Postal Reform in Japan:
A Comparative New Zealand–Japan Study
of Economic Issues
in Privatising a Postal System

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Anthony John Duggan

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Abstract

The purpose of this thesis is to analyse the economic issues in the postal reform experiences of New Zealand and Japan. New Zealand's reforms were conducted in the 1980s. Its experience raises questions about what factors were important for overcoming resistance to reform. Japan's case is a current issue, raising questions of how likely privatisation may be, what dilutions may occur, and what might the post-reform organisation look like.

This study charts New Zealand's reform evolution by supplementing the literature with interviews conducted with experts closely tied to the events. Japan's reform is similarly traced to the present day where a simulation model I have developed proposes final negotiation outcomes. I argue that New Zealand Post's pre-reform institutional environment was incongruent with efficiency and productivity. Reforms created an entirely new institutional environment based on neoliberal ideologies, separating governance from ownership and disentangling commercial and social objectives. This study shows that resistance was overcome by a culmination of implementation speed, scale of reform, carefully drafted legislation, and managerial acuity.

Japan's pre-reform environment displays a number of parallels to New Zealand's. However in this case, I argue that prolonged implementation and a greater presence of interest groups hamper reform progress and simulation suggests only a partial reform where legislation maintains entry barriers, favouring Japan Post over private competition. Key reasons in explaining the differences in outcomes between the two countries are argued to be differences in political ideologies and the strength of reform opposition. The separation of governance and ownership for instance, appears to be more distinct in New Zealand than Japan, and whilst the New Zealand model focuses upon shareholder wealth maximisation, the Japanese case appears to place greater emphasis upon stakeholder interests.

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List of Abbreviations

AFLAC	American Family Life Insurance Company
BDM	Bueno de Mesquita model
CEFP	Council of Economic and Fiscal Policy
CG	Corporate governance
CIA	Comparative institutional analysis
DPJ	Democratic Party of Japan
FSA	Financial Services Agency
HOS	Higher order simulation
IE	Institutional economics
JGB	Japanese Government Bond
JP	Japan Post (umbrella term)
JPB	Japan Post Bank
JPC	Japan Post Co. (refers specifically to mail unit)
JPH	Japan Post Holdings
JPI	Japan Post Insurance
JR	Japan Rail
LDP	Liberal Democratic Party
LOS	Lower order simulation
MACTOR	Matrix of alliances and conflicts: Tactics, objectives and recommendations
MASAM	Multi-issue actor strategy analysis model
MVL	Median voter location
NIE	New institutional economics
NTT	Nippon Telegraph and Telephone Corp.
NZP	New Zealand Post
OIE	Old institutional economics
PER	Probability of effective reform
PRC	Policy Research Council
PSA	Postal Services Agency
PSPC	Postal Services Privatization Committee
SOE	State owned enterprise
TCE	Transaction cost economics
TPP	Trans Pacific Partnership
WC	Weighted clout

1 Introduction

1.1 Background

While there are many determinants of a nation's economic performance, the underlying institutional environment—the rules of the game—are arguably one of the major contributors. For instance, policies that restrict trade flows or statutory monopolies where there would otherwise be thriving competition are examples of constraints that can hamper growth. Similarly, legislation that prevents a healthy churning of the labour market can also contribute to stagnation. Although it is doubtful that a governing agency would specifically enact institutions designed to harm an economy, owing to external changes in society, they may have since become obsolete. That is, an incumbent institutional environment, which may have once functioned well, is now simply incompatible with the new reality. One way to instigate economic reform, and thus promote a return to prosperity, is to conduct an 'institutional change': a fundamental redefinition of the rules and constraints that are placed upon organisations and individuals.

Privatisation can be considered a form of institutional change at an organisational level: where once the organisation was beholden to the state, it now finds itself in the hands of private ownership with different requirements of management. For instance, while acting as a government department, a postal agency might be considered a provider of social services and therefore less concerned with turning a profit. Under private ownership, shareholders might well expect a greater return on their investment. Consequently the manner in which the postal service operates would more likely lean towards efficiency and profitability. Furthermore, there are often cases that require more than the simple transfer of ownership: the underlying regulatory environment must be prepared to allow for competitors and market forces. With postal privatisation, the state often was the previous sole provider of services through legislative monopoly. Therefore the institutions governing the competitive environment must also be addressed in addition to the organisation itself.

Nevertheless, change often meets with resistance. Within any given institutional setting, some parties may benefit from the status quo and modifications may threaten them. From the examples above, repealing a statutory monopoly or liberalising trade laws clearly imposes a competitive threat upon the industry

incumbents; relaxed labour laws introduce a degree of risk to job security; and postal privatisation raises the possibility of reductions in service levels. Against this backdrop of potential losses, interested stakeholders may seek to obstruct change. One question that therefore arises is how much dilution or how many concessions these 'resistance forces' are able to secure and thus lessen the degree of institutional change. Another question is how the resistance or obstruction might be overcome.

Within the setting of institutional change to postal services, there are two notable cases: New Zealand and Japan. New Zealand's case is an historical one, Japan's is a current. The New Zealand case is important as it represents an example of a country that found itself in dire economic circumstances and correspondingly implemented a broad range of sweeping reforms, enacting them over a very short time. Many government enterprises were privatised or corporatised and a number of key bills redefined the institutional landscape. New Zealand's postal services also fell under these changes. Given that New Zealand executed such massive change within such a relatively narrow period, this presents number of interesting questions, including what led to the need to reform; the state of the institutional environments before and after the change; and how was it that New Zealand was able to overcome resistance to reforms.

The reason that New Zealand's experience is significant is because it shows that major institutional realignment can be achieved. In Japan, the economy has been suffering for many years despite numerous fiscal stimulus packages. The failure to coax the economy back to health has led people to ask if the institutional environment was a debilitating factor. Correspondingly, the Koizumi administration had sought to enact major structural change, one of the central components being the Japanese postal service.

Postal reform is crucial for the Japanese because the organisation is truly immense and will have wide-reaching consequences. Japan Post (JP) accounts for roughly a quarter of a million full-time workers and many more part-time workers[1]. In addition to postal services, it provides banking and insurance and here we can truly begin to gauge the organisation's scale: it is the single largest buyer of Japanese Government Bonds (JGBs) and contains the world's largest accumulation of private savings. Reforming an entity of this size or the environment in which it conducts business will have a number of far-reaching effects, both at the

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[1] In Japan, part time workers are known as 'temporary' workers.

microeconomic and macroeconomic level, and thus highlights the importance of the issue.

Nevertheless, having fostered strong government-business links and cooperation as part of JP's overall development model (Matsuura, Pollitt, Takada, & Tanaka, 2003; Tsuru, 2000), there are a number of groups that have an interest in JP and their ability to influence government policy is significant - reforming JP therefore presents a number of challenges as resistance is organised and entrenched. An example of the strength of resistance can be seen in Maclachlan's work (2004, 2006) as postmasters, by virtue of connections to powerful lawmakers, defeated earlier reform initiatives. Before any institutional change can be executed, the reformers must first overcome these opposing elements.

What this leaves us with is a story that has yet to be concluded. To assess how the Japanese reform experience may eventuate, I will develop and employ a simulation model of how negotiations between stakeholders might play out and, depending on the resistance encountered, offer predictions of the level of institutional change. From there, a full comparison with New Zealand's experience can be made, particularly highlighting lessons from New Zealand that may assist with Japan's reforms. The objectives of this thesis are therefore to establish how New Zealand was able to overcome reform resistance; use a simulation model to examine the likelihood that reform can be implemented in Japan; consider the internal consistency of the reform policies predicted by the simulation model; and determine whether lessons drawn from New Zealand can help Japan overcome reform resistance to improve its reform policies.

1.2   Research Questions

The goals for postal reform in both countries bore a number of similarities (Campbell & Porges, 2008) and a comparison is therefore useful. The New Zealand case highlights the importance of tracing changes in the institutional environment and whether they can be replicated in Japan. To help determine whether Japan can carry out its own reforms, it is necessary to compare the institutional environments in both countries. To achieve this, the following questions need to be addressed:

1. What was the institutional environment in New Zealand prior to reforms?
2. What drove reform in New Zealand?
3. How were reforms implemented and how was resistance to reforms overcome?

4. How did the new institutional environment compare against the old one?

The thesis will examine Japan's experience to date, answering the following questions:

5. What was the institutional environment in Japan prior to reform?
6. What drove, and continues to drive reform in Japan?
7. How likely is it that full reforms will be implemented and will the resulting environment be internally consistent?
8. If the Japanese reforms are internally inconsistent, what insights can we apply from the New Zealand experience to overcome these problems?

1.3 Data Analysis

To answer Questions One through Four, the thesis explores the literature surrounding New Zealand's experience. Knowledge gaps are identified and addressed through interviews with subject experts and key personnel involved in the process itself. By combining these sources, the key elements of postal reform are discussed and the internal consistency of reforms is examined by analysing the new structure and institutional environment.

Questions Five and Six are approached in a similar manner. Beginning with a review and synthesis of the literature, the initial institutional environment and drive for reform are described. Media reports and interviews I conducted are utilised to track reform evolution to the present date. Simulations conducted over the major issues are used to estimate JP reform outcomes and the new the institutional environment.

Question Eight is answered by examining the components of the new institutional environment, comparing it against the pre-reform environment and the goals of the state. Whether New Zealand-style reforms can be applied to Japan will depend on the amount of common institutional overlap. In the event that resistance forces impede reform progress, lessons from how New Zealand overcame them will be examined for potential alternatives.

1.4 Significance of Study

Reform is often met with resistance as managerial personnel and workers may face threats to job security and customers may be inconvenienced or forced to bear higher costs. The New Zealand postal reform literature is rich but does not explain how such resistance was overcome; this study addresses the gap by drawing

on interviews conducted with subject experts and provides explanations at managerial, worker, and customer levels.

Contributions will also be made to institutional economics as the New Zealand chapter provides a case which shows that ownership transferral is not absolutely necessary for successful reform providing the institutional environment is carefully prepared. This assertion is important as there is debate about whether gains from reforms are a result of ownership transferral or competition (Kikeri & Nellis, 2004).

Additionally, studies in institutional change are often conducted in retrospect, using past events to plot institutional evolution. The simulation developed for this study provides a method of conducting similar research on current events, increasing the timeliness of findings.

The simulation itself also represents a significant contribution as it can be used to model the interactions between many players over many issues. The model presented in this study is complex, containing over 3,300 calculation centres, running 1.2 million equations per iteration. Holding changes in inputs to increments of 0.1^2, the possible number of combinations exceeds 3×10^{14}. Outputs can produce some interesting results that at first appear counter-intuitive but once traced backwards become clear. The model therefore offers a considerable advantage over thought experiments for applications that require a large number of calculations.

1.5   Grounding in Mainstream Economics

This thesis draws primarily upon institutional economics (IE). The examination of pre- and post-reform contexts falls into the category of institutional change, one of the foremost theories discussed within IE literature.

Other mainstream theories are utilised in answering the research questions. Rent seeking acts as the principal guide in determining the incentive structure and behavioural patterns of certain stake-holding players and is a useful explicator in understanding the actions of some reform opponents. This study also employs agency theory in describing how reforms are designed and implemented; differing institutional environments in New Zealand and Japan will show that some agency mechanisms that operate well under Anglo-American conditions are not as effective in a Japanese context. As an example, stock markets adjust a firm's share price in

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[2] This application models eight players over seven issues with three input matrices.

accordance with the skill of management (Stephen & Backhaus, 2003), but this mechanism is undermined in Japan as large shareholders[3] often exhibit stable shareholding and a reluctance to sell.

This study also examines lobbying and its effect upon economic policy. The effects on the proposed changes the union of postmasters are able to realise will be, in part, the result of successful lobbying. Tracking these changes and simulating expected dilutions will thereby be an application of the theory of lobbying. The simulation itself is fundamentally based on utility theory and rational choice insofar that a player will only act if it increases the utility realisable.

Moral hazard will also be used to examine some of the actions, both actual and potential, taken by players in New Zealand and Japan. The practice of *amakudari*[4] in Japan is a moral hazard as it provides incentives for political officials to unduly favour certain organisations in exchange for comfortable post-retirement positions. The analysis of post-reform JP will employ moral hazard theory to examine the internal consistency of reforms and their overall effectiveness.

1.6   Thesis Structure

Fundamentally, the thesis is an analysis of two case studies that examine issues relating to institutional change relating to postal reform: one from New Zealand and one from Japan. I will argue that the processes of change can be deconstructed into a number of stages and that these stages are essentially the same in both cases. Firstly, the respective country's initial institutional environment creates a range of problems, such as unemployment, inflation, and currency crises. These issues then give rise to corrective proposals that are subsequently negotiated over. Depending on the amount of resistance encountered in each country, the proposals are then implemented to greater or lesser degrees (or even defeated), which correspondingly redefines the institutional environment. The greatest difference is that while New Zealand's experience is historical, Japan's experience is ongoing and therefore the negotiation stage of institutional reform must be simulated. The simulation model that I develop represents a major contribution of the thesis. The resulting post-negotiation institutional environment for Japan is consequently dependent on the outcomes of the simulation. The two cases can then

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[3] Typically *Keiretsu* networks.

[4] Literally translated as the 'decent from heaven' or 'soft landing'.

be compared to establish what factors were or are critical in the respective reforms and perhaps whether a New Zealand-style approach can be applied to Japan to assist in strengthening reform integrity.

Nevertheless, before delving into the respective cases, it may be beneficial for readers to first have some knowledge of the historical reform precedents in both countries. In this regard, readers may be better able to see how postal reforms fit into their respective contextual situations and the differing political tendencies. As such, Chapter Two provides a brief overview of selected reform history prior to postal reform, highlighting some interesting similarities and differences.

Chapter Three presents a review of the literature relevant to this study. As the reform experiences touch on a number of subjects, there are a several strands of literature that apply. Firstly, as the thesis contains two separate cases, a brief review of case study theory is included. Similarly, by studying institutional change relating to postal reform the thesis also draws on institutional economics and privatisation theory and these are accordingly discussed. As mentioned previously, the amount of resistance brought against a set of reform proposals arguably reduces the total level of institutional change. Chapter Three therefore also examines the literature that discusses associated difficulties in reform implementation and the forms resistance can take. Chapter Four presents the methodology and a discussion of the theories needed to generate a model for institutional change. Chapter Four also examines the methods used in constructing a simulation model for the Japanese negotiation and explains why the chosen approach is preferred. Chapter Five describes the New Zealand experience. Chapter Six examines JP, outlining its initial state and the evolution of reforms until the present day. Chapter Seven presents the actual mechanics of the simulation used to estimate the outcome of Japanese reform issues and Chapter Eight describes the results and accompanying sensitivity analyses. Chapter Nine outlines the institutional environment following the simulation and provides a final comparison with New Zealand to highlight ways to improve reform. Chapter Ten offers some final insights and concluding comments.

