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# **RESTRUCTURING PRIMARY HEALTHCARE MARKETS IN NZ: Efficiency and Equity Implications of Provider-Insurers**

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Presented at the 27<sup>th</sup> Australian Conference of  
Health Economists, Hyatt Regency Hotel,  
Auckland, September 30 2005

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# OVERVIEW

## Theoretical framework

‘two-sided markets’ for health care

contractual risk allocation

application to centrally-planned health care systems

## Application of framework to New Zealand

Pre-NZPHCS

NZPHCS

“insurance market side” implications

“health care service delivery side” implications

## Summary and Conclusions



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# THEORETICAL FRAMEWORK

## Arrow (1963)

1. “the special structural characteristics of the medical care market are largely attempts to overcome the lack of optimality due to the non-marketability of the bearing of suitable risks and the imperfect marketability of information”  
⇒ necessity of ‘two-sided’ insurance markets
2. compensatory institutional changes emerge in response to the non-marketability of bearing suitable risks and imperfect marketability of information, but these changes may themselves interfere with optimality  
⇒ “the social adjustment towards optimality puts obstacles in its own path” during contractual/institutional evolution



# **‘TWO-SIDED MARKETS’ FOR HEALTH CARE**

## **Extrapolation from work of Rochet and Tirole**

### **Two-sided markets**

platforms that help parties “get together in many ways and thereby create value for these parties that they could not readily obtain without the co-ordination of the platform”

(Evans and Schmalansee, 2005)

### **Application to health care**

#### **Insurance provider at the ‘hub’**

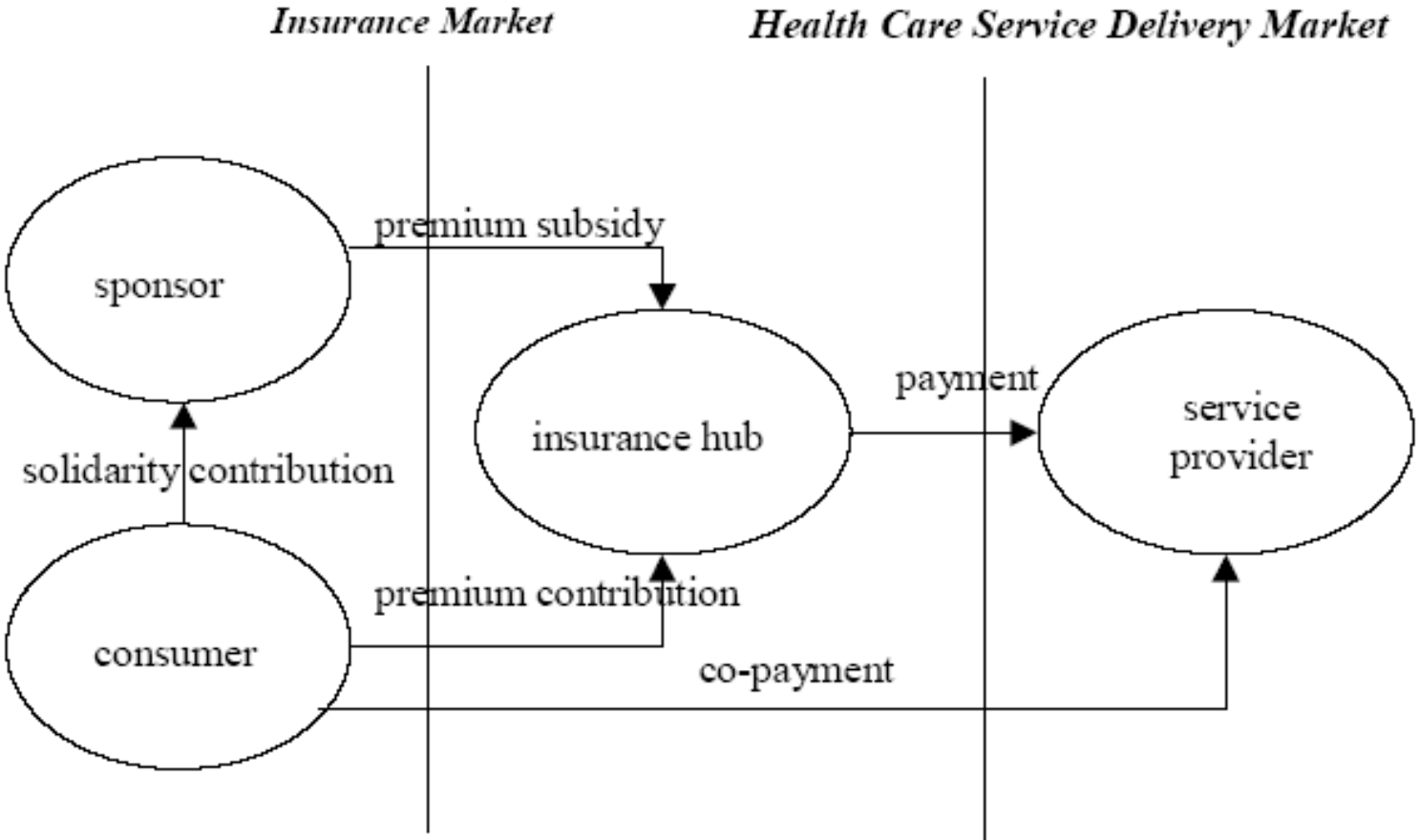
risk-bearing (insurance) markets on one side (inputs)

health care service delivery markets on the other side (outputs)



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# TWO-SIDED HEALTHCARE MARKET



Adapted from Van der Ven and Ellis (2000:761) and Rochet and Tirole (2002:552)

# GOVERNMENT AND TWO-SIDED MARKETS

## **Government as sponsor**

structuring coverage, regulating plans, managing enrolment  
reallocating premium burden across consumers  
'solidarity contributions' to effect wealth transfers

## **Government as insurance hub provider**

distinction between of solidarity payments, premium subsidies

## **Government as health care service provider**

distinction between purchasing and provision (the 'purchaser-provider split')



# CONTRACTUAL RISK ALLOCATION

## Contracts as mechanism to allocate risk

### Insurance contracts

specify premium paid and patient co-payments (input side)

specify service provider remuneration terms (output side)

### **Competition in each of insurance markets, service provision markets when insurers can set the degree of consumer cost-sharing optimally can result in a second-best efficient outcome**

(Gaynor, Haas-Wilson and Vogt, 2000)

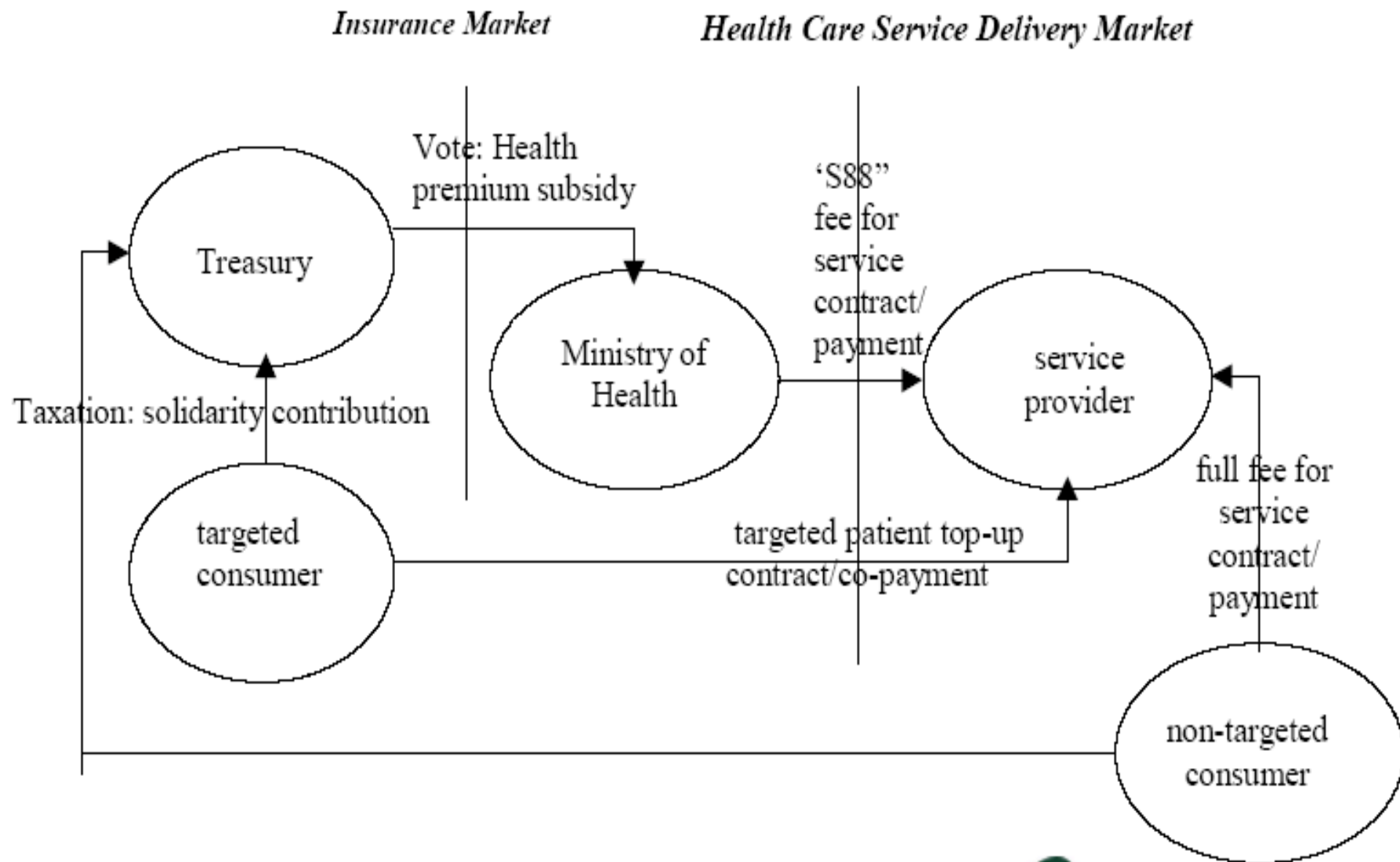
## **Evolution: implications for two-sided health care markets**

Managed Care as example



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# PRE-NZPHCS PRIMARY HEALTH CARE





# PRE-NZPHCS: KEY FEATURES

## Government as sponsor and insurer (risk manager)

### Private sector service provision

practitioner charging autonomy (1938 f.f.s. 'S88' payments)  
no risk bearing associated with patient demand uncertainty

### Tightly-targeted insurance market

majority self-insuring  
limited risk-sharing (government = residual risk bearer)  
taxation 'solidarity payments' as principal wealth redistribution  
method (ex ante equity adjustments; cost to all taxpayers)  
'S88' payments = welfare benefit outputs from social insurance

### Moral hazard: low

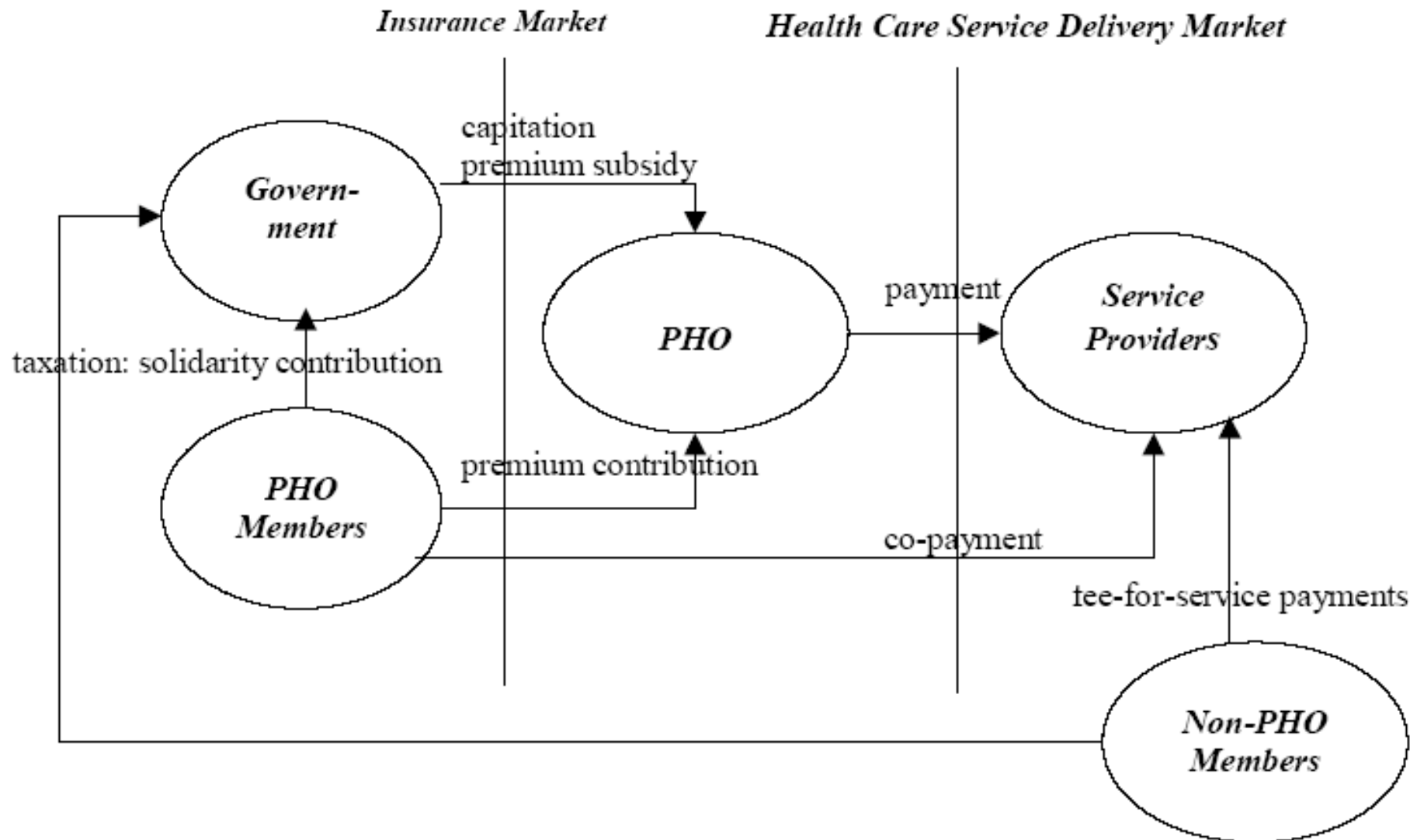
patient 'co-payments' cannot be efficient insurance contracts  
but limited in application (subsidies = 30% of practitioner income)

### Adverse selection: non-existent



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# NZPHCS: STATED DESIGN (King, 2001)



# **NZPHCS: KEY DESIGN FEATURES**

**Substantial increase in government expenditure share**

**Universal capitation funding**

mandatory risk-sharing for registered population

**Subsidy becomes premium contribution to private sector competing insurers (PHOs)**

Government 'risk-free'; private sector become risk managers

**PHOs as managed care providers**

contracts with insured individuals

no apparent barriers to optimal ex ante contracts, ex post co-payments

contracts with service providers

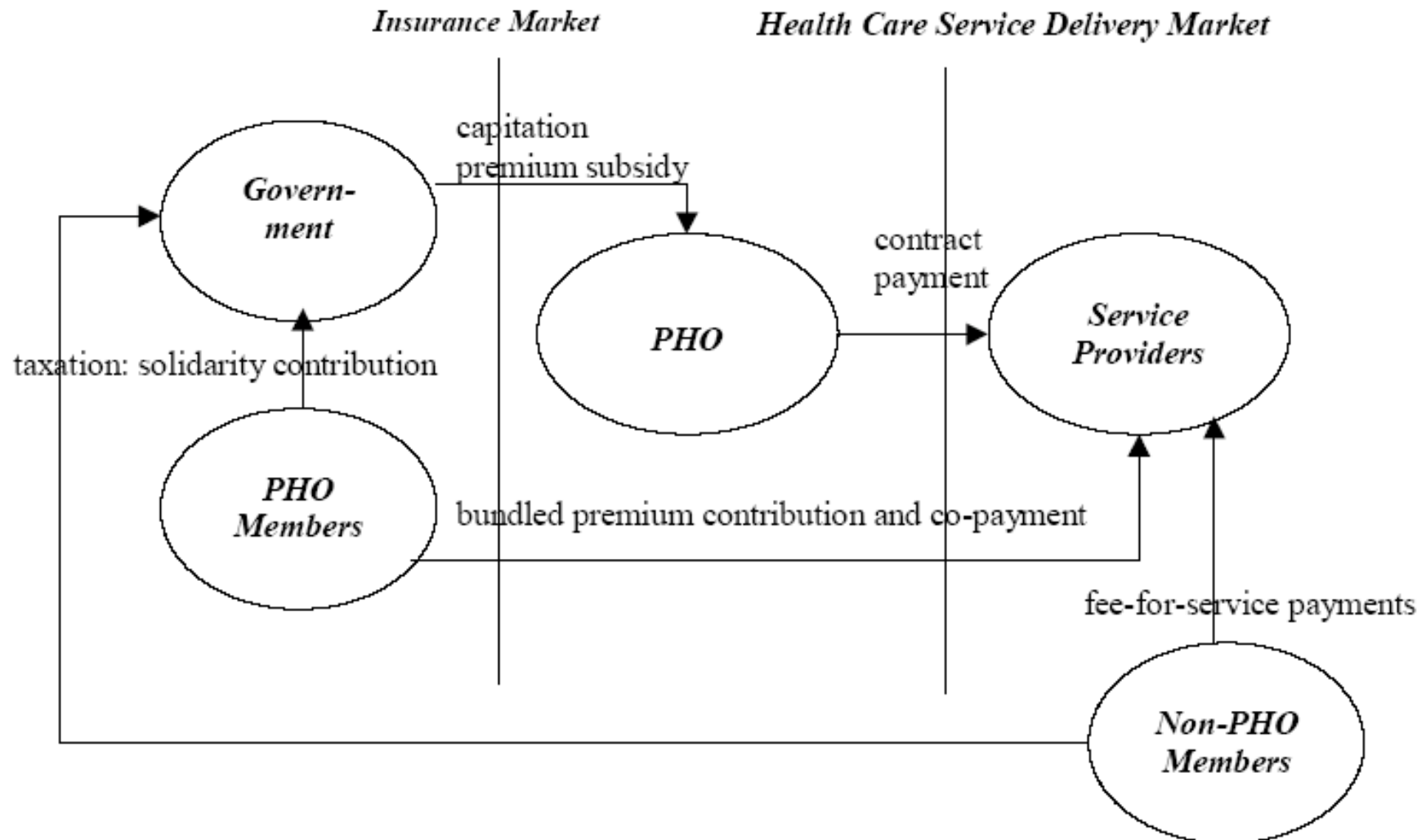
as agents of insured individuals

ability to design optimal incentive contracts



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# NZPHCS: IN PRACTICE



# TRANSITION IMPLICATIONS

## **Retention of provider charging autonomy**

negates ability to design optimal provider incentive contracts  
leads to bundling of ex ante premium contributions and ex post co-payments into a single ex post payment

## **Price 'regulation' expectations**

ex post 'bundled payments used to effect social/political wealth transfers

increased government subsidies must lead to compensatory decreases in ex post payments for government subsidy categories

## **Conflict: insurance wealth transfer objectives and social/political wealth transfer objectives**

neither achieved, or one 'crowds out' other  
implications for efficiency, equity



# INSURANCE CONSEQUENCES (I)

## **Selective increase in subsidies**

increase in moral hazard in subsidised group only

## **Insurance response**

increase ex post premiums only to the newly-subsidised

## **Regulatory response**

ex post payments for newly-subsidised must directly reflect increases in subsidies

## **Insurance response to regulatory response**

spread additional moral hazard costs across all individuals  
ex post premiums rise, even for those not receiving increased subsidies



# INSURANCE CONSEQUENCES (II)

## Efficiency outcome

prices rise for low-subsidised

consumption falls below optimum => lower welfare

prices to higher-subsidised less than optimal given increase in moral hazard risk => lower welfare

## Equity outcome

extra costs arising from lower welfare collected only from ill

ex post collection becomes a consumption 'tax on falling sick'

perfectly risk-rated ex post premium contribution

wealth transfer from the low-subsidised sick to the high-subsidised sick

wealth transfer from the sick to the well

## Contrary to efficiency raising objectives of insurance instruments



# EVIDENCE

## **Prices rising for all categories of patients**

higher charges in practices receiving lower subsidies, even for patients of same subsidy class (Consumer, 2005 Survey)

## **Patient charges not reflecting increases in subsidies** (King, 2004: Cabinet paper)

## **Introduction of Care Plus after less than 2 years**

targeted at the chronically ill

acknowledgement that the burden of the system design outcomes falls most heavily on the frequently ill?





# SERVICE DELIVERY CONSEQUENCES

## **Retention of practitioner charging right**

removes ability for PHOs to strike efficient incentive contracts with service providers

## **“If you can’t manage the risk, don’t bear it”**

‘passing on’ capitation contracts to service providers

## **Service providers become insurers**

inefficiently small – 1200-2000 patients

risk management costs rise

first recourse to manage => pass on to consumers in higher prices (replicating pre NZPHCS risk-free provider status)

incentives for adverse selection (screening) increase

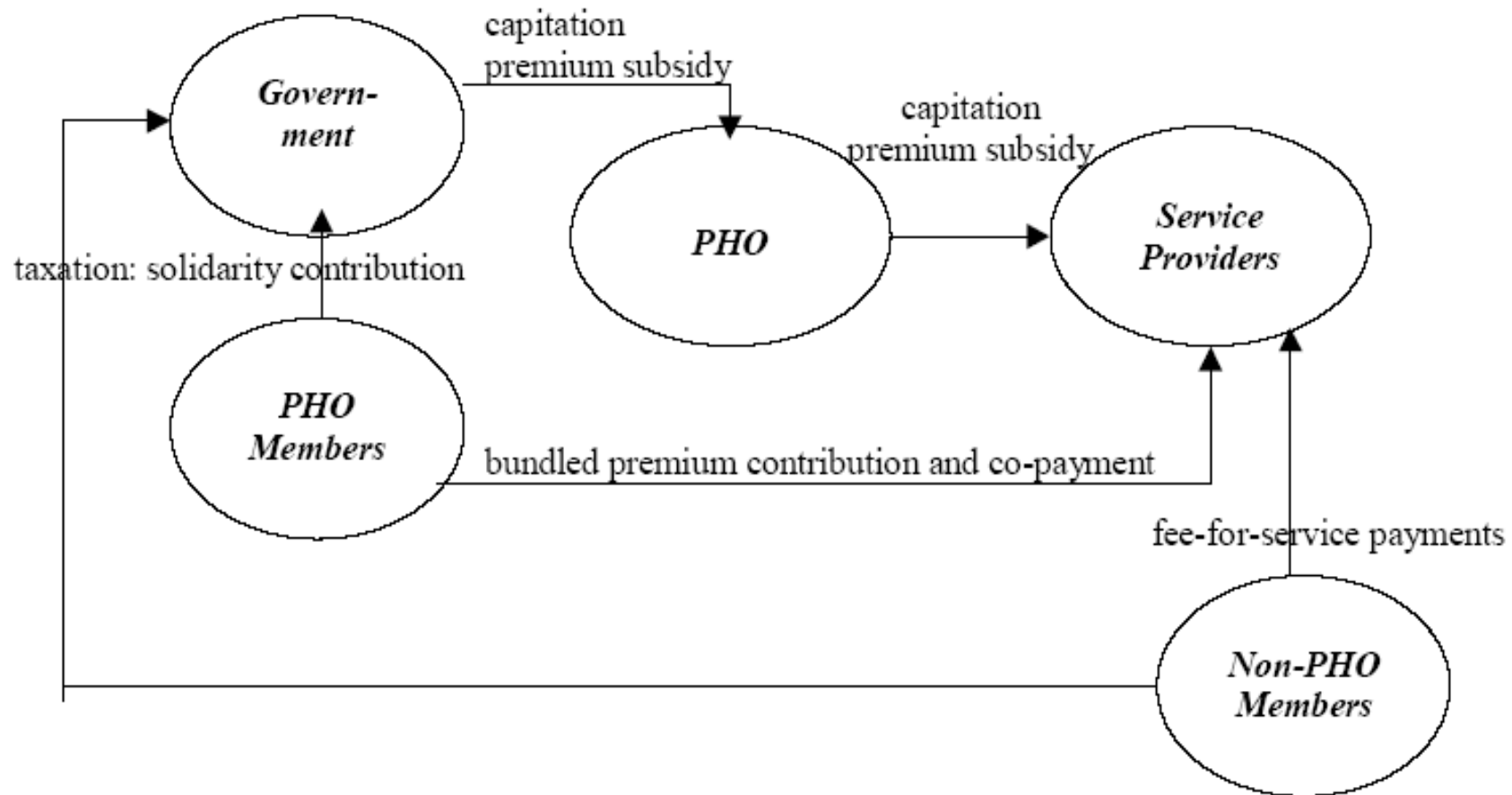
## **Welfare reduces further (relative to pre-NZPHCS, efficient insurance market)**



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# PROVIDERS AS INSURERS

*Combined Insurance Market and  
Health Care Service Delivery Market*



# COMPETITIVE RESTRICTIONS

**Unlikely to see evolution to more efficient model**

**Provider-governors mandatory in PHOs**

formed around existing provider groups

conflict of interest – on both sides of the ‘passing on’ contracts

unlikely to be party to contracts to restrict their practitioner charging autonomy

**Patients ‘locked in’**

Government subsidies non-transferrable; payable only to PHOs

patients don’t face full cost of service delivery => less competition from unsubsidised providers

**Providers may also be ‘locked in’ to PHOs**

local geographic monopolies; strong network effects



# CONCLUSIONS

**NZPHCS does not appear to be a centrally-planned iteration towards a more efficient system**

**Rather, appears to be a consequence of an attempt to use health care system institutional design to ‘fix’ a perceived problem on the health care service delivery side**

**With disastrous consequences for the efficiency of the entire system**

**Restructuring of the primary health care sector in NZ “has put obstacles in its own path”**

