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THE EVOLUTION OF TELECOMMUNICATIONS REGULATION IN NEW ZEALAND

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Abstract

Telecommunications technology is evolving, consumer preferences are changing, therefore the law that regulates the industry needs to adapt. Acknowledging this need for the law to keep up with ever-changing markets, policymakers in New Zealand recently concluded a statutory review into the Telecommunications Act 2001. The purpose of this research is to look at how, and why, New Zealand's telecommunications regulatory framework is changing. This will involve initially explaining the most significant changes to the regime that have occurred in recent years, and providing some background information on the latest law reform. The aim of latter sections of this paper will be to identify how the proposed new regulatory regime for telecommunications might work in the future.

Word length

The text of this paper (excluding abstract, table of contents, footnotes and bibliography) comprises approximately 11,990 words.

Subjects and Topics

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I Introduction

The purpose of this research is to analyse the ways in which New Zealand's telecommunications industry has been regulated in recent years, and to examine how and why this regulation is about to change. In order to provide background to the law reform currently before Parliament, it is worthwhile looking at the ways in which the New Zealand telecommunications industry and its corresponding regulation have changed over time. The result will be a comprehensive overview and analysis of the regulatory framework, with a focus on the most recent law reform and likely implications of this.

To achieve the purpose of this research, it will be necessary to have a detailed look at the issues discussed throughout the process of the law reform, to gain insight into why the regime needs to change, and how it is changing. In addition, it will be useful to examine literature on sector-specific regulation for telecommunications in New Zealand and abroad, in order to give perspective as to how the subject is viewed by a variety of academics. It will also assist in bringing to light some of the issues that are pertinent to telecommunications markets worldwide, and not just unique to the New Zealand regulatory setting. Many issues relevant to the current law reform have already been analysed by academics, and this thinking will be applied to the New Zealand context.

Part II of this paper will begin by providing background information about the telecommunications industry, will explain some of the theories behind regulation, and will also define key terms. Part III will give an overview of the major changes in New Zealand telecommunications markets in the past few decades, along with developments in the framework regulating the industry. Part IV will discuss the proposed amendments contained in the latest law reform, including an overview of the factors considered by the Government in deciding which regulation should apply. Part V will discuss the possible implications of the law reform for the future, whether the move towards the new framework is the right move, and any potential problems with the legislation. Part VI will summarise the issues that have been discussed throughout the paper and draw conclusions.

II Overview of telecommunications regulation

The purpose of this section is to give some background information on telecommunications in New Zealand before elaborating on these points in the sections below. Because of the technical nature of the subject matter, several key terms that will be used throughout the paper need will need to be defined, since much of it will be jargon specific to this particular research topic. It will be useful to describe briefly the structure of the New Zealand telecommunications industry, and how it has gone from having one main industry player, to several providers of different telecommunications services. It will also help to introduce the

types of telecommunications technology available nowadays, and the sorts of services consumers are demanding.

In this area of the law, legal and economic theories are intertwined. It is impossible to comprehend the purpose of the laws governing industry-specific regulation fully without having a basic grasp of the underlying economic rationale. It will therefore be useful to provide an overview early on of what some of the more influential academics have written about regulatory economics; specifically, the arguments for and against sector-specific regulation for telecommunications. This will give useful insight into some of the reasons the current regulatory framework is changing. It will also help by showing how past legislative decisions have been made in the hope of generating the best possible outcomes for end-users of telecommunications services in New Zealand.

In terms of telecommunications regulation in New Zealand, it will also be necessary to give a short summary of the Telecommunications Act 2001 ("the Act") and the role of the Commerce Commission ("the Commission"). The statutory review of the Act ("the Review") recently concluded by the Ministry of Business, Innovation and Employment ("MBIE") will be explained, along with the resulting Telecommunications (New Regulatory Framework) Amendment Bill ("the Bill"). This explanation of the Bill will include a description of the sorts of regulatory instruments that will be used to regulate players in the market for fibre fixed line access services ("fibre services"), i.e. the companies that have been responsible for building New Zealand's Ultra-Fast Broadband network ("UFB network").

A The New Zealand telecommunications industry

The telecommunications industry in New Zealand in 2018 comprises significantly more players than it did a few decades ago. For most of the last century, there was only one major telecommunications provider that started out as part of the New Zealand Post Office but later became Telecom Corporation of New Zealand Limited ("Telecom"). In 1987, the Government created Telecom as a state owned enterprise to take over the Post Office's telecommunications network services. It was subsequently privatised in 1989,¹ and was listed on the stock market in 1992.² Telecom owned the country's fixed line telecommunications network,³ and acted as both a wholesaler and retailer of these services. It was easy for Telecom to be the provider of telecommunications services, since it owned the infrastructure which made the provision of such services possible.⁴ To give an indication of the extent of Telecom's market power, in 1999 it basically accounted for all of New Zealand's residential

The Commerce Commission v Telecom Corporation of New Zealand Limited and Anor HC Auckland CIV-2000-485-673, 18 April 2008 [0867].

² "UFB NZ" (10 September 2018) https://ufb.org.nz/broadband-providers/telecom-nz/.

In today's market, fixed line networks include copper and fibre networks.

C. C. Nicoll "Light-handed Regulation of Telecommunications – The Unfortunate Experiment" (2002) 11 Information & Communications Technology Law 109.

lines and "had substantial sunk costs because of its status as a legacy carrier".⁵ This made it difficult for other potential competitors to enter the residential market, since it would have been hard for them to achieve the levels of economy of scale Telecom had attained. However, the Government instructed Telecom to separate its business activities, as will be explained in more detail below. This resulted in Telecom eventually being split into a retail service provider ("RSP"), Spark, and a wholesale lines business, Chorus.

As mentioned, the telecommunications market nowadays has changed significantly since the time when Telecom was basically the only player. Nowadays there are many retailers who compete to provide consumers with fixed line services, such as copper or fibre broadband, as well as mobile telecommunications services, which have become increasingly more popular in recent times. These retailers, or RSPs, include companies such as Spark, Vodafone, 2Degrees, Vocus and Trustpower.⁶ The Commission has found that some of the smaller companies who have entered the retail market relatively recently, such as Trustpower and 2degrees, are among the fastest growing companies in terms of the number of customers connected.⁷ However, the two biggest RSPs (Spark and Vodafone) still have three-quarters of the retail broadband market.⁸

In modern times, New Zealanders are demanding faster and more reliable broadband. Telecommunications markets have changed recently as the advent of new technologies has "turned communications, fixed and mobile broadband markets in particular, into one of the most innovative industries". Much like the way dial-up access was "no longer seen to be adequate" in the early 2000s, copper broadband services are starting to be viewed as too slow by telecommunications consumers now. The challenge in the early 2000s was to "bring on line high-speed and broad-bandwidth technologies at reasonable prices". This is still the challenge in 2018, with the main difference being that consumers are demanding faster speeds and more bandwidth from the telecommunications service providers, and also want to be online wherever they are. 12

One of the most drastic changes in New Zealand telecommunications markets to keep up with this surge in demand has been the nationwide rollout of ultra-fast fibre broadband. Fibre, or optical fibre, is "a very thin strand of glass that is used to transport information via a beam of

⁵ 0867, above n 1, at [31].

Suella Hansen and Noelle Jones "New Zealand Telecommunications: The actual situation-legislation and regulations" (2017) 5 Australian Journal of Telecommunications and the Digital Economy 83 at 86.

Commerce Commission "Annual Telecommunications Monitoring Report" (May 2017)
https://comcom.govt.nz/regulated-industries/telecommunications/monitoring-the-telecommunications-market-monitoring-report at 9.

⁸ At 16

Wolfgang Briglauer and Ingo Vogelsang, "A regulatory roadmap to incentivize investment in new high-speed broadband networks" (2017) 106 DigiWorld Economic Journal 143 at 158.

Nicoll, above n 4, at 118.

¹¹ At 118.

Annual Monitoring Report, above n 7.

light."¹³ Fibre is known as ultra-fast because users can "access speeds of close to 1,000 Megabits per second", which allows users to "improve productivity, access educational and entertainment content and a whole range of other benefits".¹⁴ Recognising the key role fast and reliable internet plays in fostering economic growth, the Government has identified fibre as the "technology of the future", ¹⁵ and has aimed to roll out UFB to 75% of New Zealanders by 2019.¹⁶

One of the reasons governments may choose to invest in infrastructure such as UFB networks is that "network deployment would not be profitable even for a monopolist", ¹⁷ therefore public investment is needed to incentivise companies to build these networks. Having identified policy reasons to do so, the New Zealand Government invested in the UFB network. It formed contracts with fibre providers through a competitive bidding process, and established Crown Infrastructure Partners ("CIP") ¹⁸ to oversee those contracts. Currently, CIP has a "managerial role in respect to the Government's UFB investment", ¹⁹ and ensures the fibre providers adhere to the terms set out in their UFB contracts. From 2020, the Commerce Commission will take over CIP's role in regulating fibre.

There are four fibre providers who are responsible for the UFB rollout, having each won the contracts for designated areas of the country. The major player is Chorus, the owner of the old Telecom's copper network which is still used and will continue to be used in some areas to provide broadband services. In the UFB agreements, 33 priority areas were designated, with Chorus having responsibility for around 70 percent of the areas.²⁰ Three local fibre companies ("LFCs") are rolling out fibre in the rest of New Zealand. These LFCs consist of Northpower Fibre Limited, based in Whangarei; Enable Networks Limited, based in Christchurch; and Ultrafast Fibre Limited, based in Hamilton.

B Telecommunications regulation

It would be useful at this stage to set out the economic rationale behind the types of regulation that will be discussed, and to define relevant terms. Economic regulation – also known as industry- or sector-specific regulation – is based on the idea of incentivising

Ministry of Business, Innovation and Employment *Telecommunications Act Review: Post-2020 Regulatory Framework for Fixed Line Services* (February 2017) at 11.

Ministry of Business, Innovation and Employment "Broadband and mobile programmes" (2018) https://www.mbie.govt.nz/info-services/sectors-industries/technology-communications/fast-broadband/broadband-and-mobile-programmes>.

Office of the Minister for Communications Review of the Telecommunications Act 2001: Final Policy Decisions for Fixed Line Communications Services (2017) at [68].