2 Reform History in New Zealand and Japan

This chapter briefly discusses reform history in New Zealand and Japan. An analysis of New Zealand reform experience will aid in understanding the context of JP privatisation and its relevant issues. In New Zealand, structural reforms were implemented and the postal service was a relatively small component thereof. In Japan, however, it has been said that structural reform hinges upon postal reform as Japan Post Bank (JPB) is the world's largest depository of personal savings (Tsuda, 2006), forms the core of the Japanese financial sector, and is the largest buyer of Japanese public debt (Takenaka, 2007). A comparison of previous specific experiences therefore produces some important caveats.

2.1 New Zealand's Need to Reform

A generally perceived need to reform often results in more concrete action. In New Zealand circa 1980 there was a keen sense that radical changes were needed to correct structural imbalances (Wood, 1995). Several key factors led to this perception. In the 1950s, New Zealand was one of the world's richest nations per capita but this had significantly deteriorated by the 1970s. Growth had slowed to almost zero owing to losses in domestic competitiveness and the economy was highly protected by an interventionist state (Orr, 1995). Banking and farming were highly politicized with farming subsidies and restrictive banking regulations, particularly concerning foreign interests (Suppanz, 1998).

Unemployment and the resultant strain upon the welfare system caused public debt to rise sharply (Wood, 1995). Ongoing current account deficits placed New Zealand in need of foreign capital and risk premiums rose in response (Orr, 1995). Matters were further complicated by managed exchange rates and interest rate controls. High levels of inflation led to a broad perception that the New Zealand dollar was overvalued and reform was needed to correct the discrepancy (Ministry of Agriculture and Forestry, 1996). Combined with other imbalances in the macro-economy, currency speculation, and rigid capital markets, a currency crisis arose (Suppanz, 1998).

Reform was also needed to address the increasingly large informal sector compromising monetary policy effectiveness (Suppanz, 1998). Government ownership and guarantees, both written and implied, placed tax-payers at risk in the event of failure (Suppanz, 1998). Many bank asset portfolios favoured government

debt and increasing pressures upon public debt created a degree of instability throughout the sector (Hess, 2008).

Wood (1995) highlights three major conditions that led to structural change: a widely held and acute sense of crisis, a universal perception among leaders that no single interest group should be given preference or be immune to reform, and a realisation that the problems were largely of New Zealand's own making and that no outside assistance would be forthcoming.

2.2 Planning and Execution of Reforms

The real question was whether to initiate change on a gradual basis or more rapidly. The latter occurred; one study labelled them 'big bang' reforms (Caprio, Ativas, & Hanson, 1993). Designed and executed simultaneously, changes affected many parts of the economy, particularly the financial sector, trade and industry, and the public sector. Whilst not exhaustive, what follows is a brief discussion of the more influential changes.

2.2.1 The financial sector

Reform was conducted in two stages (Suppanz, 1998), the first occurring from 1984 to the early 1990s. Some of the changes included floating the New Zealand dollar, removing restrictions in foreign currency lending, and a change in monetary policy that targeted price stability through inflation reduction (Suppanz, 1998). Other moves loosened regulations in banking investments, allowed new entrants, and removed discrimination against foreign lending institutions (Hess, 2008). The elimination of interest rate controls, credit ceilings, and ratio requirements were also brought in under stage one (Hess, 2008).

Stage two financial reforms began in the early 1990s and were designed to strengthen the legal framework of the industry (Suppanz, 1998). Most prominent was the introduction of measures that replaced internal control mechanisms with external disclosure documents (Suppanz, 1998).

2.2.2 Trade and industry

Export taxes, agricultural subsidies, and other forms of governmental assistance were phased out from 1984 to 1990 (Orr, 1995). A key objective was to reduce the presence of the state in the economy; which was estimated to be involved in up to 60% of all economic activity (Wood, 1995). Exposing New Zealand businesses to global competition and raising efficiency was another major goal.

2.2.3   The public sector

These reforms were implemented in the early 1990s and divided into separate stages (Dale & Ball, 1996). The major articles of stage one included the privatisation and corporatisation of many trading operations, including the postal service (Dale & Ball, 1996). These new organisations were assigned unambiguous goals of profit maximisation and sale proceeds were used to retire debt (Wood, 1995). Additionally the government and its support agencies began publishing financial reports similar to private companies, including balance sheets and statements of financial performance. To facilitate this, the government abandoned cash-based accounting in favour of an accrual-based system (Dale & Ball, 1996).

Stage two political reforms took the principles of privatisation and applied them to the government's non-trading operations, such as policy advice, social services, and law (Dale & Ball, 1996). Ministers were separated from department heads, similar to the relationship between a CEO and board of directors. Departments were also free to use private-style costings and paid for the use of assets the same way as businesses paid interest. Department heads were responsible for the production of outputs, the minister being the purchaser. Government departments were publically audited. The government sought reforms that would produce an environment mirroring the private sector with the accompanying competition and transparency. It gave rise to the term 'government by contract' (Dale & Ball, 1996).

Stage three primarily focused upon the adoption of private-style financial indicators designed to promote fiscal responsibility and transparency. Government debt levels, net worth, risk management practises, and tax stability could now be identified, measured, and controlled through a system of open accounting practises and disclosure documents (Dale & Ball, 1996).

2.2.4   The results

The reforms greatly changed many parts of the economy; through exposure to overseas competition, productivity rose and efficiency improved (Wood, 1995). New Zealand ranked 5th in the index of economic freedom (The Heritage Foundation, 2009a, 2009b). Government became more transparent, with better asset management and reduced operating costs (Dale & Ball, 1996). Nevertheless, transition costs were considerable and acute in selected areas. The following is a short description of some of the major effects of the reform process.

Stage one financial reforms produced feelings of euphoria within the banking industry (Hess, 2008). Without credit allocation controls banks expanded into different fields and extended loans into new businesses. The proportion of government securities fell as shares and real estate investments rose (Hess, 2008). Most of this new lending was private (McNelis & Schmidt-Hebbel, 1992). However, inexperience [5] and implicit government guarantees led to questionable risk management (Hess, 2008).

The Reserve Bank's explicit goal of price stability (Suppanz, 1998) produced a situation where domestic interest rates did not align with global rates as monetary policy was tightened to reduce inflation (McNelis & Schmidt-Hebbel, 1992). Coupled with the deregulation of foreign exchange, this led to an influx of foreign capital and subsequent increases in the real exchange rate reduced export competitiveness (McNelis & Schmidt-Hebbel, 1992). This result was exacerbated by reduced subsidies and assistance (Wood, 1995). Caprio et al. (1993) note that further pressure was felt through the global collapse of commodity prices between 1985 and 1986. Together, these factors produced a balance of payments crisis (McNelis & Schmidt-Hebbel, 1992).

In 1987 the New Zealand stock market crashed and between 1988-1989 property losses occurred, resulting in considerable numbers of non-performing loans (Hess, 2008). Hess also notes that state owned banks fared worst and the Bank of New Zealand[6] had to be rescued by the government. Twice.

Suppanz (1998) shows that borrowing increased and a wider range of instruments deepened the financial system. Monetary policy became more effective, due in part to a consolidated industry and less reliance on informal banking (Hess, 2008). Opening the capital account reduced interest rate volatility (McNelis & Schmidt-Hebbel, 1992). By removing regulations that stifled foreign portfolio investment, capital was able to respond to changing conditions. However, the risk of investing in New Zealand was not removed, but rather displaced; volatility in interest rates was transferred to exchange rates (McNelis & Schmidt-Hebbel, 1992). Nevertheless, many economists would suggest that stability in the price of credit is preferable to stability in the price of domestic currency.

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[5] Particularly so in state owned banks.

[6] Please note that the "Reserve Bank of New Zealand" is the central bank whilst the "Bank of New Zealand" is a commercial one.

2.3   *Contextualising New Zealand's Experience*

The state of a country's pre-reform banks needs to be considered carefully; evidence shows that when organisations are tightly regulated, have a large portion of government debt and little autonomy, they are susceptible to greater post-reform issues (Caprio et al., 1993). Relaxed banking controls are often associated with significant loans into private real estate. Financiers whose portfolios have been mostly public debt tend to over-expose themselves (Caprio et al., 1993) and this occurred in New Zealand (Hess, 2008). Had government also been pursuing expansionary policies the results may have been worse.

The removal of targeted or directed credit adheres to the recommendations of the literature. Governments that concentrate loans on certain industries or firms often foster a reliance on external funding, prolonging organisational inefficiency (Caprio et al., 1993). National savings are suggested to be only weakly linked to interest rates. Greater increases in savings can be attributed to a deepening of the financial system, referring to greater numbers of branches, services, and investment options (Caprio et al., 1993). Deregulation in New Zealand increased competition (Hess, 2008) and banks offer a wider range of products yet New Zealand's savings performance has not greatly improved (Suppanz, 1998). The discrepancy with the literature is beyond the scope of this study but would be an interesting project to examine.

Where economies have deregulated, unfavourable economic conditions, inexperience, and possibilities of bank collusion may increase real interest rates (Caprio et al., 1993), as was the case in Chile and Turkey. In New Zealand, the reforms effectively saw simultaneous opening of the capital account, complete interest rate deregulation, and an explicit goal of price stability. It is therefore not surprising that interest rates remained high to control inflation and exchange rates rose as foreign investors sought to capitalise on premium rates.

Removing discriminatory restrictions on foreign investment is an area where New Zealand also conforms to the literature's recommendations. Apart from bringing competition and experience, the domestic business cycle does not have the same influence on a foreign bank (Caprio et al., 1993). This can serve to mitigate the impacts of unfavourable shifts in macro-economic conditions.

At a more general level, it has been suggested that reforms should be seen as a process, not an event; a continuing cycle of change where readjustment is often more effective that a rapid paradigm shift (Caprio et al., 1993). New Zealand's

reforms may have not been optimal but they were implemented where there was significant political will and capitalised on opportunities at the time.

2.4 Reform Literature and the Japanese Experience

This section summarises the conditions that led to the drive for postal privatisation beginning with Japan's development from the post-war era, which is important as it explains in part why there is such a strong political connection to the post office.

Japan's economic development was largely driven by close ties between the state and private companies (Hwang & Schaefer, 2002)[7]. It was born from a desire to catch up with the West, but without as many factor endowments (Child-Hill & Fujita, 2000). Natural resource efficiency and cost reduction have since become culturally engrained values (Takenaka, 2007).

Government-private sector links bolstered established values of work ethics, social cohesion, and enterprise although they also produced an economy characterised by heavy government intervention, protectionist ideals, and managed trade (Hwang & Schaefer, 2002). Attitudes imposed during the American occupation were readily accepted as they were generally extensions of, or complemented pre-existing beliefs (Hwang & Schaefer, 2002).

Employment security was a guiding principle and loyalty to the company was a modern expression of traditional notions of fealty. Employment security was state-sponsored as many of its actions were (and still are) designed to prevent employment falling; private firms who maintained labour inputs during unfavourable economic conditions were granted offsetting subsidies (Child-Hill & Fujita, 2000). Japan is perhaps better described as a 'work-fare' state rather than a 'welfare state'.

Since 1945, Japan's development model focused upon exports and savings (Child-Hill & Fujita, 2000; Hwang & Schaefer, 2002; Takenaka, 2007). Heavily encouraged and incentivised, the government enacted many policies and regulations to directly raise net exports including subsidies, import restrictions, and transferral of resources and capital to favoured industries (Hwang & Schaefer, 2002). Foreign investment was actively discouraged unless there was a domestic partner with a majority shareholding (Hwang & Schaefer, 2002). Financial policies

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[7] This mentality has been cited since the beginning of the Meiji Restoration that began in 1868.

promoted savings and exports, including interventions to reduce the value of the yen. Public savings were often held within the state-run banking sector to fund construction and infrastructure spending (Child-Hill & Fujita, 2000).

By the 1970s, increasing economic waste and government inefficiency led to the beginnings of a movement that questioned such heavy intervention. Concurrent supply shocks exacerbated concerns (Child-Hill & Fujita, 2000). Nevertheless, the Japanese model produced significant growth and also maintained a high degree of income equality (Child-Hill & Fujita, 2000; Takenaka, 2007). Recently however, the economy has become less able to adapt to changing conditions and suffers from inertia (Child-Hill & Fujita, 2000).

Another side effect of the model was the 'dual-economy' (Katz, 1998). This is characterised by one group of international companies who are amongst the most competitive, innovative, and efficient organisations in the world, and another group of producers who fall behind world standards (Hwang & Schaefer, 2002). Insulating domestic industries as an explicit matter of policy, together with sponsorship of maximum employment, produced an unbalanced model that Japan has not yet been able to move away from (Scissors & Foster, 2009). For example, domestic firms can only borrow from domestic banks and following the bursting of the economic 'bubble', extension of new credit essentially stopped and many businesses collapsed (Takenaka, 2007).

Despite the severity, most of the 'bubble' losses were confined to the banking sector (Takenaka, 2007) and even here, massive government intervention muted the effects. Hwang and Schaefer (2002) concur, noting that unemployment did not rise substantially until only recently. Much of the expenditure was financed through government bonds purchased by JPB, where the Japanese citizenry have the bulk of their financial assets (Takenaka, 2007).

2.4.1 Japanese reform experience

The Japanese approach is more gradual than New Zealand's (Takenaka, 2007). Japanese policies are designed to benefit producers over consumers, a powerful tool for vote gathering although it impedes reform momentum (Toyama, 1998). Nevertheless the global movement towards privatisation in the 1980s attracted the attention of Japanese regulators, initiating their own programme including three public corporations identified for privatisation (Toyama, 1998). Toyama also states that politicians with special relations to these corporations

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resisted the proposals despite the majority of LDP members supporting privatisation. Proposals were subsequently diluted, which is unsurprising as previous deregulations in Japan have maintained a high degree of government control (Takenaka, 2007).

Poorly conducted initial public offerings also hampered reforms; Toyama (1998) shows that initial sales to the public were not accompanied by any special incentives, nor were there any employee share schemes, both of which are common practices in other countries. A broader shareholder base may therefore dilute funds available for distribution through Fiscal Investment and Loan Programme agencies and perhaps threaten the solidarity of stable shareholding.

2.4.1.1   The case of Japan Rail

Watanabe (1994) describes the privatisation of Japan Rail (JR), which adds perspective to JP. JR was burdened with debt[8], had numerous vested interests, and opposed any changes to the status quo. Inertia was largely attributed to political pressure, unions, and local governments whose efforts diluted proposals and hampered implementation. Like JP, JR symbolised traditional employment practices: seniority-based pay, lifetime employment, and generous pensions.

JR was divided into six regional centres with a nationwide freight service. The government retained a share to ensure user interests were upheld and a stabilisation fund was established to aid less profitable providers on smaller islands. These same provisions would appear again in postal reforms.

61,000 of the 276,000 workers were displaced. 20,000 were asked to retire with extra benefits and the remaining 41,000 were relocated within three years via a settlement company. Other changes included a simplification of titles and hierarchy, and the introduction of a merit-based remuneration package[9]. Departing from traditional methods, a system of formal examinations and evaluations was introduced to determine ability.

Following privatisation, the company earned profits and retired debt, assisted by the reduction of interest rates and increased passenger numbers. Key factors included public intolerance for the old system: service levels were poor, prices had risen, and previous reform attempts had been derailed. In-depth media coverage also exposed union corruption, destroying their credibility. The

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[8] So much debt in fact that the organisation could only just keep pace with interest payments.

[9] Previously, changes to titles were not associated with changes in pay, which discouraged workers.

privatisation of JR, however, should not be interpreted as a triumph of the democratic process. Watanabe (1994) argues that there was no glamour in it, rather the people execrated the former JR and the rail-lobby simply could no longer withstand reform pressure.

2.4.2   Post-bubble experience

Japan's preferred method of dealing with cash-deficient organisations is concerning. The Ministry of Finance uses a convoy system (Takenaka, 2007): banks are carried along together without letting them fall. Banks likewise have a proclivity to 'ever-green' a failing business' bad debt rather than dispose of it, creating further problems as loans to sound creditors lose precedence (Hwang & Schaefer, 2002). Caprio et al. (1993) concur but acknowledge that banks often assist companies in restructuring, which reduces agency costs. They also contend, however, that bank restorations are only successful upon retiring bad debt and instilling a reluctance to extend non-performing loans in the future.

The failure to realise a sustained recovery despite numerous government stimulus packages produced a sense of crisis and heralded Koizumi's election in 2001 (Peng, 2002). Koizumi began reforms he believed would bring Japan out of recession, including the expulsion of LDP members who had previously resisted proposed changes, although this drew criticism from US observers (Peng, 2002).

For a time, the development model itself was debated. Scissors and Foster (2009) state that there was discussion about moving Japan away from the export-led growth model but growth from 2002-2005 silenced the debate. It would appear that the global macro-environment has a large impact upon determination to reform in Japan and can galvanise resistance during inclement conditions (Peng, 2002).

2.4.2.1   A note on shareholder and stakeholder theory

Recently, the debate surrounding shareholder theory and stakeholder theory has resurfaced in the wake of financial crises initially beginning in the United States. The Anglo-American model of shareholder theory has been criticised by some for promoting reprehensible behaviours among some executives in an effort to achieve short-term share price rises as they are tied to executive remuneration packages (H. J. Smith, 2003). The Enron case is a vivid example of this. Smith (2003), however, also points out that shareholder theory dictates that profits should be made legally and without deceit. The actions of these (rightly) vilified executives cannot be associated with shareholder theory as they were acting in their *own* interests.

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Nevertheless, recent developments in the Western world have driven a sometimes emotive call to adopt more stakeholder-oriented governance approaches (H. J. Smith, 2003; The Economist, 2010; Waldkirch, 2008). Commonly cited benefits include making the organisation more responsible to the community that it operates within and a greater realisation of the environmental impact of the firm's activities. These features are certainly desirable but to claim that they are mutually exclusive to shareholder theory is a misrepresentation. Shareholder theory—when properly applied with a view to long term profitability—would suggest that charitable projects or employee investment, for example, can align with profit interests and therefore represent a good application of capital (H. J. Smith, 2003).

Herein lies the problem. Placing primacy with shareholders is not intrinsically flawed, but it is its application through agent-principal relationships, often associating executive remuneration with short-term increases in prices, that can lead to problems (The Economist, 2010). Friedman (2007) argues that properly implemented shareholder theory focusses more on dividends than short-term share price fluctuations and in doing so the illustrative charitable project or employee investment becomes more economically viable.

To borrow a term from modern art appreciation, context is everything; the recent popular support for stakeholder theory arose from the fallout of recessions sparked by financial crises in the Western world and subsequent questioning of shareholder theory (The Economist, 2010). Japan, however, has long held to the principles of stakeholder theory (Nottage, 2006; Simeon, 2009) and if pictured on a continuum featuring shareholder theory on one side and stakeholder theory on the other, leans further towards stakeholder theory than even Germany (Nottage, 2006). The particularly interesting point is that Japan, a country that has suffered prolonged recession for almost two decades, has recently begun to show glimmers of progress that coincide with gradual shifts towards *shareholder* theory (Nottage, 2006). Indeed, Simeon (2009) notes that the changing attitudes in Japan have been in response to their recession as debate surrounding the validity of the Japanese implementation of *stakeholder* theory came into question.

One point that needs to be made though is that it is the stars of the dual economy that are most associated with these shifting attitudes; the public sector still appears to firmly hold to traditional stakeholder values (Nottage, 2006; Simeon, 2009), including JP.

If, citing evidence from the American financial crisis, one were to argue that shareholder theory has failed America, one would also have to concede that stakeholder theory has failed Japan. A greater move towards shareholder theory will be argued for in later chapters. This does not infer that stakeholder concerns should be cast aside, but rather advocates a well-implemented form of shareholder theory that also addresses stakeholder concerns by making business decisions that are economically justifiable from a long-term profit perspective.

2.4.3   Arguments for reform: Following New Zealand

The New Zealand reforms presented an attractive model to Koizumi as one of Japan's primary goals was to remove the state from banking. Corruption and waste stemming from Fiscal Investment and Loan Programme investments was systemic and Koizumi was determined to sever links between government, postal savings, and Fiscal Investment and Loan Programme recipients (Maclachlan, 2011). During an interview, Koizumi also stated that privatisation of posts, insurance, and pensions would reduce the public sector by 300,000 and charge the new entities with unambiguous goals of profitability, generating tax income in the process (Iwakami, 1996).

These desires were precisely the outcomes of the New Zealand experience: the state had no presence in banking[10], the public sector had been downsized, and New Zealand Post (NZP) became a net payer of tax following corporatisation. Koizumi praised the New Zealand reforms during an official visit (Japanese Communist Party, 2005), while business communities upheld the model as a benchmark for Japan and argued that it should be given foremost attention in drawing from others' experience (Ogino, 2007). The New Zealand model clearly left a strong impression on the Koizumi administration and some commentators have described the Japanese reform as a copy of New Zealand's (Gendai Net, 2005).

2.4.4   Arguments for reform: JP

Two common arguments centre on its sheer size and how funds are used. Accounting for 380,000 employees and roughly $3 trillion US dollars in deposits makes JP an immense organisation, but it has been noted that deposits are often

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[10] This was prior to the inception of Kiwibank. Even then, NZP approached private sector investors first and only brought their prospectus to the government when they could not raise adequate funds. Additionally the State Owned Enterprises Act ensured that no favouritism applied.

used to fund dubious public spending campaigns (Hwang & Schaefer, 2002). This arose in part due to the *obligation* to inject deposits into the Fiscal Investment and Loan Programme (Amyx, Takenaka, & Toyoda, 2005). Also, public spending projects are often 'outcome-based,' which in practice means that agencies responsible for contracting work are effectively presented with a blank cheque (Jones, 2003), nor are contracts subject to cabinet or ministerial approval and hence are issued without democratic oversight (Jones, 2003). JPB is the single largest buyer of government debt, which accounts for roughly 80% of JPB assets (Japan Post Group, 2007). Data from 2004 show that JPB had JPY233 trillion of government debt whilst the private sector only held JPY39 trillion (Takenaka, 2007).

Further arguments arose from concerns surrounding the ineffectiveness of government spending packages and the pressure this placed on JPB, as the stock of Japanese public debt is so large that doubts are forming over the ability to repay it (Hwang & Schaefer, 2002). Amounting to roughly 200% of GDP at an average yield of 1.4%, outstanding JGBs require 2.8% of GDP just to remain stable (Yao, 2009). Given the growing perceived risk, it is not implausible to suggest that future JGB yields may rise. If so, the resultant devaluation of bonds currently held by JPB would create a capital loss great enough to cause insolvency (Rowley, 2006). Peng (2002) states that foreign pressure, particularly from international credit rating agencies, has added to the pro-reform argument.

Supplementary complications are the regulations and distortions that incentivise investing with JPB. In previous years JPB was permitted to set deposit rates higher than the caps imposed upon private banks (Takenaka, 2007). Additionally, special tax benefits created powerful incentives to deposit funds in JPB. However, one of the greatest features that attracted savers was the ability to buy into 10 year term deposits with the special condition that an investor could break the deposit at any stage and collect all accrued interest without penalty (Takenaka, 2007). If bond yields rise, the consequences of such a policy would have severe repercussions for the organisation; many investors would likely refinance their accounts at higher rates, which would be in addition to the losses relating to JGB devaluation. These combined features create a strong argument for the need to reform JPB, particularly given its central role in the financial system (Takenaka, 2007).

2.4.5   Arguments for reform: The financial system

Research shows that privatisation is less likely to be successful if the regulatory environment has not been suitably prepared. The Ministry of Finance supported failing banks during the post-bubble recession, allowing none to fail, and this suggests that continued protection of inefficient competitors is why Japan is still experiencing problems today (Takenaka, 2007). Hwang and Schaefer (2002) second this view but add that not even downsizing was promoted. In a clear nod to traditional values (and perhaps self-interest), the Government sought to maintain the financial system without labour losses. Additionally, Japan's financial system falls behind other developed nations for two reasons: greater income equality results in less exposure to the share market, and a government-sponsored distrust of fund managers and managed funds (Takenaka, 2007). Consequently, Peng (2002) shows that Koizumi intended to reduce the size of government and introduce competition to public companies.

Many of Japan's problems stem from reliance on trade surpluses (Scissors & Foster, 2009) which, by definition, implies high savings. Unsurprisingly, the Government sponsored industries that already enjoyed comparative advantages and neglected to develop less competitive industries (Hwang & Schaefer, 2002). Superimposing Japan's development model, it becomes apparent that structural problems would be inevitable as it would produce a dual economy, as noted by Katz (1998), characterised by ultra-competitive export industries and inefficient firms needing constant ever-greening of debt to remain solvent whilst maintaining employment levels (Takenaka, 2007). The financial system was one of the key drivers of this process and therefore is a powerful argument for reforms that include financial deregulation and a level playing field (Porges & Leong, 2006).

Some believe that JP should retain its traditional form. Toyama (1998) argues that it produces goods that, whilst demanded by the public, are difficult to profit from and a privatised postal system would limit service coverage and retire loss-making products and services. I respectfully disagree, as other public enterprises in Japan have undergone reform and produced profits whilst improving services[11]. Postal agencies in other countries have also become net payers of tax although modern conditions do require diversification into related services.

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[11] Japan Tobacco and Japan Rail are good examples in this regard.

2.5   Chapter Conclusion

The literature highlights the differences in reform experience between New Zealand and Japan, where the two governments exhibit differing ideologies regarding the purpose of state-owned organisations. New Zealand's experience shows a more arms-length relationship between the state and business, and the guiding principles are based more on commercial outcomes. Japan's experience, however, shows a more intimate relationship and a more of a continuation of traditional values. The literature surrounding New Zealand's reform is rich but the matters of how resistance was overcome and why NZP was never fully privatised have not received as much attention. This study intends to address these gaps.

The respective experiences of New Zealand and Japan expose some preliminary similarities and contrasts. Both countries began reform efforts in response to an ailing economy but where New Zealand shows relatively decisive action, Japan's progress has been slower and less effective. Postal reform in itself represents a much greater issue in Japan, particularly so owing to its size and the role it plays with respect to the financial sector. These issues are discussed in more detail in later chapters. For now, our attention now turns in the next chapter to a more thorough discussion of the literature relevant to constructing a comparative study of issues in postal reform.

3 Literature Review

3.1 Overview

This chapter reviews the literature related to producing a comparative study of postal reform. As this is a case study of comparative institutional change IE forms the core theoretical framework and therefore warrants examination. Privatisation is also discussed, including issues surrounding moral hazard and agency theory since both postal systems were affected by these factors.

The literature produces a preliminary illustration of the incumbent institutions and reform outcomes but also highlights knowledge gaps in the New Zealand experience that will be addressed in Chapter Five. Similarly, the events, structures and relationships of the Japanese experience leading up to the proposed reforms are discussed as Japanese reforms were intended to follow a similar path. Later developments will be pursued in Chapter Six.

In terms of the underlying thread that links the following topics together, the case study reveals the centrality of institutions, which leads the review to a section on IE and institutional change. Being a conscious and deliberate attempt to engender change, privatisation is a particular form of institutional change and entails a wide range of concerns. The review therefore also discusses some of these concerns, particularly some of the difficulties in implementing reform and resistance to it.

3.2 Case Study Analyses

Case studies can be used to enhance the body of knowledge (Darke, Shanks, & Broadbent, 1998; Groenewegen & De Jong, 2008). This thesis does so by examining New Zealand's and Japan's postal reform experiences. Thus the following section discusses how cases can be used to make contributions.

3.2.1 Making contributions through case studies

A case study is "an empirical enquiry that investigates a contemporary phenomenon within its real-life context" (Yin, 1994, p. 13). Using multiple methods of data collection, they are useful where the distinction between the phenomenon and its inherent context may be difficult to identify (Yin, 1994). Case studies are commonly used to understand a particular situation and contain a significant element of qualitative research (Eisenhardt, 1989b).

Despite critics of qualitative analysis (Gable, 1994), case study research should not be dismissed, as better qualitative understanding leads to better quantitative models (Eisenhardt, 1989b; Meredith & Vineyard, 1993). Case studies provide evidence, facilitating the construction of theories that are reliable, testable, and generalizable (Eisenhardt, 1989b). Case study research can therefore increase theoretical robustness. Likewise, case studies are powerful tools for theory development (Darke et al., 1998; Voss, Tsikriktsis, & Frohlich, 2002), having been used to help the construction of frameworks for theory building (Mintzberg, 1979).

3.2.2 Theory building through case studies

Theory can be deconstructed into four constituent components: variable definition, theoretical context; relationship examination, and predictions from application (Wacker, 1998). Case studies are valuable as they can analyse each of these components via a wealth of primary data (Voss et al., 2002).

Notably, there are three advantages for theory building. Studying a phenomenon in its natural setting provides data based upon primary evidence; allows the full extent of the phenomenon's complexity to be observed; and in situations where the underlying variables and relationships may not yet fully be understood, the case study approach can be used as a form of exploratory research (Meredith, 1998). The first of these advantages is particularly important for the thesis' simulations, as the actions taken by Japanese politicians confirm that the strategies programmed into the simulations are actually used in practice. The primary evidence collected for the New Zealand and Japanese experiences also corroborates the model for institutional change presented in Chapter Four.

Theory can be enhanced through either single or multiple case studies. A single case study analysis is more appropriate where the phenomenon under scrutiny is unique or exceptional (Yin, 1994). Multiple case study analyses are useful when examining a phenomenon across a broad range of situations, where cross-case comparisons may uncover trends and patterns (Darke et al., 1998). Using the multiple-case approach, juxtaposing the New Zealand and Japanese reform experiences is intended to show that the presence of elements in New Zealand's case led to successful change, whereas their absence in Japan hampered it.

To ensure rigour, cases must be strong (Yin, 1994). Yin therefore advocates a well-designed research protocol defining all the rules, procedures, data procurement methods, persons contactable, and interview questions that will be

used. Multiple methods of data collection allow triangulation, which strengthens findings (Eisenhardt, 1989b). My study heeds the preceding advice by following methods employed in other case studies, most notably in terms of data procurement and processing, and by triangulating simulation inputs through media reports and expert opinion.

Given that the case study highlights the importance of institutions, we now turn to a deeper review of institutional economics (the 'rules of the game'), which includes agency theory and other issues that will contribute to deeper case study analysis.

3.3   *Institutional Economics*

Institutional economics has existed long enough to evolve into what many term the *new institutional economics*. IE is used to analyse specific phenomena and to construct frameworks or theories around a given institution (Hodgson, 1998). This approach diverges from mainstream economics, which proffers broader application through relatively simplified theories. Losses in generalizability are counter-balanced by models more suited to individual situations where underlying assumptions do not necessarily constrain validity.

Some of the driving forces also depart from more traditional perspectives. IE explores the formation and evolution of institutions (Arrow, 1971); traditionally however, they are taken as a given (Williamson, 1975). Hodgson (1998) holds the institution as the basic unit of analysis rather than the individual because we are born into a world of institutions that often outlast the individuals who devise them.

Another key difference between IE and mainstream economics concerns assumptions about 'the rational economic man'. While traditional perspectives assume rationality as given, the act of doing so implicitly acknowledges the presence pre-existing norms, rules and institutions (Field, 1979). Yet, if one assumes a person's rationality as given and immutable, it implies that preferences are also given and the individual is in fact a 'slave' to their preferences, as aptly illustrated by Buchanan: "Choice, by its nature, cannot be predetermined and remain choice" (Buchanan, 1969, p. 47). An extension of this is the notion that preferences evolve, which will be shown to be an important factor contributing in particular to NZP's institutional shift.

Models of choice, preference and behaviour also have a distinctive impact on agency theory within IE. Applying bounded rationality, satisficing (Winter,

1971) and imperfect information, the complexity of a given transaction correlates with increasingly complex governance terms (Williamson, 2000). This has two major implications. Firstly, contracts cannot feasibly provide contingencies for all potential outcomes and are therefore fashioned to allow concerned parties the most opportunity to resolve their own differences. Judicial arbitration is an option but one cannot assume costless use of the courts, which in turn limits the number of disputes that are filed. The second is fascinating: it has been argued that the perceived inefficiencies of public bureaus[12] have been installed *intentionally* to distance them from the concerned parties and therefore fulfil their role of governing often particularly complex transactions more objectively (Williamson, 2000). As Chapters Five and Six will demonstrate, the differing approaches of the two countries lead to differing levels of complexity, in the case of New Zealand clearer distinctions allowed for disputes to be resolved more resoundingly.

Much of the work produced by IE researchers has been through case studies as they are not bound to a single theory or hypothesis, although great emphasis is placed upon comparative institutional analysis (Hodgson, 1998). This is precisely the method employed here as the thesis compares institutions in pre- and post-reform New Zealand and Japan. Specifically, by conducting a pre- and post-reform analysis, the literature denotes the individual cases as examinations of *institutional change*. More importantly, however, we recognise that this particular form of institutional change (privatisation) is done both consciously and deliberately. It is a redefinition of the institutional landscape by altering the ownership and governance structures, and the regulations guiding the organisation. As such, since privatisation is in fact an application of institutional change, the review now moves into a more thorough discussion of privatisation itself and the issues that apply to the New Zealand and Japanese cases.

3.4   Privatisation

Defined narrowly, privatisation is simply the transfer of national assets from the state to the private sector (Button & Weyman-Jones, 1994), however, the real process is much more complex. In the mid-20th century, governments produced increasing shares of goods and services in the economy (Megginson & Netter,

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[12] This includes reduced incentives, increased rules and regulations, and greater job security than private sector employment.

2001), including strategic assets, banks and other financiers (La Porta, Lopez-de-Silanes, & Shleifer, 2000). Economic arguments aside, nationalism was also a common feature (Noll, 2000).

By the time of Great Britain's Thatcher government, there were growing needs for efficiency and high public debt incentivised privatisation (Megginson & Netter, 2001; Price-Waterhouse, 1989). This was also evident in the European community where there was a greater thrust towards efficient outcomes (Button & Weyman-Jones, 1994). State-owned entities were often characterised by waste and inefficiency (Kikeri & Nellis, 2004), and in the most extreme cases were estimated to be an unsustainable five or six percent of GDP. New Zealand found itself in the same position and as privatisation gained favour in the 1980s among developed nations, New Zealand also began its reform process.

Nevertheless, and despite considerable research, there is evidence to suggest that past mistakes are being repeated. Chi and Jasper (1998) produced a comprehensive survey in the United States and found that many states were conducting their efforts on a trial and error basis; less than 20% of respondents modelled their own programmes on another's (Chi & Jasper, 1998). The same phenomenon is also present in other Western nations (Baumol, 1993). Through the respective cases developed here, this study will show that even though Japan took some cues from the New Zealand experience, they were not able to secure the same level of change. There is also evidence to suggest that even in developed nations privatisation is not conducted with a sense of systematic reform but rather on an ad-hoc basis (Chi & Jasper, 1998). More disturbingly, many of these projects are implemented without monitoring or evaluative processes (Chi & Jasper, 1998). These points have contributed to a public misconception about the timing of privatisation benefits (Baumol, 1993), a feature that will become important for the New Zealand case.

Once the decision to reform has been made, there are a number of important factors that should be considered. The review therefore now turns to a discussion of these factors and their relevance to the thesis.

3.4.1   Factors of importance during the change process

One important aspect is whether there exists a valuation differential between the state and the private sector (Mackenzie, 1998). Should the government place less value in the assets, the results are similar to a tax increase. Alternatively, if the

private sector places less value in the assets, the realised sale may be less than projected. Privatisation when a value differential exists may restrict inter-temporal budget constraints: if the state has a higher implied discount rate than the market, it follows that the revenue stream the state gives up is greater than what it could expect to receive from asset sales (Mackenzie, 1998). The presence or absence of a value differential is very important for Japan as the government now intends to use the sale of shares to fund reconstruction efforts after the Great Eastern Earthquake. Such a value differential may well be influenced by the regulations imposed on a new private entity and some of the more influential regulatory issues feature in the simulation.

Another issue is the matter of profit or welfare maximisation (Campos e Cunha & Cooper, 1998). Corporate goals and strategies, organisational structures, labour practises, and organisational culture are all facets of the enterprise that will have to adapt to the new setting (Campos e Cunha & Cooper, 1998). Kikeri and Nellis (2004) argue that two critical measurements must be taken; whether the net economic welfare generated under private hands is at least equal to when it was owned by the state, and how diffusely the benefits of privatisation are distributed. Button and Weyman-Jones (1994) second these tests, but question whether increased performance is due to simply a change in ownership, the introduction of more competition, or perhaps a better set of regulatory incentives. The New Zealand case will present evidence that, in one instance at least, the latter two are of greater importance.

Government plays a vital role in privatisation, particularly with respect to the asset's financial and competitive position, including any pre-sale restructuring. Empirical evidence suggests that the most value-enhancing moves are to remove the CEO and liquidate the assets, on average, one year earlier than initial outlines (Lopez-de-Silanes, 1997). Other restructuring activities can improve sale prices but the resources and time required are often disproportionate to value gains (Lopez-de-Silanes, 1997). It has been suggested that small and medium sized state-owned enterprises (SOE) should be sold in their current condition for the best possible price and new owners left to make decisions regarding new investments (Kikeri, Nellis, & Shirley, 1992). Bulow and Klemperer (1996) also find that auctions usually result in higher prices. This point is relevant as Chapter Six will illustrate the involvement of the state relating to assets held by the privatising entity can also lead to delays and lost opportunities.

Other factors include the government's ideology regarding markets and regulation, commitment to property rights and government credibility, the condition of the corporate governance framework, willingness to allow foreign ownership, and the type of investors that assets will be passed on to (Megginson & Netter, 2001). All of these factors appear in the respective case chapters and contribute to demonstrating how the two countries' results differ.

Gibbon (1997, as cited in Megginson & Netter, 2001) distils the common process for selling state assets. This includes preparing the environment the assets are to be sold into, establishing transparency for prospective buyers by providing the necessary information (accounting data, annual reports etcetera), and outlining the nature of any post-privatisation relationship between government and the newly privatised firm. Chapters Five and Six will show that this process appears in both countries

During the transition, governments do not necessarily become less involved in the macro-economy. In practice, it is inadvisable to disown an enterprise and cast it to the private sector; rather the state becomes a supervisor and regulator, ensuring that the newly privatised companies and related industries are not exploited (Megginson & Kay, 2000). This view is supported by other studies that suggest control transferral is more effective when combined with market liberalisation and removal of entry/exit barriers (Pinheiro, 1996, as cited in Kikeri & Nellis, 2004), a point that will be clearly illustrated through New Zealand's experience in Chapter Five.

Governments must not hastily privatise an entity into a weak environment, but excessive delays in preparing the regulatory environment can impose significant costs (Kikeri & Nellis, 2004). Experience also shows that over-regulation presents a threat to organisational freedom to the point where privatisation becomes ineffectual (Baumol, 1993). Raising these points is important because the two cases developed here corroborate the theory in both positive and negative respects.

Some scholars contend that private ownership should grant the firm a number of freedoms – including the freedom to fail (Baumol, 1993; Kikeri & Nellis, 2004). In the past, many governments rarely allowed state-owned businesses to fail despite being insolvent (Frydman, Hessel, & Rapaczynski, 2000). Bailout costs are ultimately borne by the state and can exacerbate incentive alignment issues (Megginson & Netter, 2001). Allowing businesses to fail does not suggest that privatisation itself is a failure; rather that the opportunity costs of running such an

enterprise exceed the private sector's willingness to bear them and freedom to exit infers that resource allocation efficiency is performing its role (Kikeri & Nellis, 2004). This point is relevant to the New Zealand/Japan comparison because, as shall become clear in later chapters, New Zealand's attitude and Japan's attitude differ greatly, which in turn affects the amount of change exhibited.

When considering employees, severance allowances, early retirement incentives, and voluntary departures have been suggested as ways to facilitate divestment of resources (Kikeri & Nellis, 2004). Even so, many governments find employment-based political pressures too great and ultimately concede by either reversing parts of the process or by using vague guidelines with no explicit date (Baumol, 1993); the account provided in Chapter Six shows both practices occurring. This 'regulatory risk' places costs upon the incumbent, rival firms, and consumers, which is why regulators should sever themselves from the entity once control has been surrendered (Chong & Lopez-de-Silanes, 2002). Once again, in this most political of issues, the thesis will reveal differing approaches and in New Zealand's case, a more liberalised approach would become a key factor in redefining the new institutional environment.

How the preceding points are handled by the state will have significant implications for the overall outcomes of a reform programme. Having raised a series of factors that should be taken into account when implementing privatisation, we now move on to a discussion of the benefits that may accrue from it.

3.4.2   The merits of privatisation

Despite concerns, privatisation can benefit the economy. Megginson and Kay (2000) note that barring a few exceptional cases, aggregate employment generally remains unchanged and may even increase. There are also cases where employment in the privatised firm does not systematically fall, owing to increases in demand (Megginson & Kay, 2000).

Empirical evidence displays improved productivity, rationalised pricing decisions, greater capital investment, and increased competition (Galal, Jones, Tandon, & Vogelsang, 1994). Other studies show increasing net consumer surplus despite some price increases and improvements in service quality (Delfino & Cassarin, 2001). Realising these benefits, however, requires a complementary regulatory environment and recently there has been a tendency to over-promote privatisation as a solution to many economic problems (Kikeri & Nellis, 2004). One

complication is unequally shared welfare consequences. The case of British and Welsh electricity supply showed that although producers and consumers gained, most of the utility was realised by producers (Domah & Pollitt, 2001). Other evidence shows that such asymmetric distribution can result in wider income inequality, at least in the short run (Kikeri & Nellis, 2004). Baumol (1993) argues, however, that this is an inalienable part of the open market mechanism and increasing welfare on the part of consumers is not to be turned down in light of greater benefits accruing to those willing to absorb the risk of purchasing state assets. This is a valid point but such faith in the market mechanism implicitly suggests that the regulatory environment is strong enough to withstand potential opportunism and moral hazards. These points reappear in Chapter Five where New Zealand's experience shows many of the benefits accruing as well as the presence of a strong regulatory environment.

The literature also highlights other advantages including improved performance and operating efficiency (Dyck, 2001), greater transparency, accountability and wider public shareholding (Button & Weyman-Jones, 1994), stronger capital markets, improved financial sector efficiency (Matoušek & Taci, 2005), and dividends to the state in the case of SOEs (Darwall, 2003). Realising such benefits in Japan would be advantageous, and indeed were among Koizumi's goals, but rest upon successfully reforming JP, which is the focus of Chapter Eight.

3.4.3 Major issues in privatisation

Despite a number of benefits that can be realised, there are many issues arising from privatisation. The literature on this is vast and so to give more focus to the review only the economic, political, and organisational factors that impinge directly on postal sector reform and the divergent interests of stakeholders are emphasised. These matters are important as how they are treated will have significant consequences for the respective country – particularly so for Japan as JP is so large.

3.4.3.1 Economic issues

Regarding the application of sale proceeds, increasing government expenditure or the down payment of government debt yield very different results (Mackenzie, 1998; Megginson & Kay, 2000) because privatisation-fuelled expansion crowds out private investment just as does debt-fuelled expansion (Mackenzie, 1998). By comparison, governments that saved receipts saw marked

improvements in fiscal positions over time (Davis, Ossowski, Richardson, & Barnett, 2000). The application of sale proceeds is a critical issue for Japan, as it has one of the highest sovereign debt rates in the world, but also faces the matter of reconstruction following the Great Eastern Earthquake.

Another issue for newly privatised entities is the cost of capital. In many cases the enterprise may no longer draw funds from discounted public debt and must participate in open capital markets, raising the cost of capital through increasing Beta coefficients (Button & Weyman-Jones, 1994). This can be challenging for an organisation charged with universal service commitments (Campos e Cunha & Cooper, 1998). The prospect of imposing universal service commitments is one of the key issues examined in the simulation and thus may have implications for the cost of capital as well as the attractiveness of JP as an investment.

One issue more applicable to developed nations is that many potential candidates exhibit monopoly attributes where the state has attempted to restrain profit-taking behaviour (Baumol, 1993). Additionally, a prominent argument for state control is the popular 'universal service' clause often imposed upon utility providers. In such cases, privatisation can be challenging as regulators have a number of additional tasks to perform balancing open competition, financial performance, and economic welfare. In this regard, the matter of disentangling social and commercial objectives becomes important and the two experiences will be shown to exhibit quite different predilections with equally differing outcomes.

3.4.3.2 Political issues

Government involvement in markets is often a point of contention. Arguments for private ownership often cite a central tenet of economics that markets generate competitive outcomes but this requires the absence of externalities and public goods (Megginson & Netter, 2001). The argument for government control implies that the market has failed in some way. Indeed, Briggs (1961) believes that governments should produce a 'welfare state' and in the process must alter the actions of the market through incentive and regulation to compensate for welfare losses associated with open markets.

Even so, Coase (1960) states: "All solutions have costs, and there is no reason to suppose that governmental regulation is called for simply because the problem is not handled well by the market or the firm" (as cited in Megginson, 2005,

p. 459). Furthermore, whilst proponents of privatisation concede that although state control can correct some market failure(s) privatisation has the greatest impact where the market failure that state ownership alleviates is proportionately insignificant to the technical inefficiencies and weak performance incentives of government-run organisations (Megginson & Netter, 2001).

Even in the cases for natural monopolies or public goods, some believe that state ownership is not optimal. Megginson and Netter (2001) suggest that governments often lack credibility to commit to or maintain policies that adversely affect the operations of an SOE, doubly so if administrations change over time. In the presence of conflicting goals, private ownership would at least produce an efficient outcome, if not necessarily the most welfare maximising (Shleifer, 1998). Li and Yamada (2015) produce some interesting results in this regard, noting that there appears to be incentives both to maintain employment and efficiency in partially privatised Chinese SOEs. Nevertheless, they also show that government control of SOEs may be a factor in explaining relative performance differentials compared to private firms. Compounding all the aforementioned issues, however, is the gap in the literature identified by Megginson and Netter (2001): little empirical work explores the decision of when to privatise, at what rate, and whether to divest the assets in stages or at once. They concede that this is a particularly complex topic of study. In this regard, the experience from the New Zealand case will show that, in this particular instance at least, it was not essential to surrender ownership to produce more efficient outcomes but rather a change in control.

Political resistance can influence the integrity and reach of a given set of reforms. Even if the public supports privatisation, special interest groups can hinder the process (Peng, 2002). Furthermore, where power and influence are decentralised, political pressure often results in dilution. This can occur in both majority and minority governments and ultimately results in delays or removes the intended market-oriented outcomes.

Many of the preceding points form part of an argument for government control of 'strategic industries' (Button & Weyman-Jones, 1994). A large public sector is argued to be vital for the protection of consumers and to ensure that such strategic industries act in accordance with the nation's best interests. This forms one of the major barriers in terms of political resistance to privatisation and Chapter Seven will show it appearing on several occasions.

Other forms of political resistance are observed in the perception that gains from privatisation are less than the costs and indeed, the fairness of privatisation itself has come into question. Kikeri and Nellis (2004) summarise some of the major political counter-arguments and suggest that resistance to change often arises as critics question whether the gains made are a result of extra competition or ownership transferral. Finally there is also the fear that financial gains are only realised by a select group of privileged individuals (Baumol, 1993; Kikeri & Nellis, 2004). The issue of resistance is particularly important in this study as we presume that greater resistance reduces institutional change. Accordingly, this topic is examined in both New Zealand and Japan.

Labour reductions are possibly one of the most highly charged political issues. Governments are acutely aware of the political backlash from reform and often act strategically. Job losses are often sensationalised but empirical research shows that in competitive and some high-demand sectors employment levels change only marginally (Boubakri & Cosset, 1998; Megginson, Nash, & van Randenborgh, 1994). Other studies show that where labour reduction is more significant it is due to poor underlying economic conditions rather than privatisation itself (Jones, Jammal, & Nilgun, 1998). There is also empirical evidence to suggest that remaining employees are at least no worse off and in many cases are given higher wages (Kikeri & Nellis, 2004). However, governments should perform a degree of restructuring prior to sale since they are better equipped to reduce the impact on displaced workers (Nellis & Kikeri, 1989). Despite the weight of empirical evidence, the issue is often dramatized and governments may temper reforms in an effort to avoid ill-will, perhaps because the benefits of privatisation are diffuse while its costs are comparatively concentrated (Kikeri & Nellis, 2004). This issue appears in both New Zealand and Japan, and the corresponding chapters will show how the issue was respectively resolved, and used for political gains.

Selling assets to foreign interests is a sensitive topic. Nevertheless, foreign ownership brings a number of benefits including increased transparency, greater access to capital, increased buying power, and world-class standards and practices (Dyck, 2001; Megginson & Kay, 2000). In one particularly broad empirical study it is suggested that each percentage point of foreign ownership corresponds with a 3.9% increase in added value to the firm (Smith, Cin, & Vodopivec, 1997). Even so, nationalism/xenophobia can reach such a pitch that governments have been known to block sales to foreigners via specially implemented legislation. This issue

is relevant because it appears in the Japanese case and allowing foreign ownership is one of the factors included in the simulation model.

3.4.3.3   Organisational issues

One primary organisational issue is the change the firm undergoes from ownership transferral. Research indicates that changing objectives are often associated with restructuring to include flatter, more decentralised hierarchies, which can also reduce layers of middle management (Bishop & Thompson, 1994). This process creates uncertainty and employees at many levels of the organisation may resist as they perceive threats such as loss of influence, redundancies, and increased work stress (Nelson, Cooper, & Jackson, 1995).

As the organisation becomes profit-oriented there is often the need for a change in corporate culture (Campos e Cunha & Cooper, 1998). One of the difficulties that managers may face is identifying instances where behaviour is incongruent with the desired new cultural setting and responding accordingly. Managers themselves may also be adjusting to the new conditions (Sathe, 1985, as cited in Campos e Cunha & Cooper, 1998).

Human issues are another area of concern. In some cases ownership transferral decreased relative wages and employment levels for employees, yet managerial staff received remuneration increases to levels comparable to other private sector organisations (Haskel & Szymanski, 1992). Megginson and Kay (2000) also note occurrences of compensation policies favouring management in newly privatised firms. Instances such as this can fuel uncertainties felt by internal stakeholders. The points raised here are valid concerns and the data collected for the New Zealand experience (see Chapter Five) will show how NZP successfully addressed them.

3.4.4   Moral hazards and agency issues

Opportunism can be a serious issue in privatisation. Notable cases include the Chilean electricity example where managers secured enormously higher payouts than minority shareholders during a takeover bid (Wright, 1999). The Russian coupon privatisation saw privileged individuals purchase the public's shareholdings for a fraction of their real worth (Goldman, 1997). Some of the major themes addressed in this section include governance chains, ownership structure, traditional and unique agency issues, and control without ownership. They are

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relevant to this study as the Japanese postal system forms one part of what Prime Minister Koizumi described as an 'iron triangle' of questionable exchanges.

Grabbing hand theory, a term first coined by Shleifer and Vishny (1998), describes many of the problems associated with the public sector, examples include: theft, misappropriation, perquisite consumption, insider trading, corruption, and tolerances of managerial slack (Dyck, 2001; Gedajlovic & Shapiro, 1998). At a high level of abstraction, many of these problems derive from the incentives of politicians. Boycko, Shleifer, and Vishny (1996) and Shleifer and Vishny (1994) describe models where politicians are motivated by political benefits, securing votes for example. To that end, Shleifer and Vishny (1994) argue that when control of the firm lies with managers, politicians rely on subsidies and bribes to incentivise political objectives; by comparison when control lies with politicians, managers will offer bribes to dissuade politicians from enforcing political objectives. In either case, the murky nature of the exchange may limit the overall effectiveness of privatisation.

Dyck (2001) suggests a solution in the form of governance chains. Both formal and informal, they control flows of information and accountability through extending and formalising the relationships between individuals and organisations (Dharwadkar, George, & Brandes, 2000; Dyck, 2001; Greif, 1997). Chapter Five details how such governance chains were applied in New Zealand through the redefinition of the institutional environment. In Japan, the reformers also envisioned that such formalisation would occur through the separation of JP's business units and this notion is one of the components of the simulation (see Chapter Eight for the results).

Privatisation has also been accompanied by 'entrenchment': actions designed to limit the control mechanisms installed to regulate managerial behaviour (Walsh & Seward, 1990). Traditional agency theory problems arise from misaligned agent and principal incentives (Dharwadkar et al., 2000). Increased monitoring and incentive alignment are potential solutions but require strong governance, a prerequisite seen more commonly in developed nations (Dharwadkar et al., 2000).

In addition to traditional agent–principal problems, principal–principal problems are issues to consider (Dharwadkar et al., 2000). Megginson and Netter (2001) suggest, *ceteris paribus*, concentrated ownership is best, followed by diffuse ownership, and finally state ownership; foreign ownership is superior to domestic

ownership as far as long-term performance measures are concerned. Nevertheless, Shleifer and Vishny (1994) maintain that once control has been effectively transferred to management, and there is little corruption, cash flow rights can become irrelevant. This is an interesting point, which will be illustrated by the New Zealand case.

Addressing weak governance chains should be a foremost consideration prior to selling state assets (Dyck, 2001). In the Czech Republic[13] and Slovakia, insiders took control of company assets and the lack of financial reforms provided no incentives or obligations for managers to prioritise efficiency (Kikeri & Nellis, 2004). The dual issues of unique agency theory problems and poor governance chains were major contributing factors resulting in disappointing experiences in both countries. By comparison, Chapter Five will elaborate on New Zealand's solution to principal-agent concerns. The issue is also very important in the Japanese case as JP is such a vast organisation and, as Chapter Six will show, the issue of insider governance has created a number of problems.

Regarding financing, historical evidence from Japan indicates that the concentration of financiers can reduce opportunism and abuse significantly (Aoki, 1984). Debt can be a useful tool for reducing agency-based problems as it entails a range of commitments and obligations – many of which are legally enforceable and supported by an efficient debt collection system (Gibbs, 1993). However, where the major financier is a banking entity, over-lending and deferred corporate reforms can arise from relationship arrangements particular to Japan (Weinstein & Yafeh, 1998). Another complication arises regarding loans from state controlled banks as Li and Yamada (2015) find that SOE performance is negatively impacted from such loans. Consequently, whilst debt can be used to reduce certain agency issues, others may arise depending on the form the debt takes.

Share ownership is another area where solutions to 'grabbing hands' can be found. Dyck (2001) contends that concentrated ownership fosters proactive wealth creation and preservation, leading to lower tolerances regarding unfavourable managerial behaviour. Empirical data show there is a positive relationship between shareholder concentration, profitability, and market value (Claessens, Djankov, & Pohl, 1997). Further studies concur with these findings but note that mutual funds may not be as instrumental to improved performance when compared to private

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[13] This was a voucher-based privatisation.

shareholders (Claessens & Djankov, 1999). Shareholder concentration can also reduce information asymmetries between agents and principals (Hill & Snell, 1989) and large holders of equity can leverage their voting rights to dilute managerial power and discretion (Boeker, 1992).

Concentrated ownership, however, can counteract the political objective of more diffuse public share ownership. Nevertheless, where stronger legal protections exist, shareholdings are more diffuse (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998). Also, in developed countries, the accounting practices and final market valuation of share prices show little or no difference for firms with concentrated owners and firms with diffuse owners (Holderness & Sheehan, 1988). Hence, due to stronger corporate governance, many of the benefits of concentration can be achieved with a relatively small proportion of equity (Dharwadkar et al., 2000). Ultimately, it appears to be the release of shares to an ill-prepared regulatory environment which produces the incentives that lead towards the failure of privatisation. Concentrated ownership of JP, however, may be difficult to achieve given its size and prospective buyers may be faced with requirements (such as universal service provisions) that other private entities are not burdened with. The possibility of universal service provisions and the state of the regulatory environment may well influence the attractiveness of JP as an investment alternative and these aspects form components of the simulation.

Revisiting foreign ownership, dominant foreign ownership is argued to be optimal as it minimises both traditional and unique agency issues (Dharwadkar et al., 2000). Foreign ownership, full or partial, is one of the most effective methods of severing ties to vested interests (Dharwadkar et al., 2000; Djankov, 1999); given that this severance was one of Koizumi's primary aspirations, the debate regarding foreign ownership arose several times and, as mentioned previously, is included in the simulation.

Closely related to foreign ownership is the concept of the 'golden share', which is prominent among strategic assets (Megginson & Netter, 2001) and became part of the discussions surrounding JP. Such shares provide the state with veto powers against takeover bids and can become an issue if a prospective bidder is foreign. 'Golden shares' present a risk whereby a small amount of political pressure can have significant effects on the outcome of privatisation.

3.5 Issues in Japan and their Relevance to the Privatisation Literature

From the preceding discussion we can see that the privatisation literature identifies a number of issues, these are present to varying degrees within both of the cases compiled in this study. The following section, however, focuses on Japan and provides more case-specific details that illustrate how the previous concepts apply. The reason for doing so is that it begins the process of identifying the component issues that will become the focus of the simulation[14].

3.5.1 Organisational structure and reform

The Japanese postal system faces a number of issues surrounding its upcoming post-reform structure[15]. One of the major concerns is the prospect of continuing cross-subsidisation. As Maclachlan (2006) points out, the original intention was to divide the postal bank into ten regional entities, similar to Japan Rail's four units, who would then compete with one another. Resistance forces, however, successfully lobbied for a single unit, which makes cross-subsidisation easier to maintain (Maclachlan, 2006).

Post office closures are also a sensitive issue. Liberal Democratic Party (LDP) members have strongly lobbied for the continuance of universal service, arguing that the postal system and associated postmasters play an integral part in Japanese society. The postal lobby used this as leverage and was able to enshrine universal service into legislation (Maclachlan, 2006). Baumol (1993) notes that governments sometimes compromise as institutions such as the post office are often expected to serve all citizens.

In 2007, Heizo Takenaka, Minister of Postal Privatisation, stated that approximately 60%-70% of postal operations were supported by the financial business units (Ministers criticize DPJ plan on postal savings fiscal reforms, 2005). Unit separation and charging fees for counter services to all organisations, government owned or not, would make such operational subsidisation more apparent and ideally remove it (Porges & Leong, 2006).

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[14] See Table 8-1 (p.250) for the complete list and definition of issues that are simulated.

[15] Post-reform structure meaning the state of the group after government shareholdings have been sold.

Lobbying from certain members of the LDP and the Democratic Party of Japan (DPJ) weakened reforms. Their goals were to prevent post office closures and to avoid privatisation of the postal bank[16]. In order to achieve these goals they pressured Koizumi to allow Japan Post Service Co. to buy back shares in financial services units once they had been sold (Porges & Leong, 2006). The government was therefore able to re-establish indirect cross-shareholding and cross-subsidisation once initial obligations had been met. This contradicts Chisari, Estache, and Romero (1997), who assert that transferral of control is more effective if combined with liberalising regulation and a commitment to equitable distribution of economic utility.

Many in the postal lobby see privatisation as a loss of cultural values (Maclachlan, 2006; Porges & Leong, 2006) and the LDP attempted to block foreign share ownership altogether (Porges & Leong, 2006). Eisenhardt (1989a) argues the appointment of outside directors often produces better results, primarily due to the separation from special interests. Megginson and Netter (2001) also noted similar results. A takeover bid with a foreign element may therefore be preferable but given the strength of the postal lobby this seems doubtful.

Japan appears to suffer from 'political xenophobia'; the LDP further attempted to block foreign ownership in banking and insurance arms but were thwarted by commitments to the World Trade Organisation's General Agreement on Trade in Services (Porges & Leong, 2006). Foreign ownership in privatised Japanese organisations is sparse, making up approximately 1% of all shareholdings in the Nippon Telegraph and Telephone Corporation (NTT) [17] (Bortolotti, Siniscalco, & Fantini, 2000) and about 17% of Japan Rail East (I. B. Smith, 2003). As shareholder wealth-based ideologies have encouraged Japan Rail East to successfully revise their corporate strategy (I. B. Smith, 2003), it seems short-sighted to attempt to disincentivise foreign investment in JP. Evidence shows that the Japanese government has previously intervened in privatisations, such as Japan Rail (Mizutani & Nakamura, 1996). Baumol (1993) and Chong and Lopez-de-Silanes (2002) argue that government disassociation is preferable but in the case of Japan, it seems unlikely. JGB purchases and the role of the post office in the Fiscal Investment and Loan Programme present one of the greatest temptations.

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[16] A key purchaser of Japanese Government Bonds.

[17] NTT is Japan's former state telecommunications enterprise.

Megginson and Netter (2001) state that incentive alignment issues can arise if government retains a degree of control over corporate finances; Koizumi himself wanted responsibility to rest with the private sector and not the bureaucracy (Maclachlan, 2006)[18].

3.5.2   Competitive environment and regulatory issues

Porges and Leong (2006) state that creating a 'level playing field' is inherently difficult as it requires balancing competition and universal service obligations. Bias on either side may result in either a privatised monopoly or an organisation so constrained that it may ultimately need re-nationalisation (Porges & Leong, 2006).

Additionally, the postal lobby [19] exerts intense pressure to influence members of the LDP and the DPJ. One example is the legislation surrounding 'special' and 'general' correspondence. Special correspondence could be approximated to courier services, where licensing regulations require one of the following conditions:

1. combined dimensions exceed 90 centimetres,
2. the package weighs at least four kilograms,
3. delivery is to be within three hours, or
4. postage must be more than JPY 1,000 (Porges & Leong, 2006).

This market is relatively insignificant to JP, accounting for approximately 13.8% of items delivered in fiscal 2007 (Japan Post Group, 2007). General correspondence however accounts for roughly 85.9% of all items handled (Japan Post Group, 2007). Here, the postal lobby effectively barred entry through punitive licensing requirements (Maclachlan, 2006).

One of the most prohibitive regulations requires applicants to establish at least 100,000 post boxes nationally (Maclachlan, 2006). Sympathetic parties claim that monopoly status needs to be maintained in order to maximise economic welfare, coincidentally creating the conflicting goals cautioned against by Megginson and Netter (2001), and Shleifer (1998). Furthermore, the case of Telecom New Zealand shows decreasing prices and rising consumer surplus *due* to competition, not

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[18] Chapter Six shows that future administrations did interfere with postal accounts.

[19] This is an umbrella term covering postmasters, patron politicians, postal labour unions and other vested interests.

despite it (Ross & Bamber, 1998). The presence of firms who would otherwise express interest in general correspondence also suggests it is a contestable market. Unfortunately, outcomes in imperfectly contestable markets are determined by actual competition rather than potential (Martin, 2000). This suggests that the regulations are masking other concerns. The presence of the postal lobby and their political influence is therefore an important issue and features prominently in the simulation.

Other areas where the regulatory and competitive environments have been skewed include the LDP's reduction of tax payable on fixed assets by JP and its application for consumption tax exemption (Porges & Leong, 2006). Concessions such as these will likely result in an environment that reduces reform efficacy.

Previous privatisations produced ineffective regulations and poor competitive elements. Entry into telecommunications, airline travel, and electricity has been restricted and consumer welfare consequently suffered (Furukawa et al., 1995). Additionally, there appears to be an unfavourable spectrum of outcomes concerning relationships between corporate management and regulators. Either the two sides have shared conservative attitudes, stifling change and innovation; or have exhibited conflicting attitudes causing delays. Cross-subsidisations have continued and competition has been stifled[20] (Furukawa et al., 1995). As Chapter Six will illustrate, all of these points also appear in the case of JP.

Japan's experience of deregulation is hampered by unclear objectives and a reluctance to adopt a trial-and-error approach (Furukawa et al., 1995), leading to a predisposition to maintain the status quo. Referring to Baumol (1993) and Chong and Lopez-de-Silanes (2002), the aversion to revising regulations once installed limits 'regulatory risk' but also raises the possibility that whatever regulations are enacted will favour the incumbent. These are particularly relevant points as the simulation is designed to estimate whether the status quo will endure and if JP will be favoured. Megginson and Netter (2001) claim that market solutions lead to socially preferable outcomes but given the resistance in Japan, the inefficiencies produced by the postal system's current form will be difficult to reduce.

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[20] Examples include not allowing interconnects to the NTT network for long distance calls and banning of strategic pricing to persuade customers to switch providers.

3.5.3 Political issues and vested interests

A key factor of the postal lobby is the connection between postmasters and patron politicians. Postmasters use their *chiensei*[21] to muster political support for their electorate's candidates. In return, postmasters are awarded with prestige, financial rewards, and other benefits (Maclachlan, 2006). This system is entrenched[22] and perpetuates conservative attitudes supporting the status quo.

Vote gathering is subject to performance appraisal; should a postmaster fail to reach targets, results are publicised and benefits lost (Maclachlan, 2006). This is a manifest example of some of the issues that Dyck (2001), Eisenhardt (1989a), and Megginson and Kay (2000) described relating to poor governance chains and the effect of insider manipulation upon reform.

Such relationships are not limited to postmasters. Support businesses that service postal needs[23] are awarded contracts by the Ministry of Internal Affairs and Communications and granted exclusive rights to service regional post offices. It is not uncommon for the senior managers of these support companies to be retired Ministry of Internal Affairs and Communications bureaucrats (Maclachlan, 2006). This system of *amakudari* strengthens the postal lobby as privatisation would reduce economic rents realisable to outgoing bureaucrats.

Furukawa et al. (1995) also noted the tendency for Japanese bureaucracies to maintain the status quo, ostensibly for self-preservation. In other cases such as the United States and the United Kingdom, regulatory offices were disbanded once their purpose had been fulfilled, yet in Japan corresponding agencies were essentially left intact after reforms had been delivered (Furukawa et al., 1995). This is exacerbated by language phrased as guidelines and indications rather than concrete statements. Additionally, the system of checks and balances can be more easily corrupted where an industry is administered by a single ministry (Furukawa et al., 1995).

Shleifer and Vishny (1994) make two important assertions regarding political benefits: monopolies tend to be large, and loss-making organisations can be valuable to politicians who maintain them. With respect to JP, Dyck's work on governance chains is exemplified here as the lack of appropriate accountability

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[21] Connections to the local community.

[22] Many postmasters pass on their position through bloodlines.

[23] Examples include suppliers, ATM maintenance, and cleaning services.

produces a set of moral hazards. JP booked a net loss of ¥814bn in fiscal 2006 (Japan Post Group, 2007), predominately from a lack of performance-based incentives (Maclachlan, 2006). At the inter-business level, contracts for public works are funded through government bonds purchased by JP and *amakudari* positions exist both in the appointed construction companies and JP; a relationship Koizumi labelled the 'iron triangle' (Mishima, 2005).

Benefactors of this arrangement argue that universal service and other social benefits are the result of a state-run system. They contend that deposit insurance, reduced rates for newspaper and magazine delivery, house calls to the elderly and infirm, and universal service would deteriorate under privatisation (Maclachlan, 2006). The postal lobby expounds JP as the embodiment of traditional Japanese culture and virtues[24], and privatisation for the sake of profits would be a terrible cultural loss. These points formed some of the key arguments the postal lobby used to gain public support (Maclachlan, 2006).

3.6 Potential Difficulties for Reform

Koizumi foresaw postal privatisation as a way forward, particularly so with respect to dismantling the aforementioned political issues and vested interests. Yet despite arguments for change and Koizumi's political will, several factors may contribute to making reforms harder to implement.

In terms of economic difficulties, one problem is the state of competition within the financial sector: private banking is highly competitive, creating lower spreads and generating poor risk-return ratios (Takenaka, 2007). Low spreads reduce the ability to provision against high levels of non-performing loans. Privatising JPB into this market with its attendant advantages may destabilise the current equilibrium as it would seek to reduce exposure to government debt.

Furthermore, disposing of government debt will create disturbances in the market itself (Takenaka, 2007). The policies and incentives ensconced in the postal system were designed to attract public savings and thus provide the state an avenue for targeted credit (Takenaka, 2007). Targeted credit creates poor incentives regarding fund management and can threaten the health of the financial sector (Caprio et al., 1993). As a private bank, JPB would likely seek higher profits and

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[24] Although the post office is in fact based on the British system and the loudly lauded services only appeared after initial calls for reform began to surface (Maclachlan, 2006).

less exposure to government debt (Vollmer, Dietrich, & Bebenroth, 2009). New profit-centred objectives would reduce the pool of savings national and regional governments have access to, causing difficulties for regional authorities who are largely dependent on federal grants, subsidies and loans (Jones, 2003).

Curiously, despite a stagnant economy, there is not a wide call for reforms (Takenaka, 2007). Many of the true costs of the recession have not been felt by the public due to numerous policies to maintain employment. Wood (1995) demonstrates that in New Zealand, a sense of crisis was an important catalyst in driving reform. Without this perception, complacence and inertia can take hold and thus make reforms harder to implement.

Moving on to a more political focus, other than the previously mentioned postal lobby and the barrier they represent to privatisation, another very powerful lobby group is the construction lobby. The construction industry employs about 10% of the workforce and public works account for most of the transfers from national to regional governments (Child-Hill & Fujita, 2000). In addition, subsidies to regional governments are distorted towards public works (Jones, 2003). Construction officials who go into politics tend to do well, and *amakudari* postings are common (Child-Hill & Fujita, 2000). Most of the funding is provided through JGBs and with future funding uncertain it is quite likely that this group will strongly resist reforms. Incidentally, Peng (2002) notes that policies are forged in LDP councils, not in cabinet, and such councils are often populated by interest-representing members. These factors may implicitly affect the initial setting of the simulation by creating a stronger 'resistance bloc' that will seek to stall reform efforts.

3.6.1 Potential difficulties in applying New Zealand reforms

Whilst the above are general difficulties towards implementing reforms in Japan, there are also particular complications in applying New Zealand-style reforms. It is important to highlight these as there are several parallels between the New Zealand reforms and the proposals generated by the Koizumi administration.

With respect to contracts, a strong legal system with a well-developed method of defining and enforcing contracts is important (Caprio et al., 1993). However, Japan's index value in contract enforcement is significantly weaker than New Zealand's (The Heritage Foundation, 2009a, 2009b). Contracts in Japan are written in more general terms and the legal system is not as suited to business

litigation. By itself, this may not be cause for concern but—as Chapter Five will show—New Zealand's approach was strongly based on the principle of contractualism and therefore expecting the same outcomes in a weaker environment may be misguided.

Likewise, where corporate governance is contract based, Schick (2006) argues that traditional public service values suffer as shirking may occur if an individual's responsibilities are not specifically stated. It is plausible therefore to suggest that privatisation based on contractual relationships may lead to the exchange of one form of economic waste (traditional public service inefficiencies) for another (lost productivity through non-specified obligations). This would not alleviate the moral hazard syndrome as identified by Child-Hill and Fujita (2000), but rather present it in a different guise.

Schick (2006) raises another point: contracting is not costless and as Japan's courts are said to be less effective than New Zealand's, the costs of such reform may be higher. On a more theoretical note it should be stated that every part of New Zealand's reforms were designed to strengthen contractual relationships (Schick, 2006). The New Zealand experience draws on transaction cost economics (TCE), as institutions arose as a result of seeking the most efficient governance structure (Groenewegen & De Jong, 2008; Williamson, 2000). However, examining the Japanese postal system under an institutional lens, it could be argued that TCE is not the most appropriate model to apply since its assumptions are not firmly met. Rather it appears that the multiple evolutionary stable equilibria view (Kingston & Caballero, 2009) describes the Japanese situation more accurately. If the conditions for TCE are not met, gains from reforms whose foundations are based upon a solid contractual understanding of obligations and ability to enforce them may be limited.

New Zealand-style reforms are unsuitable where shortcomings in a country's management systems exist (Schick, 2006) and it may therefore be imprudent to directly apply them to JP given the corruption of the organisation (Postal service rife with corruption, 2004). Schick asserts that when one's employment depends upon interpersonal connections, informality thrives. Given that postmasters often inherit their positions, contractualism may be futile. Schick also states that informality is a part of culture and that it would likely persist even if the conditions that allowed it to flourish in the first place were eliminated. As close ties between government and business have been maintained since the Meiji Restoration, this bond would be very difficult to break. Finally, and on a

behavioural level, in order for contractualism to succeed, individuals need to be accustomed to an environment of contractual rules and have an ingrained respect for them (Schick, 2006). The Japanese postal system does not appear to be such an environment and may well prove to be resistant to the New Zealand-style contractualism.

Turning now to the matter of corporate governance (CG), Child-Hill and Fujita's (2000) 'moral hazard syndrome' describes some of the sources of inertia opposing reform. Japanese corporate governance uses the wider group to subsidise 'losers' and corporate failure is rare (Child-Hill & Fujita, 2000). As it stands, introducing the Anglo-American model of CG that encourages autonomous action may conflict with the established formal and informal constraints of the organisation. When such conflicts arise, it has been noted that the resulting shift in governance practices is less than intended (Williamson, 2000).

Other evidence shows that rapid disposal of non-performing debt, addressing minority shareholder needs, and implementing more difficult changes quickly can expedite changes to CG (Kikeri & Nellis, 2004). However Japanese models are in direct contrast: the 'ever-greening' of debt (Hwang & Schaefer, 2002), the tendency to overlook minority shareholders (Miyajima & Kuroki, 2005), and the primary focus on stakeholder wealth (Yoshikawa & McGuire, 2008) are all aspects of Japanese CG that would likely create resistance to what the literature advocates. Furthermore, New Zealand's reforms were designed to *replace* relationship-style meetings (Schick, 2006); Japanese systems *emphasise* relationship maintenance (Matsuura et al., 2003). Schick (2006) also contends that part of the New Zealand experience was to replace ideas of civic duty and responsibility with accountability for results. Were this model imposed on Japanese postmasters, it may affect their public standing which could result in resistance. These points are implicitly relevant to the simulation as many of the changes proposed were designed to alter the institutional environment and correspondingly CG practices. The reluctance to adopt such changes by way of path dependency is a factor that may polarise the inputs of 'resistance forces' in the simulation.

Japan's inclination is often towards stakeholder wealth maximisation (Takenaka, 2007). Whilst Miyajima and Kuroki (2005) argue that foreign holdings of shares in Japanese companies are rising, and McGuire and Dow (2009) suggest that this is pressuring the stakeholder wealth system, Yoshikawa and McGuire (2008) note that introducing change to Japanese CG is a slow process. Inertia stems

in part from the fact that corporate boards in Japan have a very low frequency of outsider participation, which is in direct contrast to New Zealand, and that acquiescing to foreign models of governance runs the risk of distancing the company from its local support base (Yoshikawa & McGuire, 2008). Put another way, the entrenched nature of Japanese CG, the observed preference to focus on stakeholders, and the lack of outsider influence at the board level, may dilute political action in reforming the postal system into an efficient, profit-orientated organisation.

Given the preceding points, altering the institutions of contractualism and CG in Japan to align more with New Zealand may be difficult. Nevertheless, there is a one particular facet of the New Zealand reforms that may assuage some of the concerns of reform opponents and allow greater overall reform to materialize. As Section Seven of the SOE Act relates to subsidisation of socially-oriented services, Chapter Nine will explore some simulated scenarios of applying this feature and discuss the impact it might have on outcomes.

Finally, one peculiarity of Japanese politics is the frequency the Prime Minister changes, which presents a heightened possibility of progress being undone. The review now draws attention to this phenomenon and other forms of political influence.

3.7   *Political Influences and the Effects of Political Flux*

Much of Koizumi's ability to produce change is attributed to his popularity. Declining support makes reforms harder to implement and the public has regarded the performance of post-Koizumi premiers with a certain amount of rancour (Peng, 2002). Furthermore, as bureaucrats share close ties to politicians, meaningful changes are more difficult to realise (Child-Hill & Fujita, 2000). Peng (2002) shows that reforms are often diluted and delivered piecemeal, and that the executive office has little ability to push mandates through public policy.

One of the major hindrances the reformer faces is that an individual's political lifespan is often much shorter than that of the vested interests he or she opposes. Even successful actions can later be undone, one example being the removal of Makiko Tanaka[25] from the Koizumi administration and subsequent reinstatement under the Abe administration (Peng, 2002).

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[25] A postal rebel.

Another issue is the autonomy and freedom afforded to lower levels of government. Government departments in Japan are often placed in competition for influence and enjoy considerable freedom (Child-Hill & Fujita, 2000). In this sense, the system operates similarly to a business where effective initiatives are commonly copied (Child-Hill & Fujita, 2000). Note, however, that the Japanese government is far less transparent than New Zealand's (The Heritage Foundation, 2009a). In light of such opaque autonomy, moral hazards pertaining to the effectiveness of reform may arise. Maclachlan (2011) also notes that the postal lobby has many representatives within several government departments and policy-making organs.

Despite stated intentions to use privatisation proceeds to retire debt, Kikeri and Nellis (2004) argue that there is often a powerful temptation to use receipts for other purposes. Given the Japanese government's penchant for public spending and the current macro-economic conditions it raises questions about the resolve of lawmakers[26]. Indeed, yielding to such temptation would be unfortunate as previous losses in real estate are likely to dampen the effects of fiscal stimulus in terms of the multiplier effect (Caprio et al., 1993).

These points are relevant to postal reform as following Koizumi's departure, the vested interests remained in place and given the avenues through which the postal lobby can re-engineer policy and the current macro-level concerns, it produces an opportunity to roll back some of the initial progress. Indeed, this is what the simulation will show: whether reforms can be advanced or if they will be turned back.

3.8   Chapter Conclusion

This chapter reviews a sample of the literature relevant to conducting a study of institutional change relating to postal reform in two countries. The literature shows that case studies can assist in theory development and offer empirical evidence. It also shows that case-based methodologies are common in IE studies.

Although the privatisation literature offers a wealth of knowledge, governments do not appear to be learning from others' mistakes and the reason why such experience is overlooked offers a potential avenue of research. The results of privatisation have also been shown to vary considerably depending upon state

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[26] The recent East Japan earthquake and accompanying reconstruction budget further complicates matters.

ideology. The distribution of economic welfare post-privatisation fosters considerable debate; some authors suggest gains should be equally shared, and some maintain that that those willing to bear the risks should be the primary benefactors. Continued government ownership of natural monopolies also presents disagreement. Some contend that private hands would be better placed at the helm, while others maintain that an appropriate combination of regulatory conditions would produce the same result.

Less divisive is the matter of preparing the regulatory environment; the works reviewed appear to agree that industry regulations need to be attended to prior to releasing state assets. The need for strong governance chains and the presence of outsiders is also an area where there is a high degree of consensus.

In terms of future strands of research, the literature commonly shows improved savings rates following financial deregulation. New Zealand's case does not appear to follow this pattern and examining the cause may prove valuable. The decision of when to privatise, at what rate, and over how many stages poses an interesting line of study. The influence of macro-economic conditions on the motivation to reform offers a third avenue.

Relating to the issues pursued in this study, the review discusses a number of points that also arise in both the New Zealand and Japanese cases - thus providing details offers empirical evidence for the respective claims. The review also highlights several points that will ultimately be incorporated into the simulation, being expressed in the component issues, player identities, or factors that may help determine initial player inputs.

In closing, the placement of this thesis in the literature addresses gaps identified in the New Zealand experience and establishes the context for institutional environment identification where the changes observed in New Zealand and changes predicted in Japan can be compared. Attention is now directed to the manner in which progress in both countries will be traced, including a primer on the use of simulation analyses.

4 Methodology

4.1 Introduction

This chapter describes the methods used in analysing the institutional changes of postal reform in New Zealand and Japan. The New Zealand experience is well documented although there are some gaps. Japanese postal reform, however, has yet to be concluded. In order to produce a post-reform institutional equilibrium for JP a model that simulates expected changes is needed.

Eight research questions were presented in Chapter One, repeated here for convenience.

1. What was the institutional environment in New Zealand prior to reforms?
2. What drove reform in New Zealand?
3. How were reforms implemented and how was resistance to reforms overcome?
4. How did the new institutional environment compare against the old one?
5. What was the institutional environment in Japan prior to reform?
6. What drove, and continues to drive reform in Japan?
7. How likely is it that full reforms will be implemented and will the resulting reform environment be internally consistent?
8. If the Japanese reforms are internally inconsistent, what insights can we apply from the New Zealand experience to overcome these problems?

Questions One through Four will all be answered in Chapter Five. Question One will be addressed by drawing on historical information – primarily from academic literature. Questions Two and Three follow the same pattern but where the literature is thinner they also utilise data from interviews with subject experts processed via the general inductive approach. With respect to Question Four, the new and old institutional environments will be compared by using the literature to create an image of the post-reform environment in the same manner as Question One. Performance indicators (profit figures and labour efficiency, for example) will then be applied to measure the differences.

The research questions regarding the Japanese case will be approached in much the same way. Chapter Six answers Questions Five and Six. However, as the Japanese case has benefited from considerable media coverage, media reports will be used to supplement the literature relevant for answering Question Five; the media reports themselves will be processed via the general inductive approach and the

core sentence approach. Question Six will be answered through a mixture of secondary and primary data: literature, media reports, and expert interview data. Question Seven will be examined in Chapter Nine by constructing a post-reform institutional environment from the outcomes of my simulation model[27]. The mechanics of the model are based upon the methods commonly used within multi-player multi-issue negotiations (discussed later). Finally, Question Eight will also be answered in Chapter Nine via an applied sensitivity analysis of the simulation where changes to player inputs will be made to establish how much of a change is needed to constitute a significant change in outcome.

What follows is a more detailed explanation of the specific methods employed in this study, beginning with a brief look at the overarching theory of institutional economics. The chapter then presents the basis for constructing a model for institutional change, how details will be gathered for both countries, and discussion of the simulation including its antecedents and overall structure.

4.2 Theoretical Background: Institutional Economics

IE is a specialised branch of economics that analyses the 'rules of the game' within society and the influence they have upon human interaction (Kingston & Caballero, 2009). Whilst it uses the same fundamental tenets as classical economics IE can produce more situation-specific analyses (Furubotn & Richter, 1991). An institution is a man-made constraint upon human behaviour (Kingston & Caballero, 2009). Informal constraints include norms and culture; formal constraints include rules, contracts, and laws (Kingston & Caballero, 2009).

IE draws from a number of spheres of economic thought including, but not limited to: agency theory, transaction cost economics, property rights, and evolutionary institutional economics. IE can be considered an eclectic science that covers a range of theories and employs a variety of analyses depending upon the research topic (Furubotn & Richter, 1991; Groenewegen, Kerstholt, & Nagelkerke, 1995; Klein, 1999).

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[27] Outcomes of the simulation can be found in Chapter Eight.

4.2.1 The differences between 'old' and 'new' institutional economics

As IE has advanced there has been an increasing divide regarding problem definition, explanatory variables, and methods (Groenewegen et al., 1995), resulting in the distinction between Old Institutional Economics (OIE) and New Institutional Economics (NIE).

4.2.1.1 Old institutional economics

The primary focus of OIE is to understand the process of institutional change, with little identification of individual actors within the institutional framework (Groenewegen et al., 1995). The underlying assumption is that at any given level of aggregation, behaviour as explained by economic theory is interdependent and therefore "non-univocal" (Groenewegen et al., 1995, p. 469). Regarding institutional change, OIE looks more at the change process itself than the influence of the institution, even though some institutions foster change whilst others discourage it (Groenewegen et al., 1995). Methods often include a multidisciplinary approach and whilst this creates a particularly rich picture, it can create issues regarding rigour (Groenewegen et al., 1995).

4.2.1.2 New institutional economics

NIE by comparison seeks to explain the institution itself through classical and neo-classical economic theories (Groenewegen et al., 1995). The role of individual actors is given much greater credence, with the belief that preferences in the real world can be influenced by incumbent institutions. For expediency, the utility maximising individual is the base unit of analysis and bounded rationality and opportunism are both key factors in determining behaviour (Groenewegen et al., 1995). Where OIE tends to be multidisciplinary, NIE leans towards the more individualistic and deductive economic lenses. Hypotheses are generated and historical examples are used to support them.

4.2.1.3 A pluralistic approach

North (1973, 1994) supports integrating these two schools of thought into a more pluralistic form of research. North's work uses the institution itself as a datum where the individual is considered to be a utility maximiser (as cited in Groenewegen et al., 1995) and argues that to produce optimal institutional

equilibria, scarcity and changes in transaction costs are the catalytic drivers of institutional change.

Interestingly, North notes that whilst these forces should produce efficient outcomes, there are two reasons why inefficient institutional arrangements may prevail: one resulting from a free-rider problem, and the second through conflicts of interest and differences in the bargaining strength of players (as cited in Groenewegen et al., 1995). He also notes this second point is sufficient to explain the existence of inefficient institutional equilibria in both the long and short term. In closing, Groenewegen et al. (1995) conclude:

> It is necessary to start the analysis with the institutional environment in which the actors are embedded. Only then the pressures toward efficient governance structures can be made visible and only then the set of alternative governance structures of which actors can choose become known to the researcher (p. 474).

This study conforms to the statement above and does not make a distinction between OIE and NIE; referring to the applied pluralistic approach simply as 'Institutional Economics'.

The appropriateness of IE as a theoretical background can be evidenced by citing some of its publications. Aligica (2006) shows that through institutional mapping, players can be identified and support or opposition to a particular issue can be clarified. Comparative studies are well suited to IE; noting the differing institutional environments where organisations conduct their activities has been used to determine whether certain lessons and experiences can be transferred effectively (FitzRoy & Acs, 1992; Hu, 2006).

Groenewegen and De Jong (2008) discuss the potential of two particular strands of IE analysis as explicators of institutional change, arguing that IE is a strong foundation in a multidisciplinary approach when uncertainty and conflict is high. Other studies use IE to examine what changes are occurring within a country and why it can take so much time to implement them (Blomström & La Croix, 2006). IE features in reform studies examining when certain institutional settings can be used by supporters or detractors to engender a shift in the status quo or preserve it (Schellenbach, 2007).

IE therefore forms the theoretical backbone of this study, the chapter now delves deeper into IE by discussing matters relevant for constructing an overall model for New Zealand and Japan's postal reform experiences

4.3   Issues in Modelling Institutional Change

As this thesis is a comparative study of institutional change, this section discusses the theories directly involved in creating such a model [28]. One complication that arises, however, is the fact that I have the luxury of viewing the New Zealand experience in hindsight where outcomes are known, but not for Japan. The proposed model for Japan therefore differs slightly as it must also develop a method by which outcomes can be estimated but otherwise follows the same progression of issues leading to reforms and eventual changes. The following discussion looks first at modelling institutional change from an overall perspective, and then in finer detail. The simulation, being a very large section, is detailed later in the thesis.

4.3.1   Modelling institutional change: A broad perspective

When examining institutional change, one of the most fundamental questions is 'what creates the drive for institutional change?' In answering this, IE provides two particularly important notions: preferences can change over time (Johannessen, 2008; North, 1995), and that performance is affected by institutions – most commonly through historical links and the political framework (Johannessen, 2008). In terms of evolving preferences, the impetus for change may derive from something as simple as no longer preferring the current arrangement. The motivation that drove a government to install protectionist policies, for example, may no longer apply if its domestic industries have reached a certain level of development (Johannessen, 2008). In terms of historical links, one of the most common is technological. Technology has a direct impact upon transaction costs and therefore performance (Johannessen, 2008). The problem, however, is that people often become 'locked-in' to the technology they are familiar with, and as the technology evolves (with the potential to reduce transaction costs) the current institutional framework becomes less appropriate (Johannessen, 2008). Further

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theoretical support is provided by North (2005), who notes that changes in relative prices are one of the most powerful motivators for social changes and that technology is a major cause of changing relative prices. At a high level of aggregation, the impetus for institutional change is therefore argued to be a result of some influence exogenous to the institutional environment that results in the incumbent framework becoming less efficient (Libecap, 1989; Ostrom, 2005).

Once there is sufficient motivation for change, the next question that can be asked is *how* change occurs. Within institutional change theory, Kingston and Caballero (2009) identify two high-order categories: a design-based approach, and an evolutionary approach. The former refers to new institutions that are purposefully designed and implemented (for example, in a political process), while the latter refers to a more gradual, less deliberate process. As postal reform in both New Zealand and Japan entails a raft of purpose-specific legislation, the design-based approach applies to this study.

Suppose for a moment that an exogenous parameter affects the institutional environment, which sufficiently motivates change and a new set of institutions are installed, for instance, via a designed-based approach. Two issues then confront the researcher: how to study the system at point 'A' and point 'B', and how to study the change mechanism between points 'A' and 'B'. Aoki (2000) denotes these issues respectively as the synchronic problem and the diachronic problem. More specifically, the synchronic problem relates to understanding the institutional environment at a point in time, and the diachronic problem relates to understanding how institutional change occurs. In doing so, Groenewegen and De Jong (2008) argue that TCE can address the synchronic problem, whilst comparative institutional analysis (CIA) can help address the diachronic problem.

With respect to TCE, the essential hypothesis is that the governance structure that minimizes transaction costs is the efficient one and will hold until an exogenous change renders it otherwise (Williamson, 2000). In terms of the synchronic problem, advocates of TCE therefore suggest an analysis of the governance structures present within the institutional environment as the theory argues that the most applicable governance structures will arise in relation to the current institutional environment (Groenewegen & De Jong, 2008). TCE, however, is not equipped to deal with institutional change when there is uncertainty: suppose that an external change prompts a shift in the institutional environment, without knowing what the future holds it is entirely possible that players may not be able to

select the efficient governance structures (Groenewegen & De Jong, 2008). Therefore, in the presence of uncertainty TCE is better used to explain what *is* and what *was*, not what will be[29].

Where there are two distinct equilibria to compare, TCE can be quite useful. Changes in transaction costs can be measured directly by observing differences in production costs, transaction costs, quality levels, labour efficiency, levels of technological innovation, and other such measurements (Groenewegen & De Jong, 2008). Groenewegen and De Jong (2008) also maintain that modelling with TCE can be adjusted to fit to both high and low levels of aggregation, presumably by adjusting the performance measures to suit. Nevertheless, by directly comparing the two equilibria with these transaction costs, the researcher can infer whether a change in the institutional environment has improved performance.

CIA, developed by Aoki (2000), looks at the process of shifting from one institutional equilibrium to another. It utilises a form of evolutionary game theory where utility-maximising players (technically cost-minimising) organise themselves and opt for institutional arrangements that minimise costs. As players interact with each other, they gradually come to share the same views and the system eventually reaches an equilibrium. It is particularly important to note that Aoki's application differs from traditional game theory as players are assumed not to have full knowledge of the objective structure of the game which therefore prevents the use of backwards induction (Aoki, 2000; Groenewegen & De Jong, 2008). Instead, players interact with each other over time, employing strategies from a set of alternatives; an equilibrium is reached once none of the involved parties has an incentive to change their strategy (Groenewegen & De Jong, 2008).

One key limitation of CIA, however, is its assumption of a smooth, gradual progress towards a new equilibrium through a steady learning process. In reality, political power plays and shifts in public support, for example, are wont to occur and this can result in 'bumpy' institutional shifts (Groenewegen & De Jong, 2008). In cases of design-based institutional change, the very nature of designing new institutions can be political and therefore warrants a different approach to determining expected outcomes. Accordingly, my simulation model is politically-based and allows for the influence of such effects.

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[29] For this reason, TCE is sufficient for the New Zealand case: being historical there is no need to predict its outcomes.

In summary, TCE and CIA are both useful theories within the field of institutional change. TCE allows for the comparison of two discrete equilibria and can be used to infer an improvement (or deterioration) in the institutional environment. However, it is not able to explain the process of institutional change as it does not describe the ideas and preferences of change instigators. Nor does it cover the tactics and strategies players use to foster change (Groenewegen & De Jong, 2008). CIA offers a contribution in this respect, but is limited because it is not designed to cope with political power play (Groenewegen & De Jong, 2008). Aoki himself also notes that game theory is, in all likelihood, unable to provide a complete theory of institutions. He argues that "to understand why one equilibrium is chosen and not others, we are required to make use of comparative and historical information and engage in inductive reasoning as well" (Aoki, 2001, p. 3). Groenewegen and De Jong (2008) also note that in cases of high complexity and uncertainty, a multi-disciplinary analysis can be beneficial. In such a setting researchers therefore need to examine history and apply an approach other than pure game theory. At the same time, the chosen method also needs to be able to incorporate the influence of political bargaining to overcome the shortcomings of CIA. This is why the thesis uses a multi-disciplinary case study analysis with a particular view to the historical information in both New Zealand and Japan, and develops a new approach for estimating the new institutional environment in the case of Japan.

4.3.2 Modelling institutional change: An operational perspective

One notion that continually surfaces in IE is path-dependency, that is to say, history matters as past actions influence future actions (Aoki, 2001; Blomström & La Croix, 2006; Groenewegen & De Jong, 2008; Johannessen, 2008; North, 2005). Since this study examines institutional change with an implied 'before' and 'after' state, and since time is linear (at least to the best of our understanding), it is logical to model institutional change as a linear process divided into a number of stages. The following therefore discusses the theoretical underpinnings necessary to construct such a model.

The first step is to define the institutions prior to reform. As mentioned earlier, North (2005) describes institutions as formal or informal. By definition, formal institutions are explicitly written down (contracts and legislation for

example) and thus identifying them is a simple matter. Informal institutions can be identified by examining the relevant literature, such as in Groenewegen and De Jong (2008) and Blomström and La Croix (2006), or through direct contact with knowledgeable individuals, such as in Maclachlan (2011). One minor complication is that institutions can evolve over time (Johannessen, 2008) and this may lead to confusion surrounding when to set the 'before' state. For a design-based approach this is less of an issue: new legislation, for example, comes into effect at a specific time and thus redefine at least the formal institutions at a distinct point. Pre-reform institutions could therefore be considered those to be in place prior to the application of new legislation.

The notion of institutional change implies that there are parties dissatisfied with the status quo, that is, the institutional environment is creating problems. Consequently, the next part of the model should examine the issues being created. In this regard, Johannessen (2008) argues that a 'historical causal process' is a useful tool. A historical causal process maintains that the cause of 'X' was 'Y'; recall that North (2005) argues that an exogenous parameter shift can render an institution inefficient or obsolete. In an environment which has been influenced by an external force, two further concepts that are important are 'cognitive legitimacy' and the 'pattern perspective of institutional change'. Cognitive legitimacy refers to what people take for granted: informally, 'the way things are done around here'. A cognitively closed system is less able to learn and adjust to the outside world (Johannessen, 2008). The pattern perspective of institutional change is based on a historical causal process where "thought and action structures can be maintained despite being unproductive, since our habits and historical attachments maintain and reinforce ways of being which are obviously not optimal" (Johannessen, 2008, p. 30). These patterns can be reinforced where cognitive legitimacy is low; one empirical example drawn from Groenewegen and De Jong (2008) shows that the issues in Nordic road management reform were exacerbated owing to a strong labour union insisting on maintaining the current system. Adding to the pattern perspective of institutional change, Blomström and La Croix (2006) also note that change is only likely to occur when a critical majority of individuals and organisations are convinced that the current framework can no longer meet expectations and that a viable alternative exists. In other words, the two components of incumbent institutions and issues arising thereof can be linked as follows: a change in the external environment causes the governing institutions to become less

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effective (historical causal process), this inefficiency can be exacerbated through continuing the same behaviours (pattern perspective of institutional change), which is in turn negatively reinforced as levels of cognitive openness decrease.

Suppose now that an external change has created a series of issues – a historical causal process. Johannessen (2008) maintains that explaining the stability of a system rests upon expectations, meaning that the failure to deliver on those expectations can undermine the stability of the institutional environment. Blomström and La Croix (2006) state that when an institutional environment can no longer address the relevant issues, a wider call for reform arises. Commons, in Kaufman (2007), concurs, arguing that individuals or groups will then seek to implement change through the courts or legislation. As institutions are human-devised constraints this directly implies that a series of proposed changes will have to be supplied and deliberated over (in a democratic system at least). In creating a model, one important point to note is that at this stage the causal process now transforms from a *historical* causal process to a *functional* causal process (if one does 'A', one will get 'B'). That is, up until this point, past events have driven the discussion; from here onwards, the process is driven by the expectation held by reform instigators that the proposed new institutions will alleviate the current issues. In other words, there are now three links in the chain: the failure of the institutional environment leads to a range of issues, which in turn drives reformers to propose changes to the system that must be negotiated over.

One of IE's major contributions is the notion of transaction costs. Johannessen (2008) argues that transactions costs in the political field are related to the establishment, maintenance, and change of power either within a system or between a system and its environment. Importantly, he also argues that "resistance and opportunistic behaviour may ensue when transaction costs and transformation costs are changed" (Johannessen, 2008, p. 29). Blomström and La Croix (2006) add that with respect to institutional change, some political groups may face loses to their wealth and/or power and therefore resist. North (2005) concurs, adding that some organisations' very survival may depend on maintaining the current institutional framework and will therefore apply resources to defend against any proposed change. With respect to institutional change theory relating to group decision making, Kingston and Caballero (2009) note that the vested interests fighting for the preservation of the status quo may themselves have been *created* by the very institutional environment they seek to defend. In the same strain of

theory, Kantor (1998) states that constituent groups will often lobby their representative politicians to change or preserve the rules and that these politicians are sensitive to their needs, but also face their own set of constraints and objectives. The implication of all these contributions to institutional change theory is that before a new arrangement can be settled upon, there will likely have to be a number of concessions and compromises applied to the proposals. In terms of operationalising such a claim, Ostrom (2005) suggests that institutional change in a group decision context is a question of the involved parties weighing the costs of benefits of a new system and generating a 'minimum coalition' – a majority vote, which is in itself very similar to Black's (1958) median voter theorem. From a modelling perspective this produces further linear stages in the sense that negotiations will (most likely) lead to some dilutions and also gives rise to questions of how resistance can be overcome.

Suppose then, that a negotiation regarding the implementation of a new set of institutions takes place. Assuming the proposals have not been entirely defeated, the manner of implementation must be considered. Institutional change theory suggests that changes are often delayed until an implementation strategy has been decided on; two common outcomes are a simultaneous reformation of all interlocking-institutions, or a sequential process that can result in a transitory period which is internally inconsistent (Blomström & La Croix, 2006). Blomström and La Croix (2006) also assert that a country is more able to reform if the reformers and society understand that the proposed institutions are superior to the existing ones. The theory also maintains that actors will be more likely to adopt new ideas or alter preferences if they are unhappy with the current situation (Groenewegen & De Jong, 2008). The preceding points could therefore suggest that negotiations then lead to a series of implemented reforms agreed upon by a set of players who are trying to maximise their individual payoffs (Groenewegen & De Jong, 2008). These reforms then alter the institutional environment, at which point it can be argued that an institutional change has occurred and a comparison between initial and final stages can be made.

4.3.2.1 Theoretical overlap

As the theory of institutional change can cover a wide range of contexts it has the potential to overlap with a large number of other theories. Since this study examines the economic issues of postal reform relating to institutional change

through a design-based process, there is considerable overlap between institutional change theory and privatisation theory. In this application, therefore, institutional economics and institutional change are the guiding overall theories with the fundamental hypothesis being that an inappropriate institutional environment leads to reforms, which leads to a new environment. Nevertheless, there will be implications for elements of privatisation theory since the New Zealand and Japanese experiences are discussed in considerable detail. It is not my intention to directly 'test' these elements of privatisation theory but as details are provided through the case study, they provide contributions of empirical evidence to the privatisation literature. A second area of theoretical overlap occurs in the simulation stage of the model, which draws and extends upon the theory relating to multi-player multi-issue negotiations[30]. For the moment, however, attention is now drawn to the overall models for the two countries.

4.4   The Model for New Zealand

From the preceding section, we can now illustrate the models that plot the course of both countries studied. See Figure 4-1 for New Zealand's.

Figure 4-1 Institutional change in New Zealand
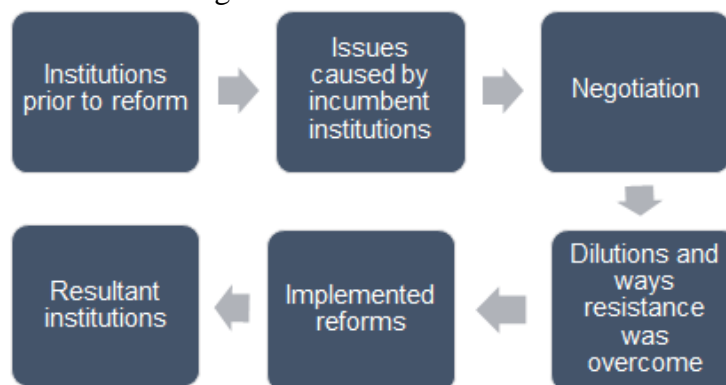
The model assumes each element shares a causal relationship with the next. That is, the incumbent institutions are argued to cause the issues, just as the drive for reform and negotiation is caused by the issues of the initial institutional environment. Factors giving rise to initial conditions are considered exogenous.

A synthesis of the literature discussed in Chapter Two and Chapter Five provides information for describing much of the New Zealand experience. However, significant gