children received would be improved. The ministry had obtained new schooling improvement resources from government but had agreed these would only be dispensed when there was a suitable schooling improvement plan in place to lift educational achievement.

Previous attempts to improve the quality of the schools had been fruitless or short-lived. The 'experts' in the Ministry of Education didn't have confidence that they understood the problem enough to be able to design a solution alone, without knowledge of local context. A key person in the ministry heading up the schooling improvement work was linked into international research and practice in this area and was sure that part of the answer lay in the schools themselves, their boards, principals and teachers, and their immediate parent communities. So when the ERO report on south Auckland schools emerged, as a result of earlier work with Treasury, the ministry had funding to invest in building capability. It had no detailed plans for how to go about this, but rather a broad general idea about building on local knowledge and improving school leadership, governance and teacher capability and parental involvement, informed by research and overseas practice.

It was also clear from meetings held in the schools that considerable differences in perspectives on the causes of the problem were to be gained from other sources, such as the students themselves, their parents, the teaching professionals, the management and governing boards, as well as local organisations like churches and community groups. Some said getting the schools to do a better job was just about giving them more resources. Others said there was more to it.

Early on there were some very fractious meetings involving the boards, staff, students, and other community interests. One in the Otara schools was a turning point. Some key board members were convinced that the ownership of the problem and its solution had to be with the elected boards who represented the parents. They were the ones who felt most keenly that their children were not getting a good deal from the principals and teachers, who they saw as having low expectations of what their children could achieve. The ministry took the position that it would like to work with the boards and the schools, and would agree to provide additional resources only when there was a sustainable plan in place for improving learning achievement.

The ministry took the new and risky step of inviting the schools to contribute to the job descriptions for the two project managers who were to look after the schooling improvement work in Mangere and Otara. There were departures from normal practice: 1) the project managers were to be located in south Auckland, away from the regional office and reporting straight to Wellington in formal terms, while in practice working very closely with the school boards and principals; and 2) having representatives from the schools participate in the selection of these people presented the ministry with some HR minefields to navigate. Two experienced and high-performing Auckland principals were appointed to these roles – i.e., people who could walk the talk when it came to school performance and children's learning.

These first steps were the beginning of a new way of working both within the ministry and between the ministry and the schools. It sounds easy but there were constant tensions and hurdles as existing procedures were challenged. There was a big turnover of staff and of some principals in the schools in those early years, because there was now a focus on what their existing resources were achieving and its effectiveness for improving children's learning. The two project managers were not very popular with their former principal colleagues. They were seen as challenging the principals to do better, and seemingly siding with the boards and parents against the principals because they opened up dialogue and constructive consultation channels with the communities.

The schools generally remained of the view that the ministry should just hand over the money and let them get on with it. The ministry however took the (hard and initially very unpopular) line that there were things that schools should be doing with their existing resources that they were not. It said it would provide additional money only when the existing resources were being applied to improving learning. Only then would new money be made available to help the schools build capability to do more with their existing resources. This eyeballing was possible because of the experience and local knowledge of the project managers, their credibility, and the relationships they had built with the boards, the local school communities and the wider educational constituencies such as the teacher unions, the School Trustees Association and the principals' national associations.

The commentary of the external researchers was also vital in this space because they provided an 'independent' assessment of what was and wasn't happening in the schools, for children and their learning. The ministry's ability to be close to the action, having the expertise to make good educational judgments and build strong relationships, and a determination to make learning outcomes for children the focus, were vital elements during the first two years.

In Otara the school boards began to work together and with the ministry through the project manager and formed the Otara Boards Forum (OBF). In those early days, in 1996, the boards were not effective, and the principals usually dominated them. The OBF vision was to support individual boards to do their job. One board chair, who had left one of the earlier meetings with the ministry because he did not feel listened to, was very much behind the idea of the OBF. He had a passion for kids in his school and community and their right to learn and succeed, and was willing to do battle with the ministry, ERO and the principals but also listen to anyone willing to join the OBF mission. Parents, the OBF said, wanted better education for their kids. The forum's job was to help train and support the boards to ask the hard questions when principals and teachers were not doing their job well enough and children's learning was suffering.

A different change scenario played out in Mangere. Some of the boards agreed to cooperate and share more about teaching and learning practices that were working for their children. Clusters were formed across the schools using literacy experts in the schools. The project manager worked with the literacy experts to focus on the actual results of the teaching interventions and their impact on children's learning. The focus in Mangere was on improving the effectiveness of teaching and using student achievement data to do this. The capability of the teachers to use student assessment tools became a focus. External experts worked with the clusters to improve their ability to interpret and use student assessment information at the individual school and cluster level. The expert teachers in literacy, who were later joined by expert teachers in numeracy, became the instigators of a process in each school to help classroom teachers improve children's literacy and numeracy. They also worked with principals to make the achievement of results for the school their primary focus. The boards too were helped to understand assessment information and to ask for information about progress on student achievement and be critical of what they were hearing. The external researchers recorded a steady improvement in learning until all of the school had their children's reading, writing and numeracy at nationally acceptable levels.

Improving the quality of the education outcomes for students in south Auckland schools required changes to be made in how the government's main agency did its business and worked with its various agents internally and externally. The Ministry of Education had resources to facilitate change, but insufficient understanding of how complex local issues that result in school failure were manifesting themselves, so that they could decide exactly what should be done, and in what order, to bring about lasting improvement. What eventuated was an adequately resourced and deliberate learning and capability-building process in the schools, the agencies and the community to better understand what would need to change if all the children in these Auckland schools were to experience successful learning. Both money resources and time were dedicated to this process, with external researchers acting as critical friends to the project.

These independent researchers charged with evaluating progress provided additional trusted perspectives and critiques as well as evidence of learning improvement in the schools. Agreement by all concerned on the overall goal of the project, being successful learning by the children, enabled all activity to be focused on this end-goal. An environment was established in which it was possible to operate collaborative learning networks at the individual classroom and school level, and use knowledge gained there to improve practice and policy. What was learned in this project began to inform both wider theory and practice around school improvement.

Over a couple of years, what began as a shared state of only partial knowledge became the trigger for a process of learning across government, non-government and community organisations involved with these schools. Shared learning over time led to new understandings of the multidimensional nature of the issues, a shared commitment to the broad goal that the educational achievement of the children in these schools should be as good as elsewhere in the country, and first steps by everyone towards doing things differently. It was only then, and with a determined focus on monitoring the results of learning achievement, that steady progress towards higher levels of achievement began to be made, evidenced in the final evaluation report of the project.23

The ministry took some risky steps, but so did the boards, the teachers and the principals, who were all focused on their goal. That also does not mean that there were no false steps or dead ends. The process of learning also led to the understanding that no one agency or organisation had all the information or resources to address the issues. For the government agency it meant doing things differently and listening to others about their experiences and understanding of the issues. For the boards it meant holding their principals and staff accountable but also ensuring that they better understood what was involved in making improvements. They too focused on the achievement data, and engaged their principals and staff on the key question of how learning might be supported and improved.

Brian Annan, who has researched the Ministry of Education's schooling improvement initiatives and their effectiveness on learning, has suggested the need for learning to occur at all levels of the system and for there to be interaction and learning across the levels (see Figure 19.4).24 That is, there is a need for ongoing learning, adaptation and evolution of the system across the policy, school governance and classroom levels.

The collaborative networks in the communities, built and strengthened by the SEMO project interventions, were not self-sustaining. Unlike vaccination, the results of this kind of intervention will continue to be affected by ongoing changes in the system. Changes of individual actors and changes in the communities and schools mean that to sustain the initial improvement in learning results, ongoing efforts and probably investment (though perhaps at a lower level) are needed. For example, having a new principal in one school led to an abrupt halt in that school of the promising improvements that had been made in literacy and numeracy levels. Significant improvements in literacy and numeracy achievement had been measured across all the schools up to that point. That new principal shifted resources to his new priorities believing that the gains made could be sustained without further focus.

While many aspects of the SEMO story have a particular historical context, there are replicable aspects of the processes used, which have a bearing on investment in complex social interventions:

- Actors need to focus on improving the overall outcome pattern and be more open regarding particular solutions (tight on outcomes/loose on means).
- Actors need time to learn from the perspectives of others about how a current pattern has been created and how that pattern might be altered for the better.
- Being prepared to learn from past experience, so that dead ends and ineffective steps are quickly identified and changed and what works can be used more widely.
- Build capability in all the actors to better understand the issues and therefore create even smarter and more effective ways of doing business.
- Careful monitoring of results by all the actors so that learning and action continues and is refined as you go along.
- Government actors learning to sometimes get out of the way and let the people on the ground (with the detailed understanding of context and problem) take a lead and try new things.
- A respectful tension and challenge between local experiential knowledge, and theoretical and expert educational practice knowledge, so that each can play a part (e.g., around teaching, learning and assessment).
- Frontline action and dialogue supported by head office dialogue, analysis, risk identification and risk management.
- Head office learning from listening and internalising the lessons.
- Wicked problems continue evolving and therefore require ongoing focus.

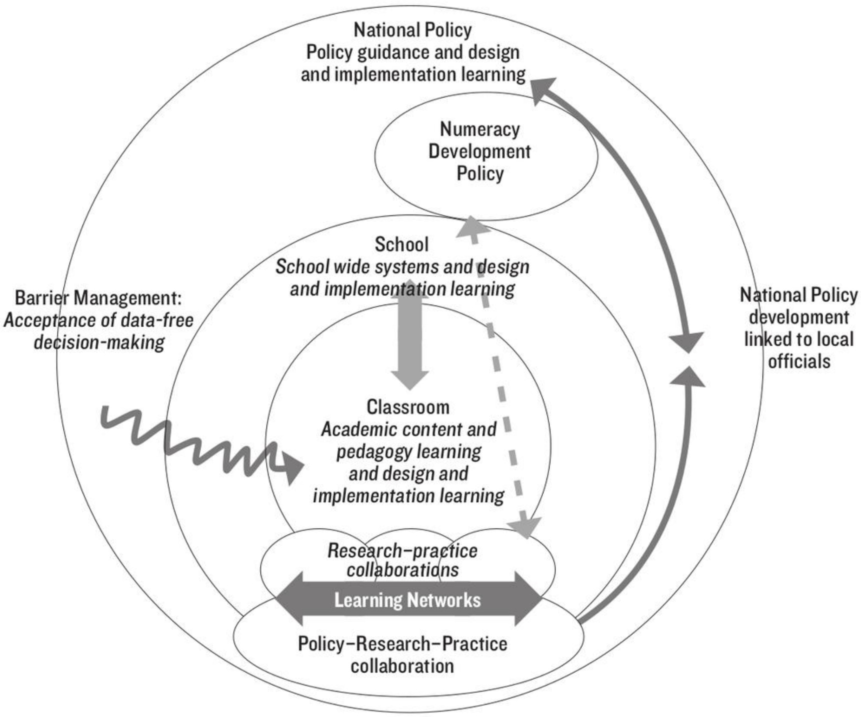


Figure 19.4: SEMO learning process model. Source: Brian Annan, 'A Theory for Schooling Improvement: Consistency and Connectivity to Improve Instructional Practice', PhD Thesis, University of Auckland, Auckland, 2007, Figure 8, p.146.

CONCLUSION

The two cases presented above illustrate some pertinent features and dimensions to inform future social investment approaches.

There needs to be investment by government agencies in understanding substantively complex problems if they are to be addressed effectively. From an investment perspective, the process of understanding the complexity of a problem by engaging with the people and the community that are closely affected is a needed but currently unfunded and unrecognised part of social investment thinking. Learning about the problem from those directly affected is also the beginning of solution-making, and these solutions must then have the support and commitment of their targets to help make them effective in bringing about change. Some of the solutions to emerge will be novel, as they were in the two cases described above, and more effective than might have been envisaged at the outset by either the government agencies involved, the service providers or the people themselves. This first point speaks to the need for social investment approaches to allow for co-evolution between the problem and the solution at the micro level.

These two examples also reflect public management practices at their time of implementation. In both cases the effectiveness of the intervention was evaluated but there was no attempt to evaluate the return on investment by considering the overall project costs and the benefits gained, or to assess the cost-effectiveness of the project against alternatives. This arguably should have been the role of the government agency responsible for the investment but is clearly not an easy thing to do, given the long-term nature of some changes. Clearly these are areas for the development of greater government agency competence as part of the social investment approach. They are not however an argument for government agencies to become prescriptive in how interventions are designed. This needs more local knowledge input.

Based on our earlier explanation of the implications of complexity, and drawing on what we learn from the two case studies, we reach four conclusions regarding systemic policy design and implementation.

First, a recognition of the condition of the world as substantively complex leads to the conclusion that the social patterns and outcomes we see today are the product of past local interactions among individuals and communities, and of past and current policies. We can look at past and current patterns but we cannot predict what these patterns will become in the future even when there is no external change. Bringing radical uncertainty and unknown changes into the equation makes the future pattern even more unpredictable.

Second, the focus of policies (including institution-building) needs to be on building resilience to unpredictable shocks and encouraging adaptation through creativity – in both the generation of ideas and their applications, and the ongoing monitoring of what is not having the intended effect.

Third, to be effective and efficient across time, institutions need to be adaptive; they need to be resilient to radical uncertainty.

Fourth, public management decisions regarding what we invest in, and how and when, need to take complexity into account, and evolve on an experimental and cautious basis, involving communities in fundamental and substantive ways.

Two principles are involved in designing and implementing policies and intervention programmes in a complex social setting. First, rather than focusing on prediction, we should emphasise experimentation – based on problems, potential solutions and desired outcomes that communities select, taking into account past experience and research about effectiveness. Second, policy-makers need to think of themselves less as social engineers and more as ‘system stewards’. Rather than engineering specific outcomes, the government’s (‘the centre’s’) role as a system steward is to create the conditions in which interacting agents in the system will strive towards socially desirable outcomes, as defined by the communities concerned.

Policy design and implementation should be thought of in an integrated and interdependent way, with mechanisms for feedback, and continuous learning and improvement, built in from the beginning. Evaluating intervention outcomes is a necessary and first step in generating knowledge about effective programmes. Evidence of the effectiveness of programme A with population B at point in time T1 does not necessarily lead to knowledge that programme A will be effective with population B, let alone C, at time T2.

As part of the experimentation process, the government agencies at the centre should encourage the collection of data that can subsequently be used to assess interventions. Multiple perspectives are needed to understand the meaning of the information collected and how it might be interpreted. Frontline practitioner and client perspectives must be an important element of this process if well-informed decisions are to be made. One of the critical systemic investments in this context is using technology to facilitate information-sharing in an effective and efficient manner.

Different actors need evidence for different purposes according to their role in the system. The investment decision-maker needs evidence which might inform where a good social return on investment (SROI) will be had. The provider of programmes on the other hand needs evidence to inform their professional judgments about their practice and how they work with clients and whether they are being effective. The expertise involved in these two practices is different and the first cannot be substituted for the second, nor vice versa. Identification of a population which, with the benefit of evidence from previous interventions, might promise a good SROI does not necessarily lead to the conclusion that the original programme of intervention should be applied without adaptation and further learning.

References

Annan, B., 'A Theory for Schooling Improvement: Consistency and Connectivity to Improve Instructional Practice', PhD Thesis, University of Auckland, Auckland, 2007

Arthur, W. B., *Complexity and Economics*, Oxford University Press, Oxford, 2015

Boulton, J. G., P. M. Allen and C. Bowman, *Embracing Complexity: Strategic Perspectives for an Age of Turbulence*, Oxford University Press, Oxford, 2015

Byrne, D. S., and G. Callaghan, *Complexity Theory and the Social Sciences: The State of the Art*, Routledge, Abingdon, 2014

Centre for Social Science Research and Evaluation, *The Campaign for Action on Family Violence: Community Study Summary Report*, Ministry of Social Development, Wellington, March 2010

Cribb, J., 'Minding the Implementation Gap: NGO Social Service Delivery and the Social Investment Approach', NZIER/IGPS Workshop on Social Investment, Wellington, February 2017

Destremau, K., and P. Wilson, 'Defining Social Investment, Kiwi-Style', NZIER/IGPS Workshop on Social Investment, Wellington, November 2016

Di Francesco, M., and E. Eppel, 'A Public Management Heresy? Exploring the 'Managerial' Role of Ministers within Public Management Policy Design', in B. Ryan and D. Gill (eds), *Future State: Directions for Public Management in New Zealand*, Victoria University Press, Wellington, 2011

Eppel, E., 'Complexity Thinking in Public Administration's Theories-in-Use', *Public Management Review*, 19, 6 (2017)

Eppel, E., D. Turner and A. Wolf, 'Complex Policy Implementation: The Role of Experimentation and Learning', in B. Ryan and D. Gill (eds), *Future State: Directions for Public Management in New Zealand*, Victoria University Press, Wellington, 2011

Eppel, E., D. Gill, M. Lips and B. Ryan, 'The Cross-Organisational Collaboration Solution?: Conditions, Roles and Dynamics in New Zealand', in J. O'Flynn, D. Blackman and J. Halligan (eds), *Crossing Boundaries in Public Management and Policy: The International Experience*, Routledge, Abingdon, 2013

Feiock, R. C., 'The Institutional Collective Action Framework', *Policy Studies Journal*, 41, 3 (2013)

Gill, D., 'Social Investment Approach: Challenges for the Public Management System', NZIER/IGPS Workshop on Social Investment, Wellington, 2017

Hayek, F. A., 'The Pretence of Knowledge', Nobel Prize Lecture in Economics, 1974

Institute of Policy Studies, *Better Connected Services for Kiwis: A Discussion Document for Managers and Front-line Staff on Better Joining up the Horizontal and the Vertical*, School of Government, Victoria University of Wellington, July 2008, http://igps.victoria.ac.nz/events/completed-activities/joiningup/Connected%20Services%20ver%2010.pdf (accessed 8 September 2017)

King, M., *The End of Alchemy: Money, Banking and the Future of the Global Economy*, Little, Brown, Boston, 2016

Klijn, E. H., and J. F. M. Koppenjan, 'Complexity in Governance Network Theory', *Complexity, Governance and Networks*, 1 (2014)

McLaren, F., and G. Stone, 'Supporting Complex Initiatives with Research and Evaluation: The Campaign against Family Violence and the Community Study Approach', paper presented at the Australasian Evaluation Society, Wellington, September 2010

Morçöl, G., *A Complexity Theory for Public Policy*, Routledge, New York, 2012

Morçöl, G., 'Complex Governance Networks: An Assessment of the Advances and Prospects', *Complexity, Governance and Networks*, 1 (2014)

Patton, M. Q., *Developmental Evaluation: Applying Complexity Concepts to Enhance Innovation and Use*, Guilford Publications, New York, 2011

Point Research, *An Innovative Approach to Changing Social Values around Family Violence in New Zealand: Key Ideas, Insights and Lessons Learnt – The Campaign for Action on Family Violence*, Centre for Social Research and Evaluation, Ministry of Social Development, Wellington, 2010

Raisio, H., and N. Lundström, 'Managing Chaos: Lessons from Movies on Chaos Theory', *Administration and Society*, 49, 2 (2017)

Robinson, Viviane, and Helen Timperley, *Strengthening Education in Mangere and Otara: Final Evaluation Report*, report prepared for the Ministry of Education, Wellington, 2004

Room, G., *Complexity, Institutions and Public Policy*, Edward Elgar, Cheltenham, 2011
Ryan, B., D. Gill, E. Eppel and M. Lips, 'Managing for Joint Outcomes: Connecting up the Horizontal and the Vertical', *Policy Quarterly*, 4, 3 (2008)
Sabel, C., and J. Zeitlin, 'Experimentalist Governance', in D. Levi-Faur (ed.), *The Oxford Handbook of Governance*, Oxford University Press, Oxford, 2011
Soros, George, *The Alchemy of Finance*, Wiley, New Jersey, 2013
Tenbensel, T., L. Chalmers and E. Willing, 'Comparing the Implementation Consequences of the Immunisation and Emergency Department Health Targets in New Zealand: A Tale of Two Targets', *Journal of Health Organization and Management*, 30, 6 (2016)

Notes

1 The authors acknowledge the constructive criticism of Jonathan Boston on an earlier draft of this chapter.
2 J. G. Boulton, P. M. Allen and C. Bowman, *Embracing Complexity: Strategic Perspectives for an Age of Turbulence*, Oxford University Press, Oxford, 2015.
3 E. H. Klijn and J. F. M. Koppenjan, 'Complexity in Governance Network Theory', *Complexity, Governance and Networks*, 1 (2014), pp.61–70.
4 M. King, *The End of Alchemy: Money, Banking and the Future of the Global Economy*, Little, Brown, Boston, 2016.
5 Ibid.
6 W. B. Arthur, *Complexity and Economics*, Oxford University Press, Oxford, 2015.
7 George Soros, *The Alchemy of Finance*, Wiley, New Jersey, 2013.
8 D. S. Byrne and G. Callaghan, *Complexity Theory and the Social Sciences: The State of the Art*, Routledge, Abingdon, 2014; F. A. Hayek, 'The Pretence of Knowledge', Nobel Prize Lecture in Economics, 1974.
9 For example: G. Morçöl, *A Complexity Theory for Public Policy*, Routledge, New York, 2012; G. Room, *Complexity, Institutions and Public Policy*, Edward Elgar, Cheltenham, 2011.
10 R. C. Feiock, 'The Institutional Collective Action Framework', *Policy Studies Journal*, 41, 3 (2013), pp.397–425; Boulton, Allen and Bowman, *Embracing Complexity*.
11 G. Morçöl, 'Complex Governance Networks: An Assessment of the Advances and Prospects', *Complexity, Governance and Networks*, 1 (2014), pp.5–16; Morçöl, *A Complexity Theory for Public Policy*.
12 Morçöl, *A Complexity Theory for Public Policy*.
13 E. Eppel, D. Turner and A. Wolf, 'Complex Policy Implementation: The Role of Experimentation and Learning', in B. Ryan and D. Gill (eds), *Future State: Directions for Public Management in New Zealand*, Victoria University Press, Wellington, 2011, pp.182–212.
14 Based on Gill, this volume, and Eppel, Turner and Wolf, 'Complex Policy

Implementation'.

15 For example, T. Tenbensel, L. Chalmers and E. Willing, 'Comparing the Implementation Consequences of the Immunisation and Emergency Department Health Targets in New Zealand: A Tale of Two Targets', *Journal of Health Organization and Management*, 30, 6 (2016), pp.1009–24.

16 A longer version of this argument can be found in Eppel, Turner and Wolf, 'Complex Policy Implementation'.

17 E. Eppel, 'Complexity Thinking in Public Administration's Theories-in-Use', *Public Management Review*, 19, 6 (2017), pp.845–61; H. Raisio and N. Lundström, 'Managing Chaos: Lessons from Movies on Chaos Theory', *Administration and Society*, 49, 2 (2017), pp.296–315.

18 E. Eppel et al., 'The Cross-Organisational Collaboration Solution?: Conditions, Roles and Dynamics in New Zealand', in J. O'Flynn, D. Blackman and J. Halligan (eds), *Crossing Boundaries in Public Management and Policy: The International Experience*, Routledge, Abingdon, 2013, pp.47–63.

19 See, for example, M. Di Francesco and E. Eppel, 'A Public Management Heresy? Exploring the 'Managerial' Role of Ministers within Public Management Policy Design', in Ryan and Gill (eds), *Future State*, pp.123–58.

20 See, for example, M. Q. Patton, *Developmental Evaluation: Applying Complexity Concepts to Enhance Innovation and Use*, Guilford Publications, New York, 2011.

21 Institute of Policy Studies, *Better Connected Services for Kiwis: A Discussion Document for Managers and Front-line Staff on Better Joining up the Horizontal and the Vertical*, School of Government, Victoria University of Wellington, July 2008, http://igps.victoria.ac.nz/events/completed-activities/joiningup/Connected%20Services%20ver%2010.pdf (accessed 8 September 2017). Adapted from the original published in B. Ryan, D. Gill, E. Eppel and M. Lips, 'Managing for Joint Outcomes: Connecting up the Horizontal and the Vertical', Policy Quarterly, 4, 3 (2008), pp.14–21.

22 Viviane Robinson and Helen Timperley, *Strengthening Education in Mangere and Otara: Final Evaluation Report*, report prepared for the Ministry of Education, Wellington, 2004.

23 Ibid.

24 Brian Annan, 'A Theory for Schooling Improvement: Consistency and Connectivity to Improve Instructional Practice', PhD Thesis, University of Auckland, Auckland, 2007.

Chapter 20

Exposing and challenging the underlying assumptions of social investment

David Hanna

There is a common desire for a system for social investment that supports citizens to lead healthy and productive lives.

In the beginning the former government's 'social investment' approach showed promise. The then Finance Minister, Bill English, conceded that what we were then doing wasn't working well. He said there was a need to redesign the social system to ensure effective interventions for people who are potentially the most expensive for government to deal with over time. From a service provider perspective this tends to correlate with people who most need help. Speaking as someone in a leadership role in a social service organisation working with people 'on the margins', this was a refreshing and bold call.

However, these words have not yet transformed into bold action let alone improved results. In fact, on current experience they risk worsening the situation for many.

To understand my growing disappointment, it is important to reflect on the current system and its underlying assumptions. This 'whole system' consists of many actors such as politicians, researchers, policy analysts, contracting managers, NGO managers, social workers and whānau workers. The desired output of this system is a set of services and products to support positive outcomes that reflect the prevailing evidence. The services are targeted to people whom analysis suggests need help. The government is the principal funder of these services and providers compete to deliver services based on its specifications of method to the prescribed target clients.

This social service system is supported by a set of powerful implicit assumptions. I suggest there are three key ones:

- The person or group in 'need' or 'vulnerable' has little or no capability to contribute to effective outcomes; they are passive recipients.
- The person or group are more like machines than active agents in their own right and part of a living system.
- Any positive change in the targeted person needing help is attributed to the intervention (i.e., the policy, the service, the key workers), and measurement of

impact over-emphasises the role of the intervention and those that intervene.

THE IMPACT OF ASSUMPTIONS

I believe that for the social investment approach to trigger genuine reform it needs to challenge and shift these powerful underlying assumptions. Let me briefly consider how these three assumptions shape the system and contribute (or not) to the outcomes that the social investment approach seeks to address.

The person or group in 'need' or 'vulnerable' is treated more as a subject to be acted on or an object to be modified. The stated intents to be 'child'-centred or consumer-focused are thin veneers that mask the fact that the power rests within the system. They do the assessment, they decide the rules and they determine the outcome the client needs to achieve.

The reasons for this assumption are likely to be varied and relatively buried. Having a better understanding of them is an important inquiry if we want to genuinely develop a more effective social service system. The person/group in need is targeted and defined by a cluster of risk factors or predetermined problems. The resulting impact of being defined by how they are failing (as determined by the system) is a consequence that is seldom considered or well understood. From the perspective of working face to face with people so defined, it is a significant barrier to progress. People defined as vulnerable are essentially passive recipient of services much like a person receiving a vaccination jab. They are relatively powerless to shape services let alone say whether something is working for them.

Under the second assumption, mechanical bias and related linear and binary thinking makes the process of designing and selecting successful interventions easier at the expense of a greater understanding. Phrases like 'line of sight' highlight this linear thinking. This assumption makes it possible for government to believe it can determine what interventions are effective in assisting a specific person. If it buys a specific service for a vulnerable person, it wants to know whether the service was effective in achieving the defined and desired outcome for that person. The measurement task involves measuring the changes in outcomes for the person ideally compared to a control group that didn't receive the service. What is measured is fixed, and measurement happens after the intervention to see if it worked. A positive outcome is confirmation that the ingredients and design of the service are right. This assumption enables an intervention to be neatly packaged into a discrete box. A set of rules and policies ensure it stays within its defined box and that it is not messed up by all the many complicating and dynamic factors the people under stress are immersed in.

At one level this all appears to make sense. However, the complexity of the many factors that influence outcomes are too hard to map effectively, let alone measure accurately. Other positive outcomes beyond those defined are either missed or labelled as unintended consequences, and other factors that influenced the outcome (or not) beyond the design of the service are missed.

The third key assumption, in partnership with the two prior assumptions, establishes the conditions for government to claim that a specific intervention has the most impact in achieving a defined outcome. The service users are passive, the paid experts know best and the problem is much like fixing a broken lawnmower. All the government needs to do is select the best service and plug in the targeted client group. In keeping with this mechanical view, the story that gets told is the story of the successes of the policy, the service or the delivery agency. The other part of the interaction is invisible: the stories of the individual who does the hard work of changing. The increased focus on outcomes puts more pressure on all players in the system to claim success for any assumed positive change. This only acts to increase the invisibility of the people wanting change.

Frequently in our work delivering government service contracts we are reprimanded by government agencies for allowing the client to set their goals. This is despite the stated intent in many contracts to be people-centred. In Family Start there is a checklist for what constitutes a child-focused goal. If a mother raising her children alone sets a goal of getting her driving licence, this is not regarded as child-focused. From her logic, having the ability to drive would enable her to get her children to key activities. Likewise, initiatives that emerge from a group of clients to self-organise an activity are frequently frowned upon. Our sharing of the desires and goals of young people in the care system is also frequently ignored by the system.

These three assumptions and the interventions that result from them in turn shape how current system-users respond. Their responses are directly linked to the system's design and are based on their own logic. The range of responses also creates the biggest frustration for the current system: how do we get the people needing help to engage fully in the service?

In our experience as a service provider, the smallest group among clients is generally people who already have some enabling factors, conditions or motivations. These people are able to engage positively in the services and as a result do experience positive gains from participating. This group is gold for providers – they really help the results look good. Some in this group may be regular users. They value the positive attention and support of being in a service and although a relatively small group they could be high users. This is seen as problematic by the system, and tight targeting towards higher and more complex needs aims to keep the group small. What is not well understood is the extent that engagement in a service by this group reduces the potential for more intensive support at a later stage.

The second group of people, my hunch the majority, learn to 'game' the system. This means they engage with the service 'on their terms' (according to their logic). They know what they are seeking from the service and act in a manner that helps ensure they will get it, without genuinely engaging. Through observing their family members' interaction with services they have learned the scripts necessary to appear to be a compliant service user and have concluded that by acting in this way they are most likely to achieve the outcome they are seeking (e.g., special benefit grant, food parcel or no punitive action). In doing so they maintain their personal integrity, because they have 'got one over the system'.

The third group is reluctant to engage in any service. They seek to have minimal contact with the formal system or opt out altogether. They run their own alternative, more informal systems to enable them to exist beyond the formal welfare system. These alternative systems can be relatively complex and unknowable. They include care systems (moving children between families if they perceive a risk that the Ministry for Vulnerable Children will remove them), economic systems (via the black economy/barter/crime), political systems (not registering and not voting) and justice systems (dealing with breaches in their own way). Successfully remaining outside the system is very challenging, and a common occupational hazard of this group is spending time in prison, which also doubles as a health system and housing system of last resort.

IMPLICATIONS OF THE SOCIAL INVESTMENT APPROACH TO DATE

The current social service system remains resistant to change. The three underlying assumptions and the corresponding broad types of user responses have achieved a form of equilibrium in the system (albeit dysfunctional). In this formal system all key actors have an interest in maintaining the assumptions and acting on their basis. Users tend to be reluctant to 'rock the boat' and the government and providers hold on to the perception that they are in fact effecting change (of course there is some positive change occurring but unevenly). It is this entrenched pattern that English's early insights highlighted.

Enter the social investment approach with the intention to disrupt this system to achieve better long-term outcomes. While initially exposing the limitations of the current system, the approach has failed to identify and challenge the three underlying assumptions. Why would they? The people leading the social investment system are largely the same key actors as in the existing system. The irony is that rather than reform the system this approach is actually leading to an intensification of it. Failure to appreciate the power of the key assumptions and how they shape the design and delivery of it limits the options to get better results. If the system isn't working, we just need to crank it up more to get the results? An indication of this is the intention to collect personal data on service users and take an intensified individually targeted approach.

Better targeting does not lead to better outcomes. There is little or no evidence to support this. Expressed another way, the process of identifying a person needing help is not linked to a better understanding of how to support them to change. This targeting capture is resulting in large investments in activity that avoid the central question – that is, how to achieve genuine engagement in helping services by people experiencing social and economic hardship.

The social investment approach, though well intentioned, has some real risks through compounding a very concerning situation for many people. Treating individuals as passive recipients, or 'victims', ignoring their insights and logic and maintaining a punitive-based entitlement regime, will over time diminish self-agency and the capacity of individuals to make positive changes. It risks pushing more people to opt out, unplug or zone out – with the result that more of them flow into the disengaged and hard-to-reach group (sometimes referred to as the 'underclass'). This trend will fuel the cycle of poor outcomes especially when we appreciate the intergenerational effect – which quickly moves beyond the 'social service' system to impact on the health, justice and education systems.

The cycle has the following type of pattern: increasing drug use (notably P), flowing through to deteriorating mental and physical health, increasing crime, increasing violence, increasing risk of gang membership, increasing prison muster and disengagement in the political process and mainstream systems. This cycle increases trauma at individual and institutional levels and leads to trauma-saturated family systems and organisations. Children growing up in such environments have their physiology and developmental capacity diminished, which thereby puts them at greater risk of needing specialist intervention, be it in education, the care system or the health system. The cycle leads to greater pressure on government expenditure over the long term – the reverse objective of the social investment approach.

CHANGING THE ASSUMPTIONS

Conversely, if the social investment system did acknowledge and change the underlying assumptions, then it could genuinely trigger better engagement for those deemed hard to engage and increase the chances of improved outcomes. Applying a client/community-led approach in organisations I work for shows some very significant shifts in attitudes and behaviours. While complex to measure the results are promising. This approach assumes:

- The person or group in 'need' or 'vulnerable' is critical in shaping the service and is central in the whole process (their voice needs to be privileged in the process).
- The person or group are complex and adaptive entities (no one group has 'the answer' and collaboration is critical).
- Most change is attributable to the person or group seeking the change (they are

the ones who do the hard work, change not noticed is not change).

The assumptions mentioned here have a sound and growing research base indicating they support effective outcomes.1 Scholarly research on effectiveness/ outcomes of social interventions identifies that 75 per cent of change is linked to the capacities of the individual, their surrounding support system and the relationship with the key worker, and only 15 per cent of any change is attributable to an intervention.2 This finding shifts the focus from identifying the 'most effective intervention' to measuring the change the client experiences and the quality of relationship with the key worker.

Partners for Change Outcome Management System (PCOMS) is one approach built on this body of research. It supports the person who is vulnerable to move into the driver's seat and steer the service. PCOMS recognises that the client is the best person to assess what works for them, and regularly measures if things are improving for the client and if their worker is effective. The data this measurement produces then informs discussions between them and their worker to jointly see what change could be made to improve the situation. This data is used in the therapeutic relationship in real time, and can be aggregated to gain an understanding of patterns of change and become a predictive tool to support treatment.

This approach gives a critical, client-driven view of success. In the current system the sole focus is on the identifying the best intervention to address a problem – a search for the holy grail. All attention is focused on only 15 per cent of the reasons for change. The majority (75 per cent) of the factors that support change are not understood and largely ignored. The client-generated data are collated into 'big data' and can be assessed in real time to inform practice and ongoing learning. This data is powerful in helping service providers (social workers, supervisors, managers) learn from their clients what is working and how to continually improve their practice and operation to be the best they can for their clients. The data indicates early on if an intervention isn't working for a client, which then prompts a change to get things back on track. The current system is wasteful by plugging clients into a programme then ignoring them until they finish and maybe then measuring if to see if it worked or not. This is too late.

The growing body of science built on an understanding of humans as living systems sees change through a complex adaptive systems lens. This approach suggests that due to the complexity of human systems our ability to measure causal links between discrete interventions is not yet developed. We need to shift the focus from the discrete 'intervention' to the set of relationships that surround people. This broadens the measurement focus away from narrowly defined outcomes to include subjective (real-time) changes in relationships and the person's experience of whether things are getting better for them. I have noticed that by widening the scope and definition of an outcome and reducing the desire to claim credit for any change we have actually increased our organisational focus on outcomes. After all, achieving outcomes is the only reason our organisation exists.

This new understanding also places an emphasis on relationships and core shared beliefs between the key players in the social service system. Translated into my organisational context this means giving attention to our organisational culture as experienced by people wanting help and focusing on the way we work. We are discovering that by being intentional in how we relate to people (externally and internally), and measuring how well we do, we support an organisational culture that is optimistic and grows and sustains trust and respectfulness. A core belief being that all people can change. The existence of trust and openness being key platforms for a client to consider genuine engagement and risk changing their behaviour and attitudes.

This organisational culture needs to be skilled in spotting and celebrating change in people. Our insight suggests that the status and health of the set of relationships that make up an organisation are critical to influencing the level of outcomes it can achieve. None of this is acknowledged or measured by the current system.

COMMUNITY-LED CHANGE

At a community level, changing the implicit assumptions can have powerful application.3 The experience of Inspiring Communities, an organisation dedicated to supporting community-led local change, highlights how many communities have taken active roles in shaping their community to be better places for their citizens. The examples and stories of this positive change can be viewed on the Inspiring Communities website.4 Studying these stories has distilled a set of features that appear important for initiatives to be effective. They are:

- have a diverse group involved in the leadership
- mobilise around a shared vision
- measure and adjust progress
- focus and build on existing strengths

Developmental evaluation provides a powerful tool to measure changes in the desired outcomes and the health of the relationships between key players continually through the process. This data is used by the local community to assess and tweak the process as it progresses.

A client/community-led approach challenges the core assumptions that sustain our social service system. This approach shifts away from trying to pick winning interventions that fix specific problems to becoming facilitators of a wider change process. More attention is given to outcomes as defined by the central actors (the people experiencing hardship and seeking change) and to the quality and breadth of relationships throughout the whole system. The intervention logic is geared to the client's theory of change as opposed to that of external experts. The process of measurement is broadened. There is interest and attention paid to the overall health and vitality of the whole system. Levels of trust and integrity are monitored via regular surveys, as are the quality of relationships and shifts in key outcomes via client-driven assessment.

As the approach is organic in nature, it is understood that there will be peaks and troughs. A dip in performance or outcomes will not trigger a punitive response but rather a process of inquiry to understand why and how it can be addressed. This enables the whole system to learn – acknowledging and growing the expertise embedded in all layers and players. In a dynamic adaptive complex system, the capacity to learn is critical to achieving positive outcomes.

A WORD ABOUT EVIDENCE

The understanding and definition of what constitutes evidence is influenced by shifting the core assumptions. The current system places primary focus on evidence derived from independent verified scientific inquiry. This is referred to as evidence-based policy. While clearly important, its limitations also need to be understood when applied to social services. The research results from many randomised controlled trials are carried out in highly controlled settings. The clients are carefully screened to ensure their problem fits the purpose of the intervention, and the researched programme is well-resourced. This design tends to remove the real-world problems that get in the way – issues like staff turnover, inter-agency politics, weak referral process, uncertain funding and so on.

These factors along with the tendency to not count the clients that drop out can limit their application to the real-world complexity of delivering a social service. This does not mean they lack value, but by widening the core assumptions to encompass a community/client-led orientation we allow a definition of evidence that can work better in the real world. This is understood as practice-based evidence. That is, what will work best for this child/family/community now – in this setting, with the resources and capacity we have at our disposal. In social service delivery we are always working in the 'now' – there is seldom the luxury of finding an ideal intervention. The challenges, complexity and dynamic situation make that impossible.

With a practice-based evidence approach the agency and key worker need to operate in 'real time'. In doing this they need to integrate their knowledge of the scientific evidence with the aspirations of the client and apply this in a way that works with the client's theory of change. A wider appreciation of evidence is needed to better capture the complexity of the environment social services operate in. This needs to validate practice-based evidence and evaluation approaches (developmental evaluation, most significant change) that align with the broader core assumptions.

THE CHALLENGE

The current social service system is under stress. This is a global pattern and the New Zealand social investment approach is one response to this stress – hence the high level of international interest in what we are doing. Rather than shift fundamental thinking, the approach has to date reinforced the worst aspects of the current system and intensified the negative impacts. In order to achieve the results, more of the same medicine is being prescribed at a higher dosage. We have all heard the adage that doing more (or even better) of the same thing and expecting different results is insanity. To get better results we need to try different approaches, expose the core assumptions to critique and treat clients as citizens and co-producers.

Politicians want change and responsive officials seek to deliver. This triggers a large amount of activity – reviews, panels, reports, leading to new structures, new operating systems and so on. External consultants free from the old baggage are engaged and government agencies jockey to be the most responsive. Publicly the politicians cite the positive change while internally they express frustration with the inertia in the public sector. A blaming culture is rampant. Aggregated data is presented in a manner to support the impression of positive change. The activity is intense and claims are bold. Through all this hype one group remain 'outside' the system – the users. They continue to be 'done to' by groups of experts, administrators and politicians – who wonder why they are hard to engage.

References

Bohart, A., and K. Tallman, 'Clients: The Neglected Common Factor in Psycho-Therapy', in B. Duncan, S. Miller, B. Wampold and M. Hubble (eds), *The Heart and Soul of Change: Delivering What Works*, 2nd edn, American Psychological Association, Washington DC, 2009

Bohart, A., and A. G. Wade, 'The Client in Psychotherapy', in M. J. Lambert (ed.), *Bergin and Garfield's Handbook of Psychotherapy and Behaviour Change*, 6th edn, Wiley, Hoboken, 2013

Cooper, M., D. Steward, J. Sparks and L. Bunting, 'School-Based Counselling Using Systemic Feedback: A Cohort Study Evaluating Outcomes and Predictors of Change', *Psychotherapy Research*, 2 (2013)

Duncan, B., J. Sparks, S. Miller, R. Bohanske and D. Claud, 'Giving Youth a Voice: A Preliminary Study of the Reliability and Validity of a Brief Outcome Measure for Children, Adolescents, and Caretakers', *Journal of Brief Therapy*, 5 (2006)

Duncan, B., *On Becoming a Better Therapist: Evidence Based Practice One Client at a Time*, 2nd edn, American Psychological Association, Washington DC, 2014

Inspiring Communities, *Learning by Doing: Community-Led Change in Aotearoa NZ*, Wellington, 2013

Lambert, M. J., 'The Efficacy and Effectiveness of Psychotherapy', in M. J. Lambert (ed.), *Bergin & Garfield's Handbook of Psychotherapy and Behaviour Change*, 6th edn, Wiley, Hoboken, 2013

Notes

1 B. Duncan, *On Becoming a Better Therapist: Evidence Based Practice One Client at a Time*, 2nd edn, American Psychological Association, Washington DC, 2014; A. Bohart and K. Tallman, 'Clients: The Neglected Common Factor in Psycho-Therapy', in B. Duncan et al. (eds), *The Heart and Soul of Change: Delivering What Works*, 2nd edn, American Psychological Association, Washington DC, 2009; A. Bohart and A. G. Wade, 'The Client in Psychotherapy', in M. J. Lambert (ed.), *Bergin and Garfield's Handbook of Psychotherapy and Behaviour Change*, 6th edn, Wiley, Hoboken, 2013.

2 M. J. Lambert, 'The Efficacy and Effectiveness of Psychotherapy', in Lambert (ed.), *Bergin & Garfields's Handbook of Psychotherapy and Behaviour Change*, pp.169–218.

3 Inspiring Communities, *Learning by Doing: Community-Led Change in Aotearoa NZ*, Wellington, 2013.

4 Inspiring Communities, www.inspiringcommunities.org.nz (accessed 8 September 2017).

Part 5
Concluding Reflections

Chapter 21
Governance, public policy and public management

Graham Scott

INTRODUCTION

If social investment were a river it would be one of the great braided rivers of the South Island.[1] It would have multiple origins and tributaries and streams that join and separate only to merge again. What people see in it depends on where on the riverbank they are standing and which of the streams they are looking at. Some people focus on the advanced use of data analytics within the existing structures of government. For others it is an attempt to extend long-standing concepts of investment in government decision-making into social policy in a more analytical way. For others it is a quite radical change in the use of evidence in policy-making.

Some see a major change in the concepts and processes for allocating state resources to achieving results that span – and go beyond – the mandates of ministries and adjust the roles of the Social Investment Agency (SIA) and Treasury to support this. Finally, for some it offers a potential for a radical decentralisation of the relationship between state and citizens, particularly those who experience multiple causes and symptoms of disadvantage and can benefit from tailored and integrated support from both state and non-state providers.

It is not surprising that some observers think they see a mean-spirited and fiscally driven method for targeting the welfare state more efficiently, while others look to the sunny uplands where they see an exciting and positive reframing of the relationships between state and citizens, with the promise of addressing the most entrenched areas of disadvantage, which the status quo is plainly failing to address. A few commentators see both.

Much of the writing about social investment begins by offering various definitions. Mostly these emphasise the use of new data sources – particularly integrated administrative data from government agencies – and analytical methods to segment populations and test policy ideas targeted on these segments. The writers then proceed to describe, critique and make proposals about particular aspects of social investment which caught their attention.

Given the multi-faceted way social investment evolved, all this is a predictable pattern of enquiry and comment. However, it is somewhat akin to the story of a group of sightless people describing an elephant by feeling its various parts. In this case it might turn out not to be an elephant at all. Where social investment is going is unknown at this point. As a consequence of this situation, a lot of rather 'edgeless' concepts are found in the conversation.

Some of the edges are missing because people are extrapolating from places where concepts and methods are safe to places where they are not. To illustrate the point, actuarial analysis is plainly a useful and appropriate tool for social investment in some circumstances. But some of the proposals for methods of social investment elevate actuarial analysis into realms where it cannot carry the weight that is implied and could lead to serious distortions to social and fiscal policy. It is dangerous to regard an actuarial estimate of a future cost to the state of an individual, on the basis of their personal history, or even a group of such individuals, as a general proxy for a social outcome. And it is dangerous to regard a reduction in an actuarial estimate of future costs to the state as a measure of improvement in social outcomes.

That said, there are particular circumstances and policy areas in which these fiscal calculations can be regarded as useful, or at least contributory, indicators of policy outcomes. Policy analysts and decision-makers need to be skilled in judging when to use actuarial analysis and what purposes it can and cannot serve.

The conversations about privacy within social investment seem similarly edgeless. It is not enough just to invoke the principles of the Data Futures Forum or park the privacy problems in a box marked 'social licence' for further consideration. The risk is that the state is giving itself social licenses. The details of how to give effect to these concepts are crucial. It is not sufficient to hear ministry spokespeople, when questioned about privacy issues, just respond that they are working very closely with the Privacy Commissioner on that.

The writer's perspective on the debate about social investment is to try to ground it in conventional principles and practices – with some adaptations – of sound public sector governance, policy-making and public management. This can be helpful in putting edges on some of the concepts and practices that have emerged.

This chapter reflects on a collection of issues that can be usefully clarified and progressed by viewing them in the way just described. These reflections draw partly on the paper the writer wrote on behalf of a committee, which he chaired in 2016, in response to a request from the then government for advice on the governance of social investment.[2] For brevity this is referred to here as the Governance Report. Other reflections arose from reading chapters in this edited collection and from discussions with many people working on social investment.

SOCIAL INVESTMENT AS INVESTMENT

The story of the development of social investment over the last decade highlights an analysis, which was presented to Cabinet in 2009, showing that a sample of 2,000 young people who had been the subject of notifications to the Child Youth and Family service (CYF) were predicted to cost around $0.75 billion in costs to corrections services over the course of their lives. This prediction was based on analysis of 20 years of historical data that linked CYF and Youth Justice Service data on individuals. The analysis did not include other kinds of expenditure by the state on these individuals, nor did it purport to be a comprehensive social cost-benefit analysis, or other methodology, to respond to these facts from within a conventional public policy framework. It dramatised the fact that the state had within its purview children who were probably going to cost it a lot of money over time, unless policies and the associated services steered their lives onto a path seen to be preferable to the one represented in the historical correlations. It starkly posed the question about how the state's future costs might be reduced by spending more money now, or spending it differently. And it invoked the idea of a rate of return calculated as the probable reduction in the future costs to the state of these people, divided by the incremental extra expenditure on them now. Hence this can be called investment in the sense of spending money now to save money later.

Much has been said in the chapters in this collection about what the concept of investment is adding to social policy. Michael Cullen's Chapter 17, for example, asserts that little or no difference would be made to the discussion if the word 'investment' could be replaced with the word 'spending'. That chapter also makes a brief reference to the concept of investment in the practices of accountancy. This point deserves elaboration by reference to public sector accounting conventions and also to the economist's concepts of investment analysis using social cost-benefit analysis.

Under traditional accounting practice an investment is a form of expenditure which results in an asset that lasts longer than the current accounting period. The cost of the asset over the course of its life is recorded as a non-cash expenditure for depreciation year by year. The asset produces either revenues from sales or user charges, while decisions about whether to make such investments are based on an assessment of the size of these revenues compared with the cost of the asset – the rate of return. In a purely commercial context the streams of cost and revenue are also implicitly the social evaluation of the investment. There is assumed to be no market failure driving a wedge between private and social cost and benefit.

Many public assets do not generate revenues, or at least have a very low rate of return, but are undertaken anyway because of social benefits not captured in these revenues. The processes for making these decisions are well-established in the use of feasibility studies, cost-benefit analyses, financial analysis and risk assessment, and in the processes of advisers and ministers. The management of these investments is conducted through institutional arrangements such as state enterprises, Crown entities and ministries, joint ventures and public-private partnerships (PPPs). Strategic planning is conducted through these agencies and amalgamated into high-level strategies overseen through the Infrastructure Unit and other arrangements. Against the background of these conventions and arrangements, what does social investment mean? There has been more than one answer to this question.

This concept of investment is very different from, say, building a road. It is more analogous to the decision a homeowner makes to either repaint their house now or let the existing paint deteriorate to the point where it has to be scraped back to the wood before repainting. She might delay the expenditure if she expects to have more money in the future. No new asset has been created and most people would regard the expenditure as maintenance or possibly some upgrade of an existing asset rather than investment. Tax rules can get very precise about these distinctions.

While applying accounting concepts to humans might seem uncomfortable, in social investment the assets in whom the state is investing are people. But, unlike roads, the state does not own them and they appear on no one's balance sheet. Their well-being over the course of their lives is the result of many influences, of which government social policies are only one. So if the state's support of people through social policy expenditure is to be called investment, then it is investment in improving their lives in some way, reducing their disadvantages or providing support in difficult times, without which their future might be adversely affected.

Thus social investment is investment both in the sense that the state is spending money now in order to spend less later – a fiscal construct – and also in the sense that it is expenditure to support people to make better lives for themselves, families and communities. The new methods of fiscal analysis are giving ministers richer information for decision-making about resource allocation in social services on a longer time-frame. Also the upgrading of the social cost-benefit method used in screening Budget requests, together with the advancing analytical capabilities of some ministries, is providing new information to support policies to sustain and improve people's well-being. These developments are something new and can justifiably be described as being about investment. But they have not been absorbed far into the totality of social expenditure and it is an open question as how far they will ever be.

FISCAL LIABILITIES AS PERFORMANCE TARGETS

Using the sample of 2,000 young people described above to illustrate a point: the quality of decisions by the government about how much to spend on the children this sample represents, and on doing what, depends on what its social policy objectives are and on legislative frameworks that both authorise and constrain it, together with providing for citizens' rights. This involves the standard processes of analysis, advice, decision-making and implementation of public policy. Information about the correlation between CYF notifications of young people and their appearance within the corrections services in later years as adults is an interesting input. But in a standard public policy context, the desired outcome concerns individual welfare within a family and community context. An improvement in policy brings a more effective contribution to that welfare, which might be assessed by a range of indicators. A policy focused on steering these people away from going to prison would be too narrow and risk distortions. But it could be one of a number of performance indicators – both ones to be sought and ones to be avoided.

Framing the policy-making processes in this conventional way helps in reflecting on the use of actuarially calculated future fiscal costs as performance targets. Under what circumstances is this likely to be an efficient and effective way of meeting policy objectives?

Boston and Gill in Chapter 1 usefully distinguish between Model 1 of social investment, which had a narrow focus on the conjunction between welfare dependency and the associated forward fiscal liability, and Model 2, which is far broader and has evolved to become the social investment framework today. As the scope broadened it became less well-defined and more exposed to risks in terms of good public policy-making practices.

Specifically, Model 1 partly owed its inspiration to methods used in ACC that were seen to be relevant to Work and Income's management of unemployment benefits. The goal for ACC is broadly to get people back to work and the management of this process is about choosing treatments and rehabilitation that achieve this end. It is sensible for a calculation of the costs to ACC of keeping a client on its books and paying earnings compensation to be weighed against options for getting the person back to work, or at least off ACC's books when the treatment is complete. Across large samples of clients ACC can build its knowledge and practices about what works best for clients with particular needs, by reference to providing services that clients are entitled to, while minimising the net costs to ACC.

Concepts and practices in ACC were one source of inspiration for social investment. However, the shift from Model 1 to Model 2 has raised questions where the ACC analogue runs into problems. With the broadening of scope, the areas where fiscal targets provide a workable or reliable proxy for policy outcomes become a special case rather than the general case. Underlying the special case is commonly the fact that the policy objective does not explicitly include a broad consideration of individual social outcomes. Getting somebody able to work again or rehabilitated from a non-work accident is the policy objective. It is just assumed that this is better both for them and the wider social welfare. Given that there are regulations around the quality of the service to do this, the risk that using a fiscal indicator as a success factor will cause distortions is low. Rehabilitating people faster and at lower cost serves their interests as well as those of the payers of premiums. There are detailed test criteria that define when a person's treatment is at an end, e.g., the injured leg has recovered to the stage where it has x per cent of the strength of the uninjured leg.

However, bringing these general ideas across into the employment services and beyond raises complications of the kind pointed out by some of the critics who have contributed to this volume. For example, getting a person off the unemployment benefit does not necessarily mean they are in sustainable employment, which would enhance their long-term well-being. So a fiscal target of reducing the cost of the unemployment benefit can be distorting, particularly if it is used as a basis for high-powered incentives on service delivery. Rather, the appropriate target should be about the person's work status. The reduction in unemployment benefit costs is a consequence of the policy with this purpose, or at least one performance indicator among others.

The number of relevant performance indicators expands with the broader scope of Model 2, but this does not diminish the importance of putting fiscal considerations in their proper place and putting the new tools associated with social investment to good use in fiscal analysis and advice. For finance ministers and Treasury, fiscal forecasts and scenarios are essential, as is sharp scrutiny of the fiscal implications of policies. In this context, predictive models, like the one that shows what future corrections costs for adults might be on the basis of characteristics of children today, are valuable new tools for fiscal analysis. That said, finance ministers and Treasury also have views on public policy proposals that require considerations beyond fiscal analysis alone. Treasury needs skills in both fiscal and social policy analysis.

It was on the basis of considerations like these that the Governance Report recommended that fiscal analysis, defined as money in and money out over time, be one component of the government's consideration of policies proposed in the name of social investment. The wider assessment of social policy should be done within the normal processes of policy analysis and decision-making, but exploiting the new databases and new analytical tools. Together with fiscal considerations, decisions are made – at least implicitly – on the basis of social cost-benefit analysis, which is augmented by political judgment of matters that are ambiguous and hard to quantify.

In contrast, the committee that produced the Governance Report had been asked to advise on a hybrid proposal, which placed heavy reliance on actuarial methods to isolate promising social investments, make proposals and hold service delivery organisations to account. While acknowledging that there are particular circumstances in which the actuarial calculations can be a pragmatic proxy for a social outcome, this is not generally the case. Hence the committee's advice was to keep fiscal and social analysis as separate but related streams of advice. While the contrasting proposal allowed for both fiscal and social outcomes to be taken into account, the hope was that the forward liability could capture most of the social cost and benefit also.

In my experience, a cost-benefit calculation grounded in fiscal calculations, but then heavily modified by arbitrary monetary valuations on social and personal indicators, is inferior to making judgments based on good fiscal analysis and good social policy analysis. To illustrate the point, one social service provider using social investment tools recently declared on radio that a young person gaining their self-confidence is valued at $19,000 in their model. The range of possible estimates for this would be wide and the results large in relation to the costs of services being provided. Whether and what to provide a young person is likely to be significantly influenced by an estimate that inherently entails some speculation. In the wake of the Governance Report, the government decided to keep the parallel streams of fiscal and policy advice, while pressing ministries to use the new perspectives and methods to improve their service delivery and bring much better evidence to ministers for resource allocation and decision-making.

COLLECTIVE IMPACT, THE ROLE OF THE STATE AND THE LIMITS OF COORDINATION

The sponsors of social investment intend it to address their concerns about social policy regarding what is being done and how it is being done. Bill English repeatedly emphasised his concern that, while the ministries speak about being customer-focused, in reality they deliver what their organisations are set up to do. Tariana Turia had gone further in saying the providers are benefiting from other people's misery. This theme within social investment is about reforming service design and delivery, so the services people get are more tailored to their situations and needs. Some ministries and also some district health boards have made good progress with becoming more client-focused, through using the new data and analytical methods to improve their service effectiveness. They have also changed their models of service design and delivery. Some of this work is sophisticated and effective, as illustrated by Tim Hughes's contribution on the justice sector (Chapter 7). In the health sector the Canterbury District Health Board's clinical alliance has been a leader in developing treatment pathways for patient segments and community health programmes that bind all the participating providers in an integrated service delivery model.

However, much of the current activity in the name of social investment is typically done by ministries working within their own mandates or with nearby services, as in the justice sector. Where citizens' needs for service span state organisational boundaries, coordination problems arise, which can be severe when the citizens have interrelated needs that do not fit naturally with the service mandates of ministries.

Coordination among ministries has been a constant theme in discussions of state sector management, at least since it was given prominence in a speech by Jenny Shipley as Minister of State Services in 1997.[3] That speech can be represented as marking a shift in strategy from emphasis on economic policy towards social policies:

> Many, indeed, most New Zealanders, want us to have economic opportunities and social service programmes that provide prosperity, inclusion and social cohesion. This is the most difficult of public policy areas, but that cannot be an excuse for accepting or defending the status quo.

The implications she had in mind for the state services included commitment to government strategic goals, better policy advice, better management capabilities, more attention to outcomes and more collaborative modes of behaviour among ministries. It is a timeless and familiar agenda. The significance to social investment is that the search for better social outcomes has challenged the state for a very long time, which raises the question of why horizontal coordination across the state is so hard.

Jenny Shipley's speech endorsed the public sector reforms of the 1980s and early 1990s, the basic architecture of which has remained unchanged since. In the 2000s there was some easing of the controls on Budget appropriations and the Better Public Services (BPS) initiative in 2012 went a bit further with this and extended the State Services Commission's (SSC) oversight of the state sector. It is curious that the Public Finance Act amendments dropped the requirement for outcomes.

Some observers, including Michael Cullen (Chapter 17), point to the Public Finance Act and the State Sector Act as the source of the coordination problem, which begs the questions 'compared with what', why governments headed by seven prime ministers did little to change these acts and why the BPS initiative has not put an end to the coordination problems. This view also undervalues the progress made in improving cross-agency coordination, especially among parties with natural affinities, as in the justice sector.

There is no evidence that ministries prior to the passage of these two acts were paragons of collaborative behaviour, and some evidence to the contrary.

Shifting the definition of Budget appropriations from inputs to outputs and giving chief executives more flexibility to manage inputs should promote the scope for collaboration, though not ensure it. The private sector displays more creativity in collaboration for commercial purposes than the public sector, in spite of having tighter systems of accountability than these two acts impose on the latter. While a case may be made for further modification of the Public Finance and State Sector Acts, it would be naive to conclude that the problems of coordination would thereby be resolved.

It is reasonable to conclude that the sources of these problems lie in a wider agenda, key elements of which are the Westminster arrangements of our democracy. There is no escaping the implications of diverse ministerial warrants and accountability of ministers to Parliament. Ministers have their own agendas, which never merge into an integrated whole at the level of detail they engage in. A Cabinet is not a board of directors, while ministers are rivalrous and driven to manage the politics of their portfolios. Strong vertical lines of accountability of ministries to their ministers are hard-wired. Ministries cannot collaborate with others against the will or the priorities of their ministers. Joint accountabilities and merged budgets are difficult to establish and manage across these vertical lines. Even where ministers are committed to collaborate on policy and coordinate their ministries to deliver it, they cannot coordinate service delivery at the level of detail and with the client focus that social investment envisages. Besides which, so-called silos have the great merit of being the channels through which ministers get things done.

All large corporate organisations find managing matrices of vertical and horizontal lines of accountability an endless challenge. The strongest line of accountability usually wins, and where they are evenly balanced, conflicts tend to escalate to the top of the organisation, with the potential to overload it. Business case studies commonly dwell on values and culture as the approach to solving these problems.

So how does the government deliver on a vision of social investment that includes the delivery of services that:

- are not biased by restrictive silo mandates;
- are tailored to the specific situations and needs of citizens that change over time;
- are an evolving amalgam of services drawn from mixed public, community and private providers; and
- engage citizens in strategies for their own well-being?

Perhaps this is more than a government can hope to achieve. But the blunt answer to the question is that, if this is what the government wants, then this is what it should be paying for. A purchasing function to do this is needed. Instead, governments are asking ministries, whose mandates are specified in laws to provide particular kinds of service and who have strong vertical lines of accountability to their ministers, to collaborate in producing blended, tailored and evolving service packages in partnership with non-state actors. They can only get so far in adding providers into the model of service delivery before the coordination challenges become overwhelming. The ministries are being asked to do things they were not designed to do, although in some cases making good progress where the span of participants is manageable. Some specific coordination issues are noted below.

A feature of the reforms of the 1980s and '90s that was abandoned was the separation of purchasing from provision. In the health sector this arrangement facilitated the development of integrated health services for various demographics such as the 'well child' programme, maternity care and the build-up in capability of Māori health clinics. It worked because these integrated services were what was being paid for. For example, in maternity care, rivalry between GP obstetricians and midwives had stymied the development of an integrated maternity service, until one of the funding authorities signalled it was only willing to fund services in which these two groups were collaborating – problem solved. A purchaser can be a counterbalance to the weight of providers' interests and politics on behalf of users and promote service integration.

Work is needed on how a planning and purchasing function, which specifically supports service delivery through collaborations between providers, might be designed and operated. In circumstances where the provider is a group of ministries or their Crown entities, the architecture for service delivery is in place, with a few modifications. But the question arises as to what the provider vehicle is, when it is not part of the existing architecture. Also the concept of purchasing implies that the purchaser knows what to purchase and from what kind of provider. This is not always the case, and the solution is an expansion of the concept into 'commissioning', as discussed below.

In its report on better social services, the Productivity Commission concluded, on the basis of extensive consultations, that social services meet the needs of many if not most New Zealanders but:

> New Zealand needs better ways to join up services for those with multiple, complex needs. Capable clients should be empowered with more control over the services they receive. Those less capable need close support and a response tailored to their needs, without arbitrary distinctions between services and funds divided into 'health', 'education' etc.4

The commission concluded that a new model was needed to support the most disadvantaged citizens – those who have complex needs and limited capacity to identify and access services. Derek Gill (Chapter 6) reproduces the commission's 'quadrant diagram', in which these people appear in 'quadrant D'. Key characteristics of this model are that it would make decisions about what services citizens need, based on their characteristics and situation and abstracted from the pressures to use the services of any particular line ministries. Decisions about services would be made by people close to the situation and the integration of services would be made by them and the citizens in question. Where numerous parties need to be involved to provide an integrated service, some organisation, based on the principles of 'collective impact', would take on the responsibility. State agencies could be involved with these organisations in whatever way was necessary to provide the service. Innovative governance, funding and contractual arrangements between state and non-state agents would be developed as appropriate to the situation.

The Governance Report went further than the commission in its advice about how this might work. It broadly endorsed the work of the ministries in using social investment tools to improve their services, but elaborated the problem that arises wherever the needs of citizens call for integration of services to achieve desired outcomes. This is not just about integrating services such as health and housing at the frontline, but also challenges the line ministries and their ministers administratively. For example, what happens if the consequence of a family not qualifying for housing support results in their children moving schools and compromising their education? As GPs are the decision-makers about people going on sickness benefits that are paid for by the Ministry of Social Development, should the Ministry of Health carry some accountability for the costs of the sickness benefit? If several ministries acting together achieve a substantial reduction in the fiscal liability of a target group, which if any of them see the benefit through an increase in their funding, or more freedom to reallocate funding? Some key players in social investment report that these issues are proving to be a real headache.

The conclusion the committee reached was that a new model of service delivery is needed, based on the principles of collective impact. Some descriptions, references and elaboration are provided in the Governance Report. It is sufficient here to explain that a collective impact vehicle takes on the responsibility for providing support to target groups. The philosophy is that the service providers respond to needs that emerge over some period and can do so flexibly without prior commitment that any particular intervention will be needed. They also have continuity with the citizens they work with and the expectation of building trust over time and deeper understanding of the situation. The Governance Report does not propose that collective impact be used throughout social investment, but that it provides a promising approach to situations where the coordination problems in the mainstream system are most difficult.

The committee followed the Productivity Commission in emphasising the importance of commissioning, which is the process by which ministries or other authorities examine a situation, decide on what kind of response is needed and select the governance, funding and organisational form and leadership of the vehicle through which the response will be delivered. In other words, commissioning goes beyond purchasing and is essential when the authorities do not know in advance the solution to the problem they are trying to solve. Policy analysis and the design of service delivery are merged in a single process with minimal prior commitment to the best way to proceed.

This solution to particular kinds of situation could not be deployed across the whole of social policy. It would not make sense to use it for citizens with simple needs and reasonable capacity to access services. Rather, the committee proposes that it is a workable solution for situations where the mainstream ministries are very disadvantaged by administrative challenges in coordinating their services into tailored packages for particular kinds of target groups in quadrant D. But it is too soon to know how extensively commissioning could advance social policy, as the skills and knowledge about it have yet to develop.

The Governance Report recommended strengthening the Social Investment Unit by broadening its mandate, growing its capability and turning it into a departmental agency in the SSC, which the former National-led government did in July 2017, renaming it the Social Investment Agency. The report recommended strengthening the agency's capacity for commissioning, both by itself and through assisting the ministries. Thus far this is being done through the development of tools and a commissioning platform, but a lot of development is still needed to reach the levels of capability proposed. The report was not doctrinaire about who should do commissioning and how, but was definite that the system should keep open options that do not necessarily flow through the line ministries. The gravitational pull of the ministries within the system can create a tendency to capture resources that might better have passed to diverse frontline collective impact vehicles addressing particular target groups.

The committee also addressed how collective impact vehicles would be funded in a way that stopped the existing vertical lines of accountability within ministries from constraining their initiative. The essence of the proposal is that a collective impact vehicle, funded in whole or part by the government, would need to have its objectives, its governance and business plan approved; and someone, possibly a government official in a large one, would take the role of 'treasurer' within the governance arrangements. This person would have the delegated authority from the 'investment manager' to release funds into the collective on being satisfied that proper financial controls are in place and that the money is being spent for the intended purposes. The investment manager might be a minister or senior official. There are other technical issues following from the Public Finance Act, which are addressed in the report.

When the authorities are deciding whether to use a collective impact vehicle in a particular situation they can make a judgment, from the perspective of the service recipients, as to the relative costs and benefits of using a process that relies on successful coordination between ministries and/or Crown entities or using a collective impact vehicle. Over time and with experience these judgments would get easier. The report recommends seconding officials from mainstream ministries to task teams to be involved in the design of collective impact vehicles, to bring their knowledge of particular services, but also to gain insights about how things might be done differently in their host ministries.

The essential point being argued here is that there are limits to what can reasonably be expected by way of collaboration between ministries in the delivery of integrated, tailored services to people with complex needs and limited capacity to access services. Perhaps those limits can be further expanded, as Oranga Tamariki will have to. But it should be accepted that we are somewhere near those limits today with very vulnerable people, which provides a partial explanation for the persistent long tails of disadvantage. There needs to be another channel of governance and funding to reach these people – one that can build trust with people over time and respond flexibly and quickly to evolving situations.

Equally important is the point that such vehicles be conceived as partnerships between the state and others, including the service recipients, in finding practical pathways to better outcomes. This is not about the kind of hierarchal, narrow and detailed contracting done under the conventional procurement regulations of the government. The proposed channel of accountability allows greater flexibility and is exercised through delegations as described above. The concept is somewhat aligned with the concept in Michael Cullen's chapter of a 'partnership state'. In the same vein, Table 6.4 in Derek Gill's chapter contrasts the character of social service delivery of the existing system with how it might be under an approach such as the collective impact model. There are precedents and working examples of some aspects in the so-called place-based initiatives and also through Whānau Ora. It is time to build on these experiences, putting the central government infrastructure in place to be able to scale the initiatives and break out of some long-standing weaknesses in the way the social ministries serve people with complex needs and low capacity to deal with them. Collective impact models are part of the solution.

One of their advantages is that they allow the state to be involved in a collective vehicle but as a participant if it is not the dominant funder. Even where it is the dominant funder, the experience of the Canterbury DHB and the literature on collective impact show that success requires funder behaviours quite different from existing behaviours seen in many micro-managed funding contracts.

There is reason for concern about a future in which charities and NGOs are co-opted by the state as contracted service providers. Submissions to the Productivity Commission revealed that some of these feel co-opted today and are very reluctant to criticise the administration of social policies out of fear of negative consequences for their contracts. Such arrangements can change the nature of the voluntary sector and NGO service providers for the worse. These organisations are part of civil society and their independence is vitally important to our democracy.

While collective impact offers a potential solution to some coordination challenges among ministries and ministers, if it proliferates in an unmanaged way it can create another kind of coordination problem. Jo Cribb (Chapter 12) refers to international experience that has ‘shown the drive to create social enterprises that develop innovative and hybrid responses to social problems, often at a local scale, has resulted in fragmented delivery and potential duplication’. To mitigate this, the governance structures and processes for social investment need to develop strategies for policy and service delivery that respond to collective impact initiatives on the basis of their comparative advantage for addressing particular kinds of issues and with a concern for efficient and effective coverage of the target populations. This would not be easy, but the central functions of the purchasing and commissioning could map the landscape of social policy over time, using rich data and advanced policy analysis. This would help to target social investments on groups where there are high potential benefits in relation to government strategic objectives and to resist overlaps and duplications. This was a core objective in the report by Matt Burgess and Denise Cosgrove to which the Governance Report responded.5

BUDGET FUNDING FOR SOCIAL INVESTMENT

The impact of social investment on the Budget thus far has been the review of proposals for new money in social policy being vetted by a panel consisting of government science advisers and others, together with the upgrading of Treasury’s cost-benefit methodology to be more directly relevant to social investment proposals. Both these initiatives have been reasonably successful in building capacity to filter proposals and align them better with social investment objectives.

A further initiative, following the Governance Report, was to introduce a new channel of funding that is earmarked for social investment proposals and for which the Budget constraint is the quality of the proposals coming forward. It is not a fixed pot of money for which ministries compete. This new channel – known as ‘Track One’ – was designed to immunise good-quality social investment proposals from being squeezed out in the Budget process by baseline funding adjustments and other kinds of new policy proposals.

So far the experience shows that the quality of proposals coming forward in Track One is to be commended, although they are coming from the ministries. Outsiders and collective impact vehicles are not sure how to respond at this point. However, these changes in how the Budget works offer prospects for funding collective impact vehicles and represent practical changes in the infrastructure to support social investment, in order to remove what might otherwise have been a potential block to its progress.

DATA ISSUES

The data story in social investment has been dominated by the linking of the government's administrative data. This has yielded large improvements in the administration of policies as, for example, the linking of benefit and tax data, which produced large fiscal savings from matching tax and welfare records. There are many other examples of improved administration from data linking. From the early use of analytical methods such as the work on the sample of 2,000 young persons described above, the analysis of data has become sophisticated and widely applied in some, but not all ministries.

The Integrated Data Infrastructure (IDI) has developed rapidly and the SIA created an analytical layer across the IDI that makes it easier for data analysts to sample and test their views on this vast base of administrative data. The current focus is on bringing in data from providers who have government contracts for delivering services. So far this 'data exchange' absorbs provider data, but is not yet feeding data back to providers. Some providers and the Privacy Commissioner are uncomfortable about handing over their clients' data out of concern it may undermine their trust, while the media and various critics have raised concerns over privacy issues and the apparent pressure on non-government providers to supply such data. However, it must be said that some providers are enthusiastic to share their client data, although it may not be the view of their clients.

Data on the health records of citizens abounds on the basis of the system of NHI numbers. But some health data for individuals sits in primary care patient databases and includes information that patients would not expect to see passed on. With the explosion of data for individuals collected by smart watches and the likelihood of genetic data for individuals becoming ubiquitous, there is a clear need for refined policies from which decisions about what goes into the IDI, and what should not, can be made. The situation is not at all clear at present and very fluid. Big questions remain to be answered. Generally the state should have rights to the information that it needs for its legitimate functions. There is a long tradition of information from citizens that is collected using the coercive powers of the state being subject to protection under the Statistics Act. The Government Statistician takes the confidentiality of this information very seriously. It is anonymised and controlled to protect confidentiality. Access to the IDI is carefully controlled with a preference for public-interest researchers.

These established practices in relation to administrative data and official statistics may be at risk of being overwhelmed by the general explosion of data availability in society and the resulting erosion of privacy. Attitudes to privacy appear to be changing. Even so, policies governing what data the state can collect and what it does with it remain a foundational issue in a free society. Just because data can be collected does not mean it should be. Policies are needed to regulate the development and governance of government databases, which in relation to social investment should be sharp enough to control and give assurances to the public about what information about them goes into these databases and how it is used. It is encouraging that the current endeavour to revisit the Better Public Services programme includes attention to these issues of regulation and governance of government data.

The work of the NZ Data Futures schema distinguishes between data that is used with consent and that which is not. Within the latter it distinguishes data coercively used for personalised purposes from that which is coercively harvested but used anonymously – like census data. The privacy issues are serious where coercively gathered data is used for personalised purposes.

One spokesperson for a ministry, interviewed on Radio New Zealand recently, responded to the interviewer's critical statement that the client data from providers, which the government insists on having, is about people's lives and should be protected, by agreeing it was and adding that 'we' will use it to 'make their lives better'. It was a response under pressure and not a statement of government policy. It is not clear whether what was meant was that the data would be anonymised and analysed with large samples to test hypotheses about the effects of policy changes, or used to provide personalised services to identifiable citizens. There is a big difference and maybe something else was in mind. This serves to illustrate the need to tie down the policies that reflect the Data Futures principles before issues of trust and privacy grow more prominent.

The question of permission comes down to trust and transparency with those whose interests are affected by the data in question. But the questions of who owns that data and who should give permission to do what with it are not simple. Somewhere downstream from the person whose life a piece of data concerns, any claim they have to control over it has been diluted to the point of extinction, unless of course it is still identifiable. When regulatory policies catch up with information industry developments, principles and policy decisions will evolve to locate and regulate where this point is. But short of this point, there are possibilities for the regulation of reuse of personal information based in private arrangements.

An intriguing general approach to these questions, which is not specifically directed at social investment issues, is being developed by James Mansell and his collaborators and goes by the name of the 'Data Commons'.6 It is concerned with data integration and reuse and is grounded in the principles of the Data Futures Forum. The problem the Data Commons is trying to solve is expressed as follows: 'data reuse interests tend to address only their own needs – frequently overlooking the interests of the data contributor. At best there is lip service to consent, minimal personal control for the contributor, or at worst coercive harvesting of data. Because these attempts fail at trust, they become costly and hard to scale.'

Within this construct, data is viewed as a common pool resource or a kind of public good, which aligns with the work of some prominent economists including

Nicholas Gruen who are working on the production of data as a public good.7 A Data Commons, according to Mansell et al., 'simply put, is a way that communities can agree on how to share their data, add to the value of their data over time, and manage the risks of its integration and reuse. Through the establishment of a Data Commons, a wider group of potential data re-users can realise more of the value for themselves and their communities safely and in a way that is high-trust and mitigates the risk of misuse.'

In essence a Data Commons is a set of protocols in a 'protocol stack' governing relationships between participants and the transactions between applications sending and receiving data.

No conceivable government database will ever have in it all the information sufficient to support robust evidence-based policy-making and service delivery. The administrative data, which is the core of IDI, is yielding useful information and will continue to do so in the coming years. But government administrative data will shrink over time as a proportion of the universe of data that researchers and policy-makers will have available. The search for insights for more effective policies must go much wider than exploring administrative data, which the government can claim a right to. The technical and legal protocols and the permissions needed to merge government data with other sources need close attention. Artificial intelligence robots are becoming ubiquitous, raising issues about what they are permitted to access.

CAPABILITY FOR TECHNICAL ANALYSIS

Some of the rhetoric in the name of social investment is superficially persuasive, but if taken literally implies some naivety about behavioural models, statistical inference, hypothesis testing and other aspects of the search for causal relationships, on which to base policy changes. Correlation is not causality and the assumption that correlations that held in the past will continue into the future carry risks, as highlighted by Tim Hughes (Chapter 7) and Amanda Wolf (Chapter 9). Administrative data, augmented by client data, cannot be assumed to contain the truth about either the causes or treatments of adverse social outcomes, no matter how sophisticated the analytical methods used.

Definitions of social investment emphasise targeting but this concept has, so far, not been elaborated widely in terms of optimising the choice of target. How target groups are selected and treated has large impacts on the actual and measured social outcomes.

It is clear that the technical analysis necessary to support social investment can be very demanding and sophisticated. The contribution by Tim Hughes is a breath of fresh air insofar as it reminds people about the complexity involved and the serious mistakes that can be made in terms of false positives and false negatives. Social investment analysis is not for amateurs.

The ministries and the SIA, Statistics New Zealand and a growing number of analysts using the IDI are displaying considerable skill in testing hypotheses using the new databases. This is very encouraging, but not all the ministries are up to speed. Treasury needs to keep building its capability to respond to policy and Budget proposals, based on these new methods and data sources. The leaders of the state sector will need to plan for a rapid widening in the capability for doing social policy analytics.

The work of the policy analysts in social investment needs to be understood by senior policy advisers, some of whom may struggle to understand it sufficiently to make critical judgments about what to conclude from it. This touches on long-standing weaknesses in policy capability that have been rehearsed elsewhere but lie beyond the scope of this chapter.[8] Suffice here to say that the tsunami of data and data analytics, which is going to wash over the state sector, is going to disrupt existing patterns of policy analysis and advice and will require astute management of the necessary changes.

CONCLUSION

Social investment is a movement which has multiple parts and admits more than one interpretation of its character. This chapter argues for moving quickly beyond the anecdotes, rhetorical statements, exaggerated claims, invalid extrapolations and edgeless concepts noticeable in the discussion of social investment. There is much to commend about social investment, and its potential is scarcely beginning to be tapped. It offers an enrichment of the evidence base to support social policy and promising new approaches to supporting the most vulnerable, through better commissioning and collective impact methods of delivery in particular. These points were important to the Productivity Commission's generally favourable assessment of social investment.

Bill English has stated that the social investment programme is only about 10 per cent along the way to where it could be. In some of its facets it has the appearance of being layered over the top of entrenched ways of doing things. Similarly Derek Gill says that social investment is at the stage of 'rising salience' but that the change has yet to be embedded. This chapter argues that embedding social investment will require it to be framed within accepted principles and good practices in public policy and public management.

Social investment is both something old and something new. What is especially new is the encroaching tsunami of data, much of which is not the government's administrative data. It offers huge opportunities and serious risks. The authorities should continue to welcome this as a major opportunity to improve social outcomes. Social investment raises and contributes to issues about the role of the state in addressing long tails of disadvantage, including the principles and practices of the use of citizens' data. The methods of social investment have become embedded in some leading ministries and mostly in relation to their 'natural' business. But the main challenge is how governments are going to adjust roles, systems, structures, processes and culture to produce blended, tailored services, to invest in the well-being of the most vulnerable, engaging with them over extended periods of time and through innovations in delivery systems of which we have only seen isolated – but encouraging – examples thus far.

References

Burgess, M., and D. Cosgrove, 'Draft Governance and Accountability for Managing Long Term Social and Fiscal Outcomes', Treasury, 3 June 2016, www.treasury.govt.nz/statesector/socialinvestment/informationreleases (accessed 8 September 2017)

Gruen, N., 'Building the Public Goods of the Twenty-First Century: Digital Public Goods in the Age of the Data Revolution', *Evonomics*, 31 April 2017, http://evonomics.com/building-public-goods-21st-century (accessed 8 September 2017)

Mansell, J., R. Laking, B. Matheson, R. Light et al., 'Data Commons Blueprint: A High Trust, Lower-Cost Alternative to Enabling Data Integration and Reuse', Aotearoa New Zealand Data Commons Project, 2017

New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015

Scott, G. et al., 'Governance and Accountability in Social Investment', report prepared by the Social Investment Working Group to respond and build on the proposals from Matt Burgess and Denise Cosgrove, November 2016

Scott, G., P. Faulkner and P. Duignan, *Improving the Quality and Value of Policy Advice*, Review of Policy Expenditure and Advice, Wellington, December 2010, www.treasury.govt.nz/statesector/policyexpenditurereview (accessed 8 September 2017)

Shipley, J., 'Future Public Management Issues', conference address, Plaza International Hotel, Wellington, 26 March 1997, www.beehive.govt.nz/speech/future-public-management-issues (accessed 8 September 2017)

Notes

1 The views expressed in this chapter are the author's and not represented here as being the views of the Productivity Commission.

2 G. Scott et al., 'Governance and Accountability in Social Investment', report prepared by the Social Investment Working Group to respond and build on the proposals from Matt Burgess and Denise Cosgrove, November 2016.

3 J. Shipley, 'Future Public Management Issues', conference address, Plaza International Hotel, Wellington, 26 March 1997, www.beehive.govt.nz/speech/future-public-management-issues (accessed 8 September 2017).

4 New Zealand Productivity Commission, *More Effective Social Services*, Wellington, 2015.

5 M. Burgess and D. Cosgrove, ‘Draft Governance and Accountability for Managing Long Term Social and Fiscal Outcomes’, Treasury, 3 June 2016, www.treasury.govt.nz/statesector/socialinvestment/informationreleases (accessed 8 September 2017).

6 J. Mansell et al., ‘Data Commons Blueprint: A High Trust, Lower-Cost Alternative to Enabling Data Integration and Reuse’, Aotearoa New Zealand Data Commons Project, 2017.

7 N. Gruen, ‘Building the Public Goods of the Twenty-First Century: Digital Public Goods in the Age of the Data Revolution’, *Evonomics*, 31 April 2017, http://evonomics.com/building-public-goods-21st-century (accessed 8 September 2017).

8 G. Scott, P. Faulkner and P. Duignan, *Improving the Quality and Value of Policy Advice*, Review of Policy Expenditure and Advice, Wellington, December 2010, www.treasury.govt.nz/statesector/policyexpenditurereview (accessed 8 September 2017).

List of contributors

Peter Alsop is the Director of Strategic Issues and Investment at the Ministry of Social Development (MSD), a role that includes responsibility for ongoing development of MSD's social investment approach. His career has spanned the private and public sectors across multiple industry contexts, including establishing the Productivity Commission and two stints at Pharmac, a government agency specialising in health investment. Peter is passionate about organisations, like MSD, making the best possible decisions for New Zealand.

Ben Apted is Senior Partner, Education at Strategic Project Partners (SPP). He works with universities, schools, training institutes and government departments to improve the impact of education policy, programmes and initiatives. Ben has led the development of intellectual property related to social impact assessment, research assessment, activity-based costing, and benefit realisation within large organisations.

Jonathan Boston is Professor of Public Policy in the School of Government at Victoria University of Wellington. He has published widely on public management, social policy, tertiary education, climate change, comparative government and New Zealand politics. His most recent books include *Governing for the Future* (Emerald, 2017) and *Safeguarding the Future* (Bridget Williams Books, 2017).

Holly Briffa is a Senior Associate at Strategic Project Partners (SPP). She has a breadth of experience across the research, higher education and government sectors, and is passionate about creating evidence-based and innovative solutions to solve strategic challenges. Holly has contributed to the development and application of impact assessment and benefits realisation approaches at SPP, drawing on her actuarial education.

Simon Chapple is the Director of the Institute for Governance and Policy Studies in the School of Government at Victoria University of Wellington. As a former policy adviser and now an academic, he is interested in rational long-term approaches to making social policy decisions.

Alex Collie is Professor and Director of the Insurance Work and Health Research Group in the Faculty of Medicine Nursing and Health Sciences at Monash University. The research group conducts applied research projects in collaboration with employers, insurers and government agencies. It focuses on improving workforce health, rehabilitation and return to work following injury and illness affecting work capacity. Professor Collie previously established and was CEO and Chief Research Officer of the Institute for Safety, Compensation and Recovery Research, a partnership between Monash University, the Transport Accident Commission and WorkSafe Victoria.

Isabelle Collins is a Principal Adviser at the Social Policy Evaluation and Research Unit (Superu). She has been an evaluation specialist for 30 years working in labour market, economic development and innovation policies across Europe. In New Zealand she was previously at the Ministry of Economic Development/ Ministry of Business, Innovation and Employment, where she worked on evaluation of the ministry's programmes.

Steffan Crausaz is the Chief Executive of New Zealand's Pharmaceutical Management Agency. Pharmac blends clinical and commercial capability to optimise government investment in medicines, vaccines and medical devices. After holding various roles in the organisation since 2003, he was appointed Chief Executive in July 2012. Steffan is also a member of Treasury's Social Investment Panel.

Jo Cribb is a Wellington-based consultant. She recently served as the Chief Executive of the Ministry for Women and previously held senior roles in the Office of the Children's Commissioner and the Ministry of Social Development.

Sir Michael Cullen taught social and economic history at Otago University before entering Parliament in 1981. He held many ministerial positions, including Minister of Social Welfare (1987–90) and, in the Clark administration, Minister of Finance and Deputy Prime Minister.

Killian Destremau is a Senior Economist at the New Zealand Institute of Economic Research. His interests span social policy, trade, regulation and urban economics. Killian has researched and advised clients on what social investment approach means for them. He gave a presentation on social investment at the 2016 Annual Aotearoa New Zealand Evaluation Association Conference.

Elizabeth Eppel is a Senior Research and Teaching Fellow in the School of Government, Victoria University of Wellington, New Zealand, with over twenty years' experience as a senior public servant. Her research interests are complexity in public policy processes, governance networks and collaborative governance.

Diane Garrett is responsible for national service development and stakeholder relationships for Family Works New Zealand. She is a registered social worker with a background in NGO and health social work, and did a stint as a senior adviser with the Ministry of Social Development. Diane's areas of interest are social justice, social policy and the synthesis of ideas and practices to support innovation.

Derek Gill is a Principal Economist at the New Zealand Institute of Economic Research, and a Senior Associate of the Institute for Governance and Policy Studies. His previous experience spans work in the public and private not-for-profit sectors and included roles as a general manager in a service delivery organisation, with the OECD and central agencies in New Zealand; he has also been a diplomat and policy adviser. Derek has served as a long-standing board chair and treasurer for a number of voluntary organisations.

David Hanna is in leadership roles in Wesley Community Action and Inspiring Communities. His expertise is in co-designing solutions and support for people who experience multiple hardships, and his interests span systems thinking, community and person-led design approaches.

Gary Hawke is Emeritus Professor of Economic History and former Head of the School of Government at Victoria University of Wellington and Senior Fellow at the New Zealand Institute of Economic Research. He serves on several advisory bodies in the education sector.

Sarah Hogan is a Senior Economist at the New Zealand Institute of Economic Research with interests in health, education and social investment. She has worked as an economist in the Canadian, Australian and New Zealand health sectors and was an early adopter of the social investment approach and Treasury's cost-benefit model (CBAx).

Tim Hughes studied economics at the University of Auckland and has worked in policy roles at the Department of Corrections and the Ministry of Social Development. He is currently a Chief Adviser in the Ministry of Justice's Sector Group.

Girol Karacaoglu is the Head of School of Government at Victoria University of Wellington. He previously served as Treasury's Chief Economist. His research and teaching are centred around intergenerational well-being and public policy.

Gail Kelly is an Associate at the New Zealand Institute of Economic Research. She has more than 20 years' experience in social research and evaluation. In past roles, Gail was a Director at the Social Policy Evaluation and Research Unit (Superu), and led Inland Revenue's research and evaluation unit, and the Bureau of Rural Sciences social science programme in Canberra. Her expertise lies in the generation and use of evidence focused on human behaviour in taxation, social impact assessment and community development.

Michael Mintrom is Professor of Public Sector Management at Monash University, with a co-appointment as Monash chair and academic director at the Australia and New Zealand School of Government. His books include *Policy Entrepreneurs and School Choice* (Georgetown University Press, 2000), *Contemporary Policy Analysis* (Oxford University Press, 2012), and the edited collection, *Political Leadership in New Zealand* (Auckland University Press, 2006).

Graham Scott is an economist who has specialised in public policy and public management over a long career. He was the Secretary to the Treasury from 1986 to 1993 and since has had leadership and advisory positions in the health sector, regulated industries and public sector management globally. He is a Commissioner on the Productivity Commission and recently headed a government-appointed committee on the governance of social investment.

Verna Smith is Director of the Masters Programmes for the School of Government at Victoria University of Wellington and Senior Lecturer in Public Policy. She was previously employed as Research Lead for the Neurotrauma Research Programme at ISCRR between 2012 and 2015.

Simon Wakeman is a Principal Adviser at the Social Investment Agency. He has worked across a range of fields as an economic consultant, an academic researcher, and an adviser to the New Zealand government.

Peter Wilson is a Principal Economist and Head of Auckland Business at the New Zealand Institute of Economic Research. He has spent over thirty years in government, the private sector and as a consultant applying the tools of economics to help people live the lives they value and have reason to value.

Amanda Wolf teaches methods and policy practices in the School of Government, Victoria University of Wellington. In addition to the social investment approach, her other interests include methods for learning from cases, relational approaches in policy analysis, and intersubjective well-being.

John Yeabsley is an economist who applies economic analysis to real-world problems in a pragmatic way. He is a Senior Fellow at the New Zealand Institute for Economic Research where he has been researching and consulting for more than twenty years. In a previous life he worked as a public policy adviser and service delivery manager.

Warren Young QSO is currently General Manager of the Independent Police Conduct Authority. He was an academic at Victoria University of Wellington from 1980 to 2000, first as Director of the Institute of Criminology and latterly as a Professor of Law and Assistant Vice Chancellor (Research). He has subsequently served as Deputy Secretary for Justice and Deputy President of the New Zealand Law Commission. He has published extensively in the area of criminal justice.

Index

Bold denotes figures/illustrations.

About the editors

http://bwb.co.nz/authors/jonathan-boston

Jonathan Boston is a Professor of Public Policy in the School of Government at Victoria University of Wellington. He has written extensively on public management, the welfare state, child poverty, climate change policy, tertiary education funding, and comparative government.

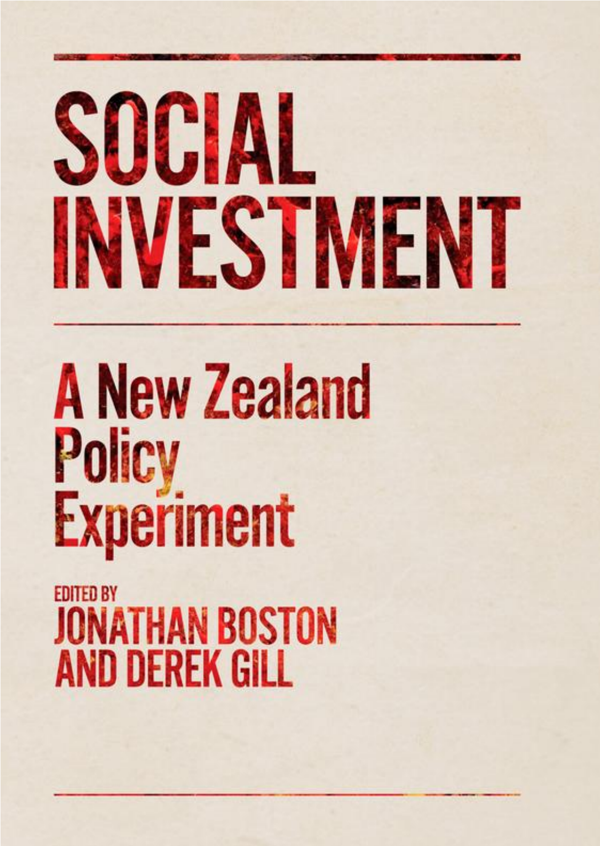
http://bwb.co.nz/authors/derek-gill

Derek Gill is a Principal Economist at the New Zealand Institute of Economic Research, and a Senior Associate of the Institute for Governance and Policy Studies. His previous experience spans work in the public and private not-for-profit sectors and included roles as a general manager in a service delivery organisation, with the OECD and central agencies in New Zealand; he has also been a diplomat and policy adviser. Derek has served as a long-standing board chair and treasurer for a number of voluntary organisations.

Original print edition cover

The cover of *Social Investment* as first published in print by Bridget Williams Books and the Institute for Governance and Policy Studies at Victoria University of Wellington in 2017.

Original print edition cover



First published in 2017 by Bridget Williams Books Ltd, PO Box 12474, Wellington 6144, New Zealand, www.bwb.co.nz, info@bwb.co.nz; with the Institute for Governance and Policy Studies at Victoria University of Wellington, PO Box 600, Wellington, igps.victoria.ac.nz, igps@vuw.ac.nz.

First ebook edition published in 2017 by Bridget Williams Books Ltd.

ISBN 9781988533551 (EPUB)
ISBN 9781988533568 (KINDLE)
ISBN 9781988533575 (PDF)
ISBN 9781988533582 (Paperback)
DOI https://doi.org/10.7810/9781988533582

Acknowledgements
This book has been published with the support of the Bridget Williams Books Publishing Trust, the Institute for Governance and Policy Studies, and the New Zealand Institute of Economic Research.

Fonts Founders Grotesk and Tiempos Text used under license from Klim Type Foundry.

Help with your BWB ebook
Your BWB ebook uses high production standards and is built to last. Please note that to view some tables on smaller devices you will need to reduce the font size. If you are experiencing any issues with this or other BWB titles and require help, your first point of contact is the bookstore or library that supplied access to the work. If they are unable to assist, please contact BWB at support@bwb.co.nz – we will be happy to help.

Edited by Denis Welch
Digital cover design: Neil Pardington
Digital development: Infogrid Pacific, Tom Rennie and Barbara Graham