¹⁶ Crown Infrastructure Partners "Frequently Asked Questions" (2018)

https://www.crowninfrastructure.govt.nz/ufb-initiative/frequently-asked-questions/>.

Briglauer and Vogelsang, above n 9, at 155.

CIP was initially set up as Crown Fibre Holdings, but was recently renamed.

Hansen and Jones, above n 6, at 86.

Bert Sadowski, Bronwyn Howell, and Alberto Nucciarelli "Structural Separation and the Role of Public-Private Partnerships in New Zealand's UFB Initiative" (2013) 91 Communications & Strategies 57 at 67.

suppliers to behave in certain ways, because the free market fails to provide sufficient incentives. This is because these markets are characterised by limited competition, or no competition, so regulation is needed to ensure consumers are not subjected to inflated prices, or sub-standard quality services. The aim of regulation is to incentivise firms to innovate, invest and be more efficient.

Economic regulation is not required in the vast majority of markets, aside from competition agencies such as the Commission providing the usual checks and balances on anti-competitive mergers and restrictive trade practices. The reason most sectors of the economy do not require specific regulation is that they are not characterised by competition issues specific to the nature of their market. Briglauer and Vogelsang make the point that "except for the case of clear market failure, unregulated markets provide more efficient investment than regulated markets given the inevitably imperfect information available on future demand for high-bandwidth and technological progress".²¹

When markets do require economic regulation, it is because they have aspects of a natural monopoly. The natural monopoly characteristics of certain industries have long been regarded as a form of a market failure,²² thus justifying the need for regulation, since the free market in is unable to deliver efficient outcomes. A natural monopoly market is one in which "costs will be lower if they consist of a single supplier".²³ For example "in the case of network industries, features of the market structure can generally be attributed to the fact that some undertakings possess the infrastructure elements that are essential to alternative competitors and are economically very difficult to replicate".²⁴ It is therefore most efficient for just one supplier to serve these markets, but these businesses need to be regulated so that consumers do not suffer as a result of the monopoly's market power.

Utilities companies, such as electricity, gas, and water businesses are often classified as natural monopolies due to the expense involved in building the utility network, and the inefficiencies that would arise should the network be duplicated. Fixed line telecommunications markets, such as the old Telecom, or fibre networks in modern times, are also often characterised as natural monopolies. However, these companies arguably have less market power than utility businesses, since there is a degree of competition from mobile service providers and consumers are afforded a certain level of choice. With reference to Telecom in 1989, Nicoll describes a natural monopoly as a company which owns "...an essential utility (i.e., one that cannot be duplicated economically)". ²⁵ Chorus and each of the LFCs own the fibre networks in their UFB areas, and it would be hugely expensive to

²¹ Briglauer and Vogelsang, above n 9, at 145.

Joseph D. Kearney and Thomas W. Merrill "The Great Transformation of Regulated Industries Law" (1998) 98 Columbia Law Review 1323.

Alfred E. Kahn *The Economics of Regulation: Principles and Institutions* (1st ed, MIT Press, Cambridge (Mass), 1988).

Briglauer and Vogelsang, above n 9, at 145.

Nicoll, above n 4, at 109.

replicate these, so it is easy to understand why the Government has identified these companies as requiring regulatory oversight.

While many regard telecommunications markets as natural monopolies in need of regulation, some critics have questioned whether the telecommunications sector should be regulated at all. For example, Spiller and Cardilli claim to have disproved the "myth" that "telecommunications remains a natural monopoly where competition must be engineered by regulators". Some economists claim that although markets characterised as natural monopolies like telecommunications pose a risk of market failure, that risk is exceeded by the risks of "regulatory failure", therefore Government intervention via sector-specific regulation is unjustified. On this point, Kearney and Merrill claim that "the perceptions of regulatory failure are in the ascendancy, while perceptions of market failure are in decline". However, this claim does not accord with the situation in New Zealand, as will be discussed below.

Another example of a critic of sector-specific regulation is Howard A. Shelanski, who claims that "the next transformation on the horizon is away from the independent regulator and towards regulation through general competition law".²⁹ Shelanski discusses the feasibility of reducing the amount of regulation imposed on telecommunications services in the United States. He makes particular reference to telecommunications mergers, but also looks more generally at this idea of decreasing regulation. After the United States enacted the Telecommunications Act in 1996,³⁰ competition in the markets for some telecommunications services did not develop as quickly as anticipated. Because of this, Shelanski argues that perhaps general competition law would be just as effective in constraining the behaviour of telecommunications firms, and that preferable approach would see "the traditional regulatory concerns of pricing and market structure being left to market forces and to general competition policy".³¹ However, this approach has been unsuccessfully attempted in New Zealand, as will be explained in the next section.

C Telecommunications regulation in New Zealand

The Act, as it currently stands, sets out which telecommunications services are regulated by the Commission,³² and how that regulation is imposed on suppliers of these services. When it

Pablo T. Spiller and Carlo G. Cardilli "The Frontier of Telecommunications Deregulation: Small Countries Leading the Pack" (1997) 11 Journal of Economic Perspectives 127 at 137.

Kearney and Merrill, above n 22, at 1323.

²⁸ At 1399.

Howard A. Shelanski "From Sector-specific Regulation to Antitrust Law for US Telecommunications: The Prospects for Transition" (2002) 26 Telecommunications Policy 335 at 354.

Telecommunications Act of 1996 Pub L No 104-104, 110 Stat 56.

Shelanski, above n 29, at 336.

Commerce Commission "Commission's role in telecommunications" (August 2018) https://comcom.govt.nz/regulated-industries/telecommunications/commissions-role-in-telecommunications.

was enacted in 2001, the Act established the position of the Telecommunications Commissioner within the Commission.³³ The Commission implements, monitors and enforces the Act, as it will continue to do once the new regulatory framework is implemented. Section 18 states that the purpose of the Act is to promote competition in telecommunications markets for the long-term benefit for end-users within New Zealand. It "provides the underlying economic regulatory settings for communications markets in New Zealand".³⁴

The Act is set to change when the Bill is enacted. This will "establish a regulatory framework for fibre services; remove unnecessary copper fixed line access service regulation; streamline regulatory processes; and provide more regulatory oversight of retail service quality". The Bill will aim to ensure regulation is stable and predictable, only applied where necessary to address competition issues, and can easily respond to the changing telecommunications environment. These regulatory principles will be discussed in more detail below, and conclusions drawn about whether Bill is likely to achieve these aims.

The focus of this research will be on the new fibre regime, rather than the other parts of the Bill pertaining to copper deregulation and retail service quality, since the new regulatory framework for fibre is the most significant change the Bill is making. MBIE had defined "regulatory framework" for telecommunications as "the system of laws, regulations, rules, procedures and organisations within which the regulation of communications services takes place". They go on to explain that this framework includes the requirements regulated fibre providers must comply with, as well as "the access regime (and any associated price control), the regulatory decision maker, rules and procedures for decision making". 37

The Bill introduces utility-style regulation for fibre broadband networks, so-called because it currently applies to the utility businesses that are regulated under Part 4 of the Commerce Act 1986 ("Part 4" and "the Commerce Act"). Under the Part 4 regime, the Commission regulates natural monopoly business in electricity and gas industries, as well as selected airport services at Auckland, Wellington and Christchurch International Airports.³⁸ As will be discussed below, there are many differences between Part 4 and the telecommunications regime, but the purpose is similar. The Bill states that the changes to this regulatory

Telecommunications Act 2001, s 9; Commerce Act 1986, s 9(3).

Office of the Minister for Communications Review of the Telecommunications Act 2001: Final Decisions on Fixed Line Services, Mobile Regulation and Consumer Protection (22 May 2017) at [11].

New Zealand Parliament "Telecommunications (New Regulatory Framework) Amendment Bill" (2018) https://www.parliament.nz/en/pb/bills-and-laws/bills-proposed-

laws/document/BILL_74818/telecommunications-new-regulatory-framework-amendment>.

Post-2020 Regulatory Framework, above n 13, at 12.

³⁷ At 12.

Commerce Commission "Which markets are affected?" (August 2018) https://comcom.govt.nz/regulated-industries/our-role-in-regulated-industries/who-is-regulated>.

framework for fibre will ensure excessive profits are limited and that the market is responsive to consumer demands for service quality.³⁹

It would be useful at this point to explain the current approach to regulating telecommunications pricing in New Zealand, known as Total Service Long-Run Incremental Cost ("TSLRIC"). Under the current Act, the pricing of certain telecommunications services is determined using TSLRIC. TSLRIC is an approach to price-setting based on forward-looking costs, i.e. the "costs efficiently incurred in providing the service not directly attributable to providing an additional unit of the service". However, this approach is set to change if the Bill is enacted, as a new pricing methodology will likely be applied, known as the building blocks model ("BBM"). BBM is currently used by the Commission in setting prices for services regulated under Part 4, and is also used by Australian regulators in fixed line telecommunications markets. Hoth TSLRIC and BBM are used for asset valuation and price-setting, but each uses a different method to value regulated assets. The differences between these two approaches, as well as the rationale behind the change from TSLRIC to BBM, will be discussed in more detail below.

The particular forms of regulation that the Bill is introducing for fibre are information disclosure ("ID") for Chorus and the LFCs, and price-quality regulation ("PQR") for Chorus. ID regulation will mean that regulated suppliers are required to disclose "financial and other network-related information".⁴² This form of regulation helps to ensure there is enough information available about these suppliers to encourage transparency, so that interested parties (including the regulator) can assess their performance. During the Review, MBIE noted that "should evidence emerge that information disclosure regulation is not effective in deterring monopoly behaviour, the Commission will be able to impose price-quality regulation".⁴³ Thus even the LFCs who are subject to a lighter form of regulation will be operating under the constant threat of more onerous regulation, should the information they disclose show them to be engaging in anti-competitive behaviour. PQR involves placing "constraints on revenues and/or prices, and requirements for service quality" on regulated suppliers with the aim of limiting their ability "to earn excessive profits while providing incentives to innovate and invest in their infrastructure".⁴⁵ PQR is designed to mimic the effects seen in competitive markets for the long-term benefit of consumers.

Telecommunications (New Regulatory Framework) Amendment Bill (293-1) (explanatory note).

Nicoll, above n 4, at 120.

Callum Gunn "Building Blocks' under Part 4" (September 2015) Telecommunications Users
Association of New Zealand https://www.tuanz.org.nz/wp-content/uploads/2016/04/Introducing-the-Building-Block-methodology

Post-2020 Regulatory Framework, above n 13, at 11.

⁴³ At 4.

⁴⁴ At 4.

⁴⁵ At 4.

Before implementing these two forms of regulation, the Commission will need to set the underlying rules that will apply to how the regulations will be set. These underlying rules are known as input methodologies ("IMs"), and are "a set of rules designed to increase regulatory predictability, whereby the regulator develops and specifies binding methodologies for determining the various inputs into price-monitoring, price-setting and other regulatory activities prior to those activities occurring". ⁴⁶ IMs bind the Commerce Commission "to the approach it will subsequently take in applying the regulatory framework". ⁴⁷ This will involve the Commission setting out how it plans to go about implementing the new regime and then sticking to that plan. The rationale behind this approach is that it means fibre providers are able to predict how the rules that will have such a huge impact on their businesses might apply.

III Evolution of telecommunications regulation in New Zealand

Emerging technology and the increasing importance of connectivity in people's lives have driven changes in telecommunications markets. The products and services on offer are constantly changing, and consumer needs are shifting. As mentioned, dial-up internet was once considered an acceptable product, and not many consumers had access to broadband or high-speed internet. Before that, landlines were the main form of communication, with few people owning mobile phones, let alone smart phones with data capability. As the telecommunications industry has changed over time, so too has regulation of the industry. Regulation has also responded to changes in the political environment, in economic and legal thinking, and has adapted when it has become evident that a particular part of the regime is not working. The regulatory framework for telecommunications has been subject to significant changes in New Zealand up until the present time.

A The period of light-handed regulation

A useful starting point for an overview of this history is the period of light-handed regulation at the end of the 20th century. Briglauer and Vogelsang claim that industry-specific regulation for telecommunications should only be considered "if competition law is proven to be insufficient". Throughout New Zealand's period of light-handed regulation, the Government attempted to see if competition law alone would be sufficient to curb the monopolistic tendencies of telecommunications companies. During this time, the Government largely relied on the restrictive trade practices sections of the Commerce Act, such as s 36. This section prohibited market participants from using their dominant position for an anti-competitive purpose, e.g. by restricting or preventing a potential competitor from

Post-2020 Regulatory Framework, above n 13, at 11.

Ministry of Business, Innovation and Employment *Telecommunications Act Review: Options Paper* (July 2016) at 23.

Briglauer and Vogelsang, above n 9, at 149.

entering the market. Section 36 now prohibits "taking advantage of market power" but before 2001 it prohibited "use of a dominant position". 49

This attempt at light-handed regulation is widely regarded as having failed. It is described as having proven "insufficient to address in a timely manner key issues for new market entrants such as interconnection and discriminatory pricing". ⁵⁰ C.C. Nicoll's article "Light-handed Regulation of Telecommunications – the Unfortunate Experiment" examines the outcomes of the period of reliance on competition law, and the lessons that can be learned from this "experiment". One of these lessons, Nicoll claims, is that a "deregulated utility...will continue to exercise monopoly power unless there is the political will and a properly funded regulator to curb its worst excesses". ⁵²

However, academics have not been unanimous in their criticism of this light-handed approach, with some favouring this approach over sector-specific regulation. One academic who is not convinced by the alleged perils of light-handed regulation is Bronwyn Howell, who claims "it cannot be concluded from the New Zealand changes that light-handed, competition based regulation has failed".⁵³ She is critical of what she perceives as the inefficient, time-consuming and expensive process of setting ex ante regulation rather than relying on ex post competition law. The arguments against industry-specific regulation claim that it lacks flexibility and "is overly bureaucratic and very costly to administer".⁵⁴ This goes to Kearney and Merrill's point mentioned earlier, that regulatory risk can outweigh the risk of market failure in some cases.⁵⁵

Howell poses an argument about the amount of competition that should be expected in a small, isolated economy like New Zealand, where many markets are highly concentrated.⁵⁶ She asserts that because of the nature of the economy, it is difficult to design a framework which limits market power in a way that ensures firms can still compete, but are not able to abuse their dominant position.⁵⁷ While this might make sense, it is unclear why Howell makes this point at the beginning of a paper focussing on telecommunications regulation. Perhaps the implication is that firms trading in most industries in New Zealand face little competition, so natural monopolies are not as unique and in need of regulation as they are in

See Commerce Amendment Bill 2001 (296-2).

Hansen and Jones, above n 6, at 86.

Nicoll, above n 4.

⁵² At 109.

Bronwyn Howell "A pendulous progression: New Zealand's telecommunications regulation 1987-2007" (2007) http://hdl.handle.net/10063/3974 at 35.

Carl Blanchard "Telecommunications regulation in New Zealand: light-handed regulation and the Privy Council's judgement" (1995) 19 Telecommunications Policy 456 as cited in Bronwyn Howell "From Competition to Regulation: New Zealand telecommunications sector performance 1987-2007" (paper presented at the International Telecommunications Society European Region Conference, LUISS Guido Carli University, Rome, September 2008) at 4.

Kearney and Merrill, above n 22.

Pendulous Progression, above n 53, at 9.

⁵⁷ At 10.

other jurisdictions. It has become clear in the eleven years since Howell presented this paper that the New Zealand Government has not shared her views regarding the inadequacies of sector-specific regulation. Such regulation has been in place for telecommunications since 2001, and a return to the light-handed approach has not occurred.

The "light-handed" period provided the setting for lengthy litigation between Telecom and Clear Communications Limited ("Clear") throughout the 1990s.⁵⁸ Howell states that the length of time taken for the parties to reach a settlement created uncertainty in the telecommunications industry which prevented further entry occurring.⁵⁹ Nicoll claims that the litigation between Telecom and Clear filled the void that was left by this absence of regulation. 60 Because there were no specific rules in place to govern the actions of telecommunications companies, parties were forced to take matters into their own hands and litigate. This was the idea of light-handed regulation; limited regulatory oversight, and competition law litigation as a backstop. However, the problem was the length of time taken to resolve this litigation, since courts are relatively slow and lack much of the technical expertise required to examine conduct in complicated telecommunications markets. Nicoll argues that the courts are "ill-equipped to fulfil a regulatory function of this nature";61 it is better served by the Government, or by an independent and expert regulatory body. According to Kerf and Geradin, Australian observers of the dispute between Clear and Telecom also concluded that "courts applying general antitrust rules were unable to come to specific decisions on technically complex telecommunications matters, and that courts were ill-suited to exercise the continual supervision of regulatory arrangements". 62 The sort of uncertainty market participants experienced during this period is something sector-specific regulation aims to prevent.

B The Fletcher Inquiry and sector-specific regulation

As mentioned, this period of light-handed regulation with the reliance on general competition law was described by critics as being inadequate in addressing competition concerns in these markets. Perhaps its most notable criticism came in 2000, when the Government commissioned the Ministerial Inquiry into Telecommunications, chaired by Hugh Fletcher and thus known as "the Fletcher Inquiry".⁶³ The Fletcher Inquiry was a "response to growing

See Clear Communications Limited v The Telecom Corporation of New Zealand (1993) 5 TCLR 413.

Pendulous Progression, above n 53, at 19.

Nicoll, above n 4, at 114.

⁶¹ At 114.

Warren Pengilley "Himler and Essential Facilities" (1994) 17 University of New South Wales Law Journal 1 as cited in Michael Kerf and Damien Geradin "Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation: An Assessment of the United States, New Zealand and Australian Experiences" (1999) 14 Berkeley Technology Law Journal 919 at 991.

Hugh Fletcher *Ministerial Inquiry into Telecommunications: Final Report* (27 September 2000) as cited in *0867*, above n 1, at [37].

dissatisfaction with availability and pricing",⁶⁴ and it drew several conclusions on the lack of effectiveness of the light-handed approach in delivering benefits to users of telecommunications services.

The Government's policy for the Fletcher Inquiry was to ensure New Zealand's regulatory framework delivered "cost-efficient, timely and innovative telecommunications services on an ongoing, fair and equitable basis to all existing and potential users". ⁶⁵ The Fletcher Inquiry concluded that "because of the ubiquitous nature of Telecom's network, and the need of other providers to interconnect to that network, Telecom had market power which had allowed it to charge inefficiently high interconnection prices over the previous decade". ⁶⁶ It found that the ability of telecommunications companies to provide services in a manner consistent with the Government's policy goals would be enhanced by legislation to regulate the sector. ⁶⁷ Because of the Fletcher Inquiry's findings on the insufficiencies with this light-handed approach, Parliament introduced sector-specific regulation for telecommunications via the enactment of the Telecommunications Act 2001. ⁶⁸

Perhaps unsurprisingly given her views on light-handed regulation, Howell disagrees with the Fletcher Inquiry's recommendations about sector-specific regulation. She argues that there was "little evidence to suggest that the 'light-handed' regime performed any worse than comparable industry-specific regimes over the same period".⁶⁹ However, there are so many economic, political and technological factors at play that it is an oversimplification to compare New Zealand's approach to regulation telecommunications with the approaches taken in other countries during this time. One of the most significant factors is the way Telecom was trying to keep up with the massive surge in internet usage. As noted by the High Court in the *0867* decision, "the advent and dramatic expansion of the internet during the 1990s caused a revolution in telecommunications worldwide".⁷⁰ The Court in this decision also noted that internet calling was significantly different from traditional voice calling, in that traffic was one-way, longer in duration, and could be automated to redial numbers repeatedly. All of these factors resulted in network congestion for Telecom, which had flow on effects for the industry as a whole, and these ramifications had not been expected by regulation or commercial arrangements.

Ministry of Business, Innovation and Employment Regulating communications for the future: Review of the Telecommunications Act 2001 (September 2015) at 28.

mailto://www.beemve.govt.nz/release/telecommunications-media-kit-backgrounder-questions-and-answers>.

^{66 0867,} above n 1, at [53].

⁶⁷ At [38].

Hansen and Jones, above n 6.

Pendulous Progression, above n 53, at 2.

⁷⁰ 0867, above n 1, at [1].

Howell also criticises the Fletcher Inquiry for having given "no indication of priorities...given amongst competing objectives", and claims that the relative importance of terms like "cost-efficient", "timely", "fair" and "equitable" was not made clear. The concept of weighing each of these policy objectives is particularly relevant to examine in light of the current Bill before Parliament, where it is unclear how much weight has been placed on each of the regulatory principles underpinning the legislation, such as "flexibility" and "certainty". This illustrates the difficult job ahead of policy makers in trying to make recommendations as to how such a complicated sector should be regulated.

Shelanski makes the point that, during the 1990s, several countries had recently opted for a more light-handed approach to telecommunications regulation, using Australia and New Zealand as examples. Despite having published the article in 2002, Shelanski fails to refer to the Fletcher Inquiry or the enactment of the Telecommunications Act 2001 in New Zealand. Had these sources been examined, he would have found that in fact the light-handed approach was no longer favoured in New Zealand. While academics like Howell and Shelanski have tried to argue that telecommunications does not require sector-specific regulation, the Government saw New Zealand's experience with light-handed regulation as unsuccessful. Relying on competition law is inappropriate for a sector where firms have characteristics of natural monopolies. Expert regulators with an in-depth understanding of this sector can resolve any competition issues far more effectively than courts, so long as the appropriate regulatory framework is in place.

Parallels can be drawn between the Fletcher Inquiry's findings and the current proposed regulatory framework for telecommunications in New Zealand. This is unsurprising since each amendment to the Act is an attempt to bring the framework into line with the latest market developments. Much as the Fletcher Inquiry recommended a regulatory model to ensure appropriate access to and pricing of Telecom's services,⁷² the latest Review recommended implementing a regulatory framework to ensure Chorus cannot earn excessive profits for allowing access to its network. Another similarity in the changes taking place in 2000 with today is that the Fletcher Inquiry found "electronic communications had become central to the New Zealand economy... and to the ability of New Zealanders to participate fully in society and the global economy". This finding is also analogous to the policy reasons behind New Zealand's UFB roll out, that access to high-speed internet drives productivity and social benefits. Just as the Fletcher Inquiry recommended the enactment of the Telecommunications Act in 2001 to implement sector-specific regulation, it is important that natural monopoly fibre providers are regulated to ensure these services are available on an ongoing, reliable and affordable basis.

⁷¹ Shelanski, above n 29.

⁷² Nicoll, above n 4, at 115.

⁷³ At 115.

C Developments in the 2000s

It was not all smooth sailing for users of telecommunications services in New Zealand after the Act passed; some competition issues persisted. In December 2005, the Government instigated a "stocktake" of the telecommunications sector.⁷⁴ This came about when it became evident that New Zealand was falling behind other countries in the Organisation for Economic Co-operation and Development ("OECD") in terms of the performance of broadband services.⁷⁵ This stocktake found that competition in the telecommunications sector was not at the desired level.⁷⁶ The Government was also aware that market participants were struggling to compete with Telecom due to the "absence of safeguards for the terms and conditions of supply of wholesale services from the vertically integrated incumbent supplying essentially the same services to its own retail arm".⁷⁷

Concerns about Telecom's market power coming out of the stocktake resulted in the Government employing several methods to regulate the telecommunications sector in 2006, in order to close the gap between New Zealand and other countries in the OECD.⁷⁸ The 2006 amendment to the Act is described by Hansen and Jones as having "encompassed key provisions for improving competition". 79 Some information disclosure requirements were inserted into the Act, meaning Telecom and other telecommunications access providers had to publicly report certain information about their businesses. 80 Other significant amendments required Telecom to act in a less discriminatory manner, and introduced more regulated telecommunications services.⁸¹ These amendments required Telecom to prepare separate accounts for its wholesale businesses ("accounting separation").82 Local loop unbundling (LLU) was also introduced, which required Telecom to lease part of the network connecting to each customer's premises to its competitors.⁸³ The idea behind LLU was to allow other RSPs "to compete fully with Telecom to provide faster, cheaper broadband", 84 thus offering consumers more choices. The Government decided to go one step further in its attempts to solve competition issues in telecommunications markets in 2007, when the Telecommunications Minister ("the Minister") instructed Telecom "to operationally separate its network activities from its wholesale and retail activities". 85 The purpose of separating

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[&]quot;Government moves fast to improve Broadband" (4 May 2006) The official website of the New Zealand Government https://www.beehive.govt.nz/release/government-moves-fast-improve-broadband>.

[&]quot;Government moves fast to improve Broadband", above n 74.

Hansen and Jones, above n 6.

Cabinet Policy Committee 2006 as cited in Hansen and Jones, above n 6, at 85.

[&]quot;Government moves fast to improve Broadband" above n 74.

Hansen and Jones, above n 6, at 85.

Telecommunications Act 2001, s 69Y. The Bill will introduce a different, more advanced, information disclosure regime for fibre providers.

Hansen and Jones, above n 6.

Government moves fast to improve Broadband" above n 74.

Nicoll, above n 4, at 118.

[&]quot;Government moves fast to improve Broadband" above n 74.

⁸⁵ From Competition to Regulation, above n 54, at 4.

Telecom's activities in this way was to encourage transparency, competition and investment.⁸⁶

As mentioned, in 1999 Telecom was dealing with significant pressure on its infrastructure due to the massive and unprecedented increase in internet traffic.⁸⁷ This, along with the one-way nature of internet traffic, was causing "an adverse and growing imbalance in fees payable by Telecom to Clear".⁸⁸ Telecom introduced the 0867 service in 1999 to combat these problems. The 0867 service was designed to reduce the charges Clear was receiving from internet service providers ("ISP"s), and to "provide an incentive for ISPs to move from Clear's network to Telecom's network".⁸⁹ Clear alleged that the introduction of this service breached s 36 and complained to the Commission, who commenced proceedings against Telecom in 2000.⁹⁰ The eventual result of this case was the Supreme Court finding it had "not been proved that Telecom used its (assumed) dominant position in the relevant markets when introducing the 0867 service".⁹¹ While the conduct occurred in 1999, this case did not conclude until 2010.

Telecom and the Commission were also embroiled in separate lengthy litigation regarding Telecom's conduct from 2001-2004, and this litigation did not reach a conclusion until 2012. In this case, the Commission alleged that Telecom breached s 36 by deterring entry into certain markets, and that "some of the wholesale prices charged by Telecom for "data tails"... were so high, in relation to its retail prices, as to cause a price squeeze". The Court of Appeal upheld the finding that Telecom had breached s 36 by engaging in this conduct. These cases illustrate how slow the court process can be in dealing with competition issues in the telecommunications sector, especially where the facts are complicated as in 0867 and Data Tails.

D 2011 amendments to the Act

The Government went one step further in 2011 with the structural separation, or de-merger, of Telecom into Spark and Chorus. This was a crucial turning point in the history of the New Zealand telecommunications industry, and the structural separation was considered a world

From Competition to Regulation, above n 54, at 31.

^{87 0867,} above n 1, at [1].

⁸⁸ At [2].

⁸⁹ At [78].

Sarah Keene, Victoria Irwin and Andrew Fincham "The 0867 Case – Death Knell of the Counterfactual?" (paper presented at Bright*Star Competition Law and Regulatory Review Conference, 22-23 February 2010).

The Commerce Commission v Telecom Corporation of New Zealand Limited and Anor SC 76/2009 [2010] NZSC 111 [0867] at [49].

Telecom Corporation of New Zealand Ltd v Commerce Commission CA313/2011 [2012] NZCA 344 [Data Tails].

At [5]. The Court described "data tails" as the connection between a customer's premises and the point where rival providers can receive data signals from Telecom, and a price squeeze as occurring when a vertically integrated firm such as Telecom sets wholesale prices in a way that reduces competitors' profits in retail markets.

first. Hithough incumbent telecommunications companies overseas had been subjected to some form of separation such as the accounting or operational separation that was initially imposed on Telecom, New Zealand was the first country to have "full ownership separation". So 2011 also saw an amendment being made to the Act which provided for government-funded networks, such as the UFB network, with structural separation forming part of the agreements for the UFB roll-out. The 2011 amendment also introduced a new section 157AA of the Act, which required the Minister to review the policy framework for regulating telecommunications services. This involved considering whether this framework was the most effective means of promoting competition for the long term benefit of endusers, whilst also promoting legitimate commercial interests of wholesalers and retailers. It also looked at whether the current regulations encouraged efficient investment and supported innovation by telecommunications providers. This was a significant amendment because it allowed for reviews to be conducted to ascertain whether the legislation was still fit-for-purpose.

IV Proposed law reform

Various levels and forms of regulation have been attempted in New Zealand in the last few decades, and it has become clear that as much as some critics might argue against telecommunications sector-specific regulation, competition law alone is insufficient to regulate this industry. Throughout the past few decades, the Government has proven that it is unwilling to let companies with features of natural monopolies, such as the old Telecom or the new Chorus, use that market power to the detriment of consumers. The question that needs to be addressed now is not whether fibre should be regulated, but how it should be regulated, and whether the Bill properly envisages a future scenario where the market for telecommunications services is more competitive.

A Review of the Act

The Act is about to be amended as a result of MBIE's Review which aimed "to make sure New Zealand has the right laws for communications networks after 2020, to meet the needs of consumers and businesses, and to help keep our economy growing". The significance of 2020 date is that it marks the end of CIP's contractual arrangements with the four fibre providers, i.e. the "current UFB contracts will end in December 2019 and UFB wholesale pricing will then be set purely on a commercial basis". MBIE recognised the important role

Regulating communications for the future, above n 64, at 40.

⁹⁵ At 40.

Ministry of Business, Innovation and Employment "Telecom separation" (2015) https://www.mbie.govt.nz/info-services/sectors-industries/technology-

communications/communications/previous-reviews-and-consultations/telecom-separation>.

[&]quot;Telco Act gearing up for 21st Century upgrade" (12 July 2016) The official website of the New Zealand Government https://www.beehive.govt.nz/release/telco-act-gearing-21st-century-upgrade>.

Regulating communications for the future, above n 64, at 59.

wholesale pricing will play after this date in ensuring fixed line markets work well, consumers are able to easily transition to fibre from copper, and regulated businesses have the right incentives to invest.⁹⁹ To achieve its vision for the UFB initiative, the Government emphasised the importance of having "a regulatory framework that supports efficient private sector investment", and that this "should decrease dependence on government intervention to drive network upgrades and meet the growing needs of consumers". ¹⁰⁰

Another reason to implement a new regulatory framework for fibre networks is that Government wants UFB to continue to provide the benefits of high speed internet to New Zealanders for years to come. Because of this, it is important that regulation of the fibre providers should not be neglected once the roll-out is finished. MBIE made the point that once the construction of the UFB network is complete, the focus of telecommunications policy would shift to designing "an enduring regime" for the future. 101 A predictable regulatory regime provides market participants with the confidence they need to invest, innovate or enter the market. This is because they can "predict the outcomes of regulatory proceedings". 102 An uncertain regulatory regime post-2020 could have the effect of stifling investment, since investing in UFB infrastructure once the contractual arrangements have ceased could be viewed as risky in the absence of clear rules. Hansen and Jones make the point that the Review aimed to keep promoting competition for the long-term benefit of endusers of telecommunications services in light of the rapid change in markets, and improvements in technology. 103 They also note that the aim was "to determine whether regulatory modifications are necessary following significant technological, market and structural change over the last fifteen years, including convergence, the UFB programme and the structural separation of Telecom in 2011". 104

The issues considered in the Review provide valuable insight into how and why the Act is changing, as well as a narrative of the regulatory options that were considered throughout the process. Importantly, several of the Review documents identify the regulatory principles that will form the basis of the updated Act. They state that regulation should be clear, predictable, proportional, transparent, accountable, flexible, and only implemented where necessary. To keep up with the rapid pace of change, the Review found that regulation "needs the flexibility to respond to change, allowing and incentivising deregulation if technological changes or new business models create new opportunities for competition that were not anticipated". This flexibility means the Act should not favour one kind of technology over another; it should have the ability to adapt to changing consumer preferences and other market forces.

⁹⁹ Final Policy Decisions for Fixed Line Communications Services, above n 15.

¹⁰⁰ Δt 18

Regulating communications for the future, above n 64, at 55.

¹⁰² At 57.

Hansen and Jones, above n 6.

¹⁰⁴ At 86.

Regulating communications for the future, above n 64, at 50.

The most significant of these regulatory principles are predictability and flexibility. These are important principles because there is a natural tension between them, and the relative importance of each will have to be weighed up when the regulation is applied to fibre providers. This tension exists because it is difficult for something to be predictable whilst also being flexible, technology-neutral, and adaptable to change. As will be discussed in greater detail below, these principles of regulation are particularly relevant in light of the fact that consumers could, at any point, develop a preference for other forms of technology that provide a superior service to fibre. On the subject of flexibility, MBIE emphasised that "flexibility is important in the fast-evolving market for broadband services". There is always the possibility of future competition from emerging technologies in this fast-changing industry, therefore it is vital that the amended legislation be sufficiently equipped to respond to changes in telecommunications markets.

To encourage more investment to occur after the UFB build is completed, MBIE emphasised the need for certainty in pricing for wholesale services, including copper prices. This would be difficult under the status quo, since the Act as currently drafted would require the Commission to instigate a time-consuming investigation into fibre services and then make a recommendation to the Minister as to whether these services should be regulated.

On the need for regulation in fixed line markets, MBIE considered the competitive pressures faced by Chorus and the LFCs. They claim that fixed line markets "still have natural monopoly characteristics" due to the "very high barriers to entry". They make the point that competition was likely to be limited as more consumers migrate from copper to fibre, and that Chorus' prices would be unlikely to face sufficient constraints. Chorus "competes with the provision of broadband infrastructure with high speed offerings...over its legacy copper network", ie. it provides copper services in much of New Zealand, as well as providing fibre in its UFB areas. This helps explain why the Review concluded that the LFCs should only be subjected to ID regulation, rather having to comply with ID and PQR as Chorus will have to. LFCs face competition from Chorus' copper services in their UFB areas, whereas Chorus does not face nearly as much competition, thus Chorus needs an additional, stricter form of regulation to constrain its behaviour.

MBIE made it clear during the Review that it is not necessarily appropriate to aim to promote competition in fixed line networks, since they have characteristics consistent with natural monopolies. Instead, it is more sensible to promote a purpose along the lines of that contained in Part 4 of the Commerce Act, i.e. "outcomes consistent with outcomes produced in competitive markets". Due to the presence of natural monopoly characteristics, true

Post-2020 Regulatory Framework, above n 13, at 5.

Regulating communications for the future, above n 64, at 14.

¹⁰⁸ At 15.

Hansen and Jones, above n 6, at 86.

¹¹⁰ At 86.

competition cannot be achieved in all regulated industries, and it is not a realistic goal in telecommunications markets. As such, the purpose of Part 6 was initially drafted so as to "promote the long-term benefit of end-users in markets for fibre fixed line access services by promoting outcomes that are consistent with outcomes produced in workably competitive markets". MBIE also made the point that this new purpose will "allow regulation to address monopoly pricing directly, and draw on precedent from Part 4 where relevant". This purpose statement shows that policy-makers acknowledge the realities faced by fibre providers and end-users, as will be discussed below.

As mentioned, one of the changes proposed by MBIE during the Review was to move from the TSLRIC price-setting approach to BBM for telecommunications regulation. Both TSLRIC and BBM are mechanisms which allow regulated telecommunications businesses to recover the costs of investing in assets, but the method for calculating the valuation of these assets differs. TSLRIC is more abstract in nature and involves modelling a hypothetical scenario, whereas BBM involves setting a maximum allowable revenue of a regulated business by first determining the value of various "building blocks". TSLRIC is currently used by the Commission in setting the prices of regulated copper services under the Telecommunications Act, while BBM is used in utility regulation under Part 4 of the Commerce Act and "is used for both copper and fibre services in Australia".

TSLRIC is "a forward-looking cost based methodology that may be used by the Commission when conducting pricing review determinations". ¹¹⁷ It involves setting prices by modelling future supply based on the hypothetical efficient operator's costs, and "…benchmarking against international services". ¹¹⁸ Put simply, it involves calculating the predicted price of services if inputs at the present day prices were used to supply services in the future. MBIE describes TSLRIC as follows: ¹¹⁹

"Under TSLRIC the underlying network assets are valued (and periodically re-valued) based on what it would cost if they were to be replaced with a 'modern equivalent asset'. Costs are set independently of the actual costs being incurred by the regulated entity and are intended to result in prices consistent with those that would be present if there was effective competition."

Telecommunications (New Regulatory Framework) Amendment Bill (293-1) s 162.

Options Paper, above n 47, at 7.

Regulating communications for the future, above n 64.

For an illustration of how BBM works see Figure 15: An example of the 'building blocks' making up the building block methodology in *Regulating communications for the future*, above n 64, at 74.

Regulating communications for the future, above n 64.

¹¹⁶ At 73.

Commerce Commission "Commission releases discussion paper on application of a TSLRIC Pricing Methodology" (3 Jul 2002)

https://comcom.govt.nz/news-and-media/media-releases/archive/commission-releases-discussion-paper-on-application-of-a-tslric-pricing-methodology>.

Regulating communications for the future, above n 64, at 15.

¹¹⁹ At 73.

The aim of TSLRIC is to replicate what might happen in a competitive market if a firm attempted to charge wholesale prices that were higher than their costs of building the network, leading access-seekers (e.g., RSPs) to "enter the market and build their own infrastructure". This would cause market forces to drive down the incumbent's wholesale prices until they were equal to the price of replacing the network. The Commission has stated in several copper pricing decisions that the aim of the TSLRIC approach is to prevent monopoly pricing; and to promote efficient investment, cost-minimisation, efficient use of infrastructure, efficient cost recovery, efficient entry into downstream markets, and non-discrimination. 121

During the Review, MBIE explained that "under BBM, a regulated supplier's allowed revenue is equal to the sum of underlying components or 'building blocks,' consisting of the return on capital, return of capital (or depreciation), operating expenditure, and various other components such as taxes and incentive amounts". This approach differs from TSLRIC in that it involves setting an initial regulated asset base based on the actual costs of building these assets. The next step is to calculate the cost of recovering that investment, as opposed to the cost of replacing the asset under TSLRIC. Using this method, the regulated business is given maximum allowable revenue which enables it to recover actual costs, rather than theoretical costs. The result of these calculations is that the regulated business' revenue "should be sufficient to cover all of its efficiently incurred costs (or 'building blocks') without putting the entity in a position to earn excessive profits". 123

MBIE provided some reasoning for recommending the move from TSLRIC to BBM for regulating wholesale fibre prices. They mentioned that the TSLRIC approach is often unclear, and that it was time-consuming, used considerable industry resources, and created uncertainty about whether prices would be backdated. MBIE also claimed that this lack of certainty stifled incentives to innovate and invest, and thus impacted on consumers. On the other hand, MBIE described BBM as more appropriate in that it will "provide a suitable basis for robust retail competition over the UFB network". Because fibre providers will be able to earn a fair return on their assets and recover costs, this will encourage further investment and innovation, such as network expansion.

As MBIE noted, such incentives would not be as strong under TSLRIC, since it "is not directly concerned with whether the incumbent under- or over-recovers". This

Regulating communications for the future, above n 64, at 73.

For example, see *Final pricing review determination for Chorus' unbundled copper local loop service* [2015] NZCC 37 at 65. See also *Final pricing review determination for Chorus' unbundled bitstream access service* [2015] NZCC 38 at 58.

Post-2020 Regulatory Framework, above n 13, at 10.

¹²³ Δt Δ

Regulating communications for the future, above n 64, at 75.

Final pricing review determination for Chorus' unbundled copper local loop service, above n 121, at [289].

methodology is also likely to provide more certainty about pricing than TSLRIC by making prices less volatile, and eliminating the possibility of "windfall" losses or gains flowing to the regulated business each time its regulated asset base is revalued. However, BBM is not without its faults, and the advantages and disadvantages of each approach will be discussed in more detail below.

A Key changes in the Bill

As a result of the Review, the Bill was introduced on 8 August 2017. ¹²⁶ It had its first reading on 16 August 2017 and was referred to the Economic Development, Science and Innovation Committee ("the Committee") for scrutiny in early 2018. The Bill has had its second reading, and is due to move to the Committee of the whole House stage for debate in the coming months. As part of the new regime, the Commission will be required to establish a new framework for regulating fibre services. As outlined above, this will mean setting the IMs that will apply to the regulations, as well as determining the ID and PQR requirements. The Commission will also need to review regulated fibre services to see how effectively the regulation meets its purpose.

As mentioned, the Bill will impose utility-style regulation. During the Review, MBIE argued that since Telecom was structurally separated, fixed line telecommunications providers operate more like businesses in other industries that are regulated under Part 4. This is because they are wholesale-only businesses providing "a limited set of services in markets with limited competition". Thus the case was made for telecommunications regulation to be more consistent with the regulation of electricity and gas businesses, i.e. the "traditional utilities" Because this style of regulation has already been implemented under Part 4, the Commission already has experience in applying and enforcing it, and it "has the benefits of being more widely understood by investors and supporting investment in high quality infrastructure". The next section will involve a more detailed analysis of the more significant aspects of this new framework, and how they may work in practice.

As mentioned above, another significant change the Bill is making is the addition of a specific purpose statement for what will become the new Part 6 of the Act, which will set out how fibre fixed line access services are to be regulated. This purpose will be distinct from the overall purpose of the Act set out in s 18, which aims to "promote competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand by regulating, and providing for the regulation of, the supply of certain telecommunications services between service providers". The new s 162 will aim to ensure fibre providers:

New Zealand Parliament, above n 35.

Regulating communications for the future, above n 64, at 69.

¹²⁸ At 19.

¹²⁹ At 20.

- (a) have incentives to innovate and to invest, including in replacement, upgraded, and new assets; and
- (b) have incentives to improve efficiency and supply fibre fixed line access services of a quality that reflects end-user demands; and
- (c) allow end-users to share the benefits of efficiency gains in the supply of fibre fixed line access services, including through lower prices; and
- (d) are limited in their ability to extract excessive profits.

Concerns were raised in Select Committee submissions about the proposed wording of s 162, relating to the fact that the wording of this section was too narrow and focused too much on the interests of fibre end-users. Originally, when making a recommendation or decision, the Commission and the Minister only had to consider the s 162 purpose. However, the Committee recommended to the House that a related section – s 166 – be amended so that it does not favour the interests of end-users of fibre over the interests of consumers who use other telecommunications services. The new s 166 will allow them to consider, where relevant, "the promotion of workable competition in telecommunications markets for the long-term benefit of end-users of telecommunications services". MBIE gave the following reasons for recommending the change in wording of s 166:¹³⁰

"...to permit the Commission to consider promoting the long-term benefit of all telecommunication end-users when applying the purpose statement will provide the Commission with the flexibility necessary to respond to technological change. The Commission should only be able to consider this factor where it is relevant. This preserves the fundamental purpose statement and the alignment with Part 4 of the Commerce Act, but allows the Commission to balance the interests of fibre users and users of other technologies if necessary."

The Commission will also have to periodically review fibre markets and consider whether or not they should be deregulated, as will be discussed in more detail below. Section 208 of the Bill states that "the Commission may, at any time after the implementation date, review how fibre fixed line access services should be regulated under this Part if the Commission has reasonable grounds to consider that fibre fixed line access service". It can recommend to the Minister that certain relevant markets no longer be regulated under the regulatory framework for fibre. In making such a recommendation, the Commission must consider whether competition has emerged in a relevant market, whether fibre providers have become restricted in their ability to exercise market power, and whether the s 162 purpose would be better met if fibre services were no longer subject to PQR. While a deregulation review can

Ministry of Business, Innovation and Employment Telecommunications (New Regulatory Framework)

Amendment Bill: Departmental Report to the Economic Development, Science and Innovation

Committee (20 April 2018) at [30].

be commenced at any time after the framework is implemented, the Commission must conduct a review before each regulatory period (other than the first regulatory period).¹³¹

The Bill makes several other changes to the Telecommunications Act that the Commission will be responsible for implementing. As well as applying the new regulatory framework for fibre, the Commission will be required to review certain determinations applying to copper services by December 2019, and deregulate copper in fibre areas since "the copper network is nearing the end of its useful life, and is ultimately being replaced by the UFB network". The Bill also contains provisions which aim to protect consumers and improve levels of retail service quality. However, as mentioned earlier, the changes to the regulatory framework for fibre are the most significant changes, and represent one of the biggest shifts in New Zealand's history of telecommunications regulation. As such, it is worth discussing whether law makers have made the right decision in introducing this fibre regime and analysing how some of the aspects of the new framework are likely to work in practice.

V The new regulatory framework

The first question worth discussing is why the Act needs to change now. The statement the Committee made claiming that Review "...concluded that there was a need for regulatory change given the major growth in fibre network services in New Zealand and the relative decline in copper"133 is an oversimplification. If the copper network had been replaced with a fibre network, but the structure of the telecommunications sector and other market dynamics had remained the same, a regulatory change may not have been needed. It is not accurate to contend that the migration from copper to fibre lines is the key factor driving the need for a new regulatory framework – even though fibre is able to provide superior broadband services to New Zealanders. Alternatively, it could be argued that without the UFB network having been constructed, a new regime may still have been needed, given the other changes that have taken place since 2001 as the industry has modernised and its structure has evolved. A better explanation for why the Act needs to change would involve a combination of many of the explanatory factors discussed above; the significance of the UFB roll-out and the conclusion of those contractual arrangements in 2020, the way the New Zealand telecommunications industry has evolved in past decades, and flaws in the current framework found during the Review.

While there are many explanations as to why a new framework was needed, it is also worth analysing some of the policy choices made by the Government in drafting the Bill. For the

Section 205 states that "The first regulatory period starts on the implementation date and lasts for a period of 3 years." The implementation date stated in the Bill is 1 January 2020, but the Minister is able to grant the Commission with an extension of up to 2 years.

Post-2020 Regulatory Framework, above n 13, at 5.

Economic Development, Science and Innovation Committee *Final report: Telecommunications (New Regulatory Framework) Amendment Bill* (4 May 2018) at 1.

politicians and public officials tasked with creating the legislation which underpins industry-specific regulation, the task has involved weighing up several competing factors in order to reach a final decision. Briglauer and Vogelsang make the point that "regulation, if effective and binding, is in no way neutral, but always involves trade-offs to be made". They also discuss the need for regulation to balance between allowing competition to suffer as a result of a lack of deregulation "against competitive distortions such as suboptimal investment due to overregulation on the other hand". These are all complex issues the Government has had to consider in formulating the new regime.

As outlined above, companies like Chorus operate in many ways like businesses regulated under Part 4. Because of this, the Government made a sensible choice in introducing utility-style regulation for fibre providers; however, it is crucial that the approach taken to regulating other sectors is not directly transplanted to a unique industry like telecommunications. As the Commission stated in its Select Committee submission, utility-style regulation has functioned well in regulating natural monopolies under the Commerce Act, and has also worked well in the UK and Australia. MBIE had stressed during the Review that the new framework will have "features unique to fixed line services as necessary to apply this regulation to this class of technology". This is important because since light-handed regulation was scrapped, the telecommunications sector has always been regulated by its own legislation – the Telecommunications Act, rather than the Commerce Act – and it is a particularly complex and unique industry. It would not be appropriate to implement a one-size-fits-all approach to regulating telecommunications services; the Commission will need to implement the regulation bearing in mind that it is specific to telecommunications.

Another sensible choice was to scrap TSLRIC in favour of BBM for setting the prices of regulated fibre services. While TSLRIC has its advantages, BBM is better-suited to the current state of fibre markets, and is likely to provide the telecommunications industry with more predictability and stability than TSLRIC. Setting prices using TSLRIC is a complicated process which runs the risk of being imprecise due to the difficulty of undertaking such complex calculations. Ingo Vogelsang explains that "the measurement of economic costs of individual services or network components... in telecommunications... is a difficult undertaking because economic costs are forward-looking, because of the rapid technical progress and because of economies of scale and scope, resulting from the use of long-lived

Briglauer and Vogelsang, above n 9, at 144.

Martin Cave and Richard Feasey "Policy towards competition in high-speed broadband in Europe, in an age of vertical and horizontal integration and oligopolies" (2017)

http://www.cerre.eu/sites/cerre/files/170220_CERRE_BroadbandReport Final.pdf> as cited in

Jerry A. Hausman and William E. Taylor "Telecommunication in the US: From Regulation to Competition (Almost)" (2013) 42 Review of Industrial Organization 203 at 206 as cited in Briglauer and Vogelsang, above n 9, at 157.

Commerce Commission "Submission to the Economic Development, Science and Innovation Committee on the Telecommunications (New Regulatory Framework) Amendment Bill" (2 February 2018).

¹³⁷ Post-2020 Regulatory Framework, above n 13, at 3.

assets". ¹³⁸ This emphasises the point that natural monopolies in the telecommunications sector pose a challenge for regulatory agencies in setting prices, especially if a method that relies on estimating forward-looking costs such as TSLRIC is used.

Beltrán and Duignan have also attempted to discern the possible reasons jurisdictions may wish to move from a TSLRIC regulatory methodology to BBM. The authors look at several pertinent issues, such as why the UK and Australia made the move to BBM for telecommunications regulation, and analyse the incentives this form of regulation provides to suppliers of telecommunications services. They look at how BBM is a preferable approach to TSLRIC in that it benefits the telecommunications industry by offering more predictable regulation, while curtailing monopoly profits and protecting end-users. The authors make the point that the "conclusion that the TSLRIC methodology involves arbitrary decisions rather than being predictable, has lead a growing number of jurisdictions to change their telecommunication regulatory approach", ¹³⁹ and that many countries are choosing BBM as the preferred form of regulation. The main benefits of BBM are its predictability, and the fact that it incentivises regulated businesses to invest, limits their ability to extract excessive profits, and protects end-users.

The ability of BBM to incentivise investment is something that is clearly important to the Government, since it wants the UFB initiative to have long-term viability, and provide benefits to New Zealanders for years to come. Fibre has been identified as the way to achieve economic prosperity in New Zealand, and BBM is consistent with the goals of this project in that it aims to "generate more predictable long-term outcomes and... improve investment and innovation incentives for both access providers and seekers". However, the Government could be accused of being constrained in its consideration of which pricing methodology should be implemented, since it has a vested interest in ensuring the success of the UFB network it poured significant funds into. Perhaps this precluded Government from giving sufficient weight to the benefits of TSLRIC, in that this price-setting approach is arguably more flexible and technology-neutral, and could be more appropriate in future if emerging technologies are able to effectively compete with fibre services.

In the current telecommunications environment, however, BBM is likely to provide market participants with more stability and certainty about pricing than TSLRIC, as more New Zealanders transition from copper to fibre networks. TSLRIC, with its lack of certainty about what would be built in a hypothetical scenario, does not align with the reality of modern

Ingo Vogelsang "The Endgame of Telecommunications Policy? A Survey" (2013) 64 Review of Economics 193, at 13.

Fernando Beltrán and Pat Duignan, "Reducing Uncertainty in Price Regulation for Fibre-Based, Open-Access Platforms" (1 October 2017) https://www.researchgate.net/publication/320583098/download at 1.

Regulating communications for the future, above n 64, at 20.

telecommunications markets,¹⁴¹ and overall BBM is the preferable approach. However, changing market conditions may mean this regulatory framework will need to be revised again in the future.

It is important to note that although several of the Review documents state that BBM will be applied from implementation date, BBM is not explicitly included in the Bill. The Cabinet paper setting out the final decision on the Bill explains that "Cabinet agreed that fibre networks should be regulated under the new BBM regime", 142 but the Bill itself does not mention building blocks. In contrast, the current Act "...does not leave this implicit, but rather explicitly includes the concept of forward-looking costs in TSLRIC". 143 Given the extent to which BBM was discussed throughout the Review, it is unclear why the Commission has been given such wide discretion in formulating prices for fibre services; in theory, TSLRIC could still be used. This decision not to mandate BBM is a failure of policy-makers in achieving certainty — one of the main principles of economic regulation — since regulated fibre providers will not have any assurance as to which price-setting approach will apply until the Commission commences its work implementing the new regulatory framework.

There is a question as to whether or not the proposed law reform accounts for the possibility of future changes in technology, demand and competition. It is possible that another form of technology may become a viable alternative to fibre to the extent that it can compete on a meaningful level. This possibility is relevant not only to the price-setting approach, but to the new regime in general, and has the potential to cause problems in terms of stability, predictability, flexibility and technology-neutrality. As the Court noted in *Commerce Commission v Vector Ltd*:144

"...there is a continuum between complete certainty at one end and complete flexibility at the other. The question is where Parliament has drawn the line. Clearly Parliament did not accord the Commission absolute flexibility, nor did it require absolute certainty in the regulatory regime.... the Commission's extensive consultation obligations under Part 4 are also likely to produce further certainty over time"

telecommunications-act-2001/submissions/>.

Chorus "Submission for Chorus in response to The Ministry of Business Innovation and Employment's Discussion Paper Regulating communications for the future – Review of the Telecommunications Act 2001 (8 September 2015)" (30 October 2015) Ministry of Business, Innovation and Employment <a href="https://www.mbie.govt.nz/info-services/sectors-industries/technology-communications/communications/regulating-the-telecommunications-sector/review-of-the-sector-review-of-the-s

Final Decisions on Fixed Line Services, Mobile Regulation and Consumer Protection, above n 34, at [16].

Final pricing review determination for Chorus' unbundled copper local loop service, above n 121, at [113].

Vector Ltd v Commerce Commission [2012] NZSC 74 at [60].

As mentioned above, technology is rapidly evolving in the telecommunications sector, meaning it can be highly unpredictable. There is a chance that new technologies may become available that are able to provide a service to consumers that is equivalent, or superior, to that provided over fibre lines. The Commission emphasised this point its Select Committee submission, mentioning the "possibility that competition will emerge from new technologies". For example, fifth generation ("5G") wireless communication has been rolled out in some countries, and may soon be able to provide New Zealanders with high quality connections. Enable also argued in their Select Committee submission that there is the possibility that in future "technology such as 5G wireless will further intensify the level of competition by the time the proposed amendments come into effect". Advances in technology such as this could have a huge impact on the state of competition in telecommunications markets, and it is unclear whether the new regulatory framework sufficiently allows for this possibility.

There are also currently other services available that could be considered imperfect substitutes for fibre, such as hybrid fibre coaxial and fixed wireless access services. He Briglauer and Vogelsang make the point that it is important to consider "pressure from competition factors (or imperfect substitutes) which are outside the relevant and regulated market...e.g. competition stemming from mobile networks". He importance of the regulation being flexible enough to respond if these "imperfect substitutes" become more popular, so that a situation does not arise where fibre is regulated needlessly.

If new technologies emerge that are able to compete with fibre services, or become popular enough to be seen as substitutes for fibre, the Minister and the Commission will need to be able to react appropriately and recognise that Chorus and the LFCs have less market power than they once did. This recognition may occur as the result of a deregulation review. It is difficult to envisage a new entrant emerging in a fibre market to the extent of being a "major competitor" to Chorus or the LFCs, since those companies already have the UFB contracts and their infrastructure would be highly expensive to duplicate. However, it is possible that certain fibre markets could be deregulated for other reasons, such as an increase in demand for alternative technologies.

¹⁴⁵ Commerce Commission Submission, above n 136, at [27.3].

Spark New Zealand "Spark New Zealand outlines 5G network intentions" (9 August 2018) https://www.sparknz.co.nz/news/Spark-outlines-5G-network-intentions/>.

Enable Networks Limited "Submission to the Economic Development, Science and Innovation Committee on the Telecommunications (New Regulatory Framework) Amendment Bill" (2 February 2018).

¹⁴⁸ At 1.

Briglauer and Vogelsang, above n 9, at 146-147.

On examination of the EU's regulatory approach, J. Scott Marcus describes it as "completely technology-neutral" in that "if one service is substitutable for another, then it should be subject to roughly the same regulatory constraints, irrespective of the technologies used to deliver the services". The same could not be said of the proposed law reform in New Zealand – although the Bill attempts to be technology-neutral, different technologies are not subject to the same regulatory constraints, since there will be a specific regime solely applying to fibre. However, it could also be argued that in the telecommunications industry in New Zealand at the moment there are no genuine substitutes for fibre services that can provide similar speeds or other technical specifications, so the regime cannot be completely technology-neutral.

As mentioned above, the Commission is able to conduct a review and make a recommendation to the Minister regarding the deregulation of fibre services. As stated in a Cabinet paper, this is "another important regulatory design principle", 152 requiring the Commission "to review whether any geographic area, service, asset or market should be deregulated prior to each regulatory reset". 153 Vogelsang has raised many points that are applicable to a discussion about the possibility of fibre being deregulated in New Zealand in the future. He has questioned whether the need for economic regulation has changed in the face of competition to the point that industry-specific regulation may no longer be necessary. He discusses the shift in the "regulatory efficiency frontier" caused by the development of new technology and changes in markets, using the examples of fixed-mobile substitution and next generation access networks. He goes on to make several points about the possibility of deregulation, stating that "...total deregulation will only work if competition is either sustainable at the time of deregulation or if its emergence over time cannot be prevented by the incumbent". 156

On s 208, the Committee has stated that this "provides for the Commission to review whether fibre fixed line access services should be deregulated", ¹⁵⁷ and "is designed to take into account the changing nature of telecommunications technologies that are possible substitutes for fibre". ¹⁵⁸ The Committee recommended that s 222, which "would give effect to the recommendations of such reviews by allowing for the deregulation of specific providers", ¹⁵⁹

J. Scott Marcus "The potential relevance to the United States of the European Union's newly adopted regulatory framework for telecommunications" (2003) 2 Journal on Telecommunications and High Technology Law 111 at 128.

¹⁵¹ At 128.

Final Decisions on Fixed Line Services, Mobile Regulation and Consumer Protection, above n 34, at [73].

¹⁵³ At [46].

Vogelsang, above n 138.

¹⁵⁵ At 193.

Vogelsang, above n 138, at 256.

¹⁵⁷ Final Report, above n 133, at 7.

¹⁵⁸ At 7.

¹⁵⁹ At 8.

be amended so that it also allows "for the deregulation of specific markets". How while it makes sense that certain markets, such as geographic markets, are able to be deregulated, it is unclear how these sections might work in practice. In particular, it is not clear when such a deregulation review could take place, nor how long it would take. While section 208 states that a deregulation review could occur "any time after implementation date", it might take a long time for such a review to conclude and take effect.

If the Commission and the Minister are not able to manage the process of deregulating fibre seamlessly, should the need arise, this could result in a fibre provider being disadvantaged. For example, there could be a 5G provider, or provider of another technology that has not yet been envisaged, who is able to compete in the retail market, whilst also owning their own infrastructure. Such providers could find themselves in a much better position than a regulated fibre provider that is struggling to compete given the regulations they must comply with. The upshot of this is that in a situation where, say, a city in New Zealand had strong competition for telecommunications services, rather than being dominated by fibre, the fibre provider in that particular city would still be subject to regulation until a deregulation review had been finalised.

There could be issues with the flexibility of the regime if ss 208 and 222 do not effectively work together to allow for timely reviews on the need for fibre regulation, and if regulation cannot promptly respond to changes in technology and consumer preferences. If the Commission develops input methodologies and the corresponding regulatory instruments based on the current state of the market, but then commences a deregulation review resulting in fibre no longer being regulated shortly after implementation date, this would cause issues for businesses as to the certainty and predictability of the regime. There is also a risk that new technologies are able to meaningfully compete with fibre before implementation date, given the fast-paced nature of this industry and the fact that the new regime might not be implemented until 2022 if the Commission is granted an extension.

As mentioned with regard to the purpose statement, MBIE claim that the widening of s 166 will result in the regime being more flexible to changes in technology, since the Commission will have to consider the interests of end-users of all telecommunications services, not just fibre end-users. However, it is unclear how ss 162 and 166 will interact in practice, and this lack of clarity reduces the amount of certainty the Bill gives fibre providers. Perhaps this uncertainty, along with the uncertainty around which pricing approach will be taken, and how deregulation reviews might work, will be rectified after the Bill passes and the Commission makes its intentions clear as to how the new regime will be implemented.

Final Report, above n 133, at 8.

Departmental Report, above n 130.

VI Conclusion

When the New Zealand Parliament enacted the Telecommunications Act 2001, the UFB network had not yet been envisaged. Telecom was operating as both wholesaler and a retailer and was able to discriminate against businesses competing in retail markets. There have been several developments over the years that have seen competition in telecommunications markets increase, resulting in better outcomes for consumers. MBIE made the point during the Review telecommunications regulation "has encouraged competition and delivered benefits to consumers", ¹⁶² and that rules need to stay in place to incentivise providers to supply services at acceptable prices and levels of quality. While the market looks decidedly different today than it did when the Act was passed, the goals of economic regulation remain the same. Chorus and the LFCs enjoy a degree of monopoly power, and operate in many respects like regulated utility businesses. It therefore makes sense that they should be subject to utility-style regulation, and it makes sense that this reform should take place now that New Zealand is on the cusp of having near universal ultra-fast broadband coverage.

While the overall premise of the Bill makes sense, like many other pieces of legislation, it is not without its faults. The main problem with the way the Bill is currently drafted is that it appears to be inconsistent in its acknowledgement of fibre as the way of the future on one hand, and its desire to be technology-neutral on the other hand. There is a risk that where the Bill has attempted to provide flexibility and the ability to respond appropriately to advances in technology and shifts in demand, this has been at the expense of the certainty and predictability that the regime should give fibre providers.

Despite these drawbacks, however, the Bill is likely to go some way towards achieving better outcomes for telecommunications end-users. A key point emphasised by MBIE was that "communications regulation was designed for a different era and may need to be adapted to reflect today's competitive environment". As Nicoll wrote in 2002 with reference to a previous amendment to the Act "if the Bill goes through in its present form, we will at least have the well-crafted legal mechanisms which should lead to a well-ordered, efficient market". He same could be said for the current Bill, which promises to deliver the benefits of competition to consumers in a market that has previously struggled with competition issues. The telecommunications industry is still in need of regulation, and that regulation needs to match current economic and technological realities. The Bill represents an important step in the evolution of New Zealand's regulatory regime, and it will soon become clear how the regime will account for future developments in this unpredictable and ever-evolving sector.

Regulating communications for the future, above n 64, at 10.

¹⁶³ At 9.

Nicoll, above n 4, at 119.

BIBLIOGRAPHY

PRIMARY SOURCES

Clear Communications Limited v The Telecom Corporation of New Zealand (1993) 5 TCLR 413.

Commerce Act 1986.

Commerce Amendment Bill 2001 (296-2).

Economic Development, Science and Innovation Committee *Final report: Telecommunications (New Regulatory Framework) Amendment Bill* (4 May 2018).

Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38.

Final pricing review determination for Chorus' unbundled copper local loop service [2015] NZCC 37.

Ministry of Business, Innovation and Employment *Regulating communications for the future: Review of the Telecommunications Act 2001* (September 2015).

Ministry of Business, Innovation and Employment *Telecommunications Act Review: Options Paper* (July 2016).

Ministry of Business, Innovation and Employment *Telecommunications Act Review: Post-2020 Regulatory Framework for Fixed Line Services* (February 2017).

Ministry of Business, Innovation and Employment *Telecommunications* (New Regulatory Framework) Amendment Bill: Departmental Report to the Economic Development, Science and Innovation Committee (20 April 2018).

Office of the Minister for Communications *Review of the Telecommunications Act 2001:* Final Decisions on Fixed Line Services, Mobile Regulation and Consumer Protection (22 May 2017).

Office of the Minister for Communications Review of the Telecommunications Act 2001: Final Policy Decisions for Fixed Line Communications Services (2017).

Telecom Corporation of New Zealand Ltd v Commerce Commission CA313/2011 [2012] NZCA 344 [Data Tails].

Telecommunications Act 2001.

Telecommunications Act of 1996 Pub L No 104-104, 110 Stat 56.

Telecommunications (New Regulatory Framework) Amendment Bill (293-1).

The Commerce Commission v Telecom Corporation of New Zealand Limited and Anor SC 76/2009 [2010] NZSC 111 [0867].

The Commerce Commission v Telecom Corporation of New Zealand Limited and Anor HC Auckland CIV-2000-485-673, 18 April 2008 [0867].

Vector Ltd v Commerce Commission [2012] NZSC 74.

SECONDARY SOURCES

Alfred E. Kahn *The Economics of Regulation: Principles and Institutions* (1st ed, MIT Press, Cambridge (Mass), 1988).

Bert Sadowski, Bronwyn Howell, and Alberto Nucciarelli "Structural Separation and the Role of Public-Private Partnerships in New Zealand's UFB Initiative" (2013) 91 Communications & Strategies 57.

Bronwyn Howell "A pendulous progression: New Zealand's telecommunications regulation 1987-2007" (2007) http://hdl.handle.net/10063/3974>.

Bronwyn Howell "From Competition to Regulation: New Zealand telecommunications sector performance 1987-2007" (paper presented at the International Telecommunications Society European Region Conference, LUISS Guido Carli University, Rome, September 2008).

C. C. Nicoll "Light-handed Regulation of Telecommunications – The Unfortunate Experiment" (2002) 11 Information & Communications Technology Law 109.

Callum Gunn "Building Blocks' under Part 4" (September 2015) Telecommunications Users Association of New Zealand https://www.tuanz.org.nz/wp-content/uploads/2016/04/Introducing-the-Building-Block-methodology.

Carl Blanchard "Telecommunications regulation in New Zealand: light-handed regulation and the Privy Council's judgement" (1995) 19 Telecommunications Policy 456.

Chorus "Submission for Chorus in response to The Ministry of Business Innovation and Employment's Discussion Paper Regulating communications for the future – Review of the Telecommunications Act 2001 (8 September 2015)" (30 October 2015) Ministry of Business, Innovation and Employment .

Commerce Commission "Annual Telecommunications Monitoring Report" (May 2017) https://comcom.govt.nz/regulated-industries/telecommunications/monitoring-the-telecommunications-market-monitoring-report.

Commerce Commission "Commission releases discussion paper on application of a TSLRIC Pricing Methodology" (03 Jul 2002) < https://comcom.govt.nz/news-and-media/media-releases/archive/commission-releases-discussion-paper-on-application-of-a-tslric-pricing-methodology>.

Commerce Commission "Commission's role in telecommunications" (August 2018) https://comcom.govt.nz/regulated-industries/telecommunications/commissions-role-in-telecommunications.

Commerce Commission "Submission to the Economic Development, Science and Innovation Committee on the Telecommunications (New Regulatory Framework) Amendment Bill" (2 February 2018).

Commerce Commission "Which markets are affected?" (August 2018) https://comcom.govt.nz/regulated-industries/our-role-in-regulated-industries/who-is-regulated.

Crown Infrastructure Partners "Frequently Asked Questions" (2018) https://www.crowninfrastructure.govt.nz/ufb-initiative/frequently-asked-questions/.

Enable Networks Limited "Submission to the Economic Development, Science and Innovation Committee on the Telecommunications (New Regulatory Framework) Amendment Bill" (2 February 2018).

"Government moves fast to improve Broadband" (4 May 2006) The official website of the New Zealand Government https://www.beehive.govt.nz/release/government-moves-fast-improve-broadband>.

Howard A. Shelanski "From Sector-specific Regulation to Antitrust Law for US Telecommunications: The Prospects for Transition" (2002) 26 Telecommunications Policy 335.

Ingo Vogelsang "The Endgame of Telecommunications Policy? A Survey" (2013) 64 Review of Economics 193.

J. Scott Marcus "The potential relevance to the United States of the European Union's newly adopted regulatory framework for telecommunications" (2003) 2 Journal on Telecommunications and High Technology Law 111.

Jerry A. Hausman and William E. Taylor "Telecommunication in the US: From Regulation to Competition (Almost)" (2013) 42 Review of Industrial Organization 203.

Joseph D. Kearney and Thomas W. Merrill "The Great Transformation of Regulated Industries Law" (1998) 98 Columbia Law Review 1323.

Martin Cave and Richard Feasey "Policy towards competition in high-speed broadband in Europe, in an age of vertical and horizontal integration and oligopolies" (2017) http://www.cerre.eu/sites/cerre/files/170220 CERRE BroadbandReport Final.pdf>.

Michael Kerf and Damien Geradin "Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation: An Assessment of the United States, New Zealand and Australian Experiences" (1999) 14 Berkeley Technology Law Journal 919.

Ministry of Business, Innovation and Employment "Broadband and mobile programmes" (2018) https://www.mbie.govt.nz/info-services/sectors-industries/technology-communications/fast-broadband/broadband-and-mobile-programmes>.

Ministry of Business, Innovation and Employment "Telecom separation" (2015) https://www.mbie.govt.nz/info-services/sectors-industries/technology-communications/communications/previous-reviews-and-consultations/telecom-separation>.

New Zealand Parliament "Telecommunications (New Regulatory Framework) Amendment Bill" (2018) https://www.parliament.nz/en/pb/bills-and-laws/bills-proposed-laws/document/BILL_74818/telecommunications-new-regulatory-framework-amendment>.

Pablo T. Spiller and Carlo G. Cardilli "The Frontier of Telecommunications Deregulation: Small Countries Leading the Pack" (1997) 11 Journal of Economic Perspectives 127.

Sarah Keene, Victoria Irwin and Andrew Fincham "The 0867 Case – Death Knell of the Counterfactual?" (paper presented at Bright*Star Competition Law and Regulatory Review Conference, 22-23 February 2010).

Spark New Zealand "Spark New Zealand outlines 5G network intentions" (9 August 2018) https://www.sparknz.co.nz/news/Spark-outlines-5G-network-intentions/>.

Suella Hansen and Noelle Jones "New Zealand Telecommunications: The actual situation-legislation and regulations" (2017) 5 Australian Journal of Telecommunications and the Digital Economy 83.

"Telco Act gearing up for 21st Century upgrade" (12 July 2016) The official website of the New Zealand Government https://www.beehive.govt.nz/release/telco-act-gearing-21st-century-upgrade.

"Telecommunications media kit backgrounder - questions and answers" (20 December 2000) The official website of the New Zealand Government https://www.beehive.govt.nz/release/telecommunications-media-kit-backgrounder-questions-and-answers.

"UFB NZ" (10 September 2018) https://ufb.org.nz/broadband-providers/telecom-nz/.

Wolfgang Briglauer and Ingo Vogelsang, "A regulatory roadmap to incentivize investment in new high-speed broadband networks" (2017) 106 DigiWorld Economic Journal 143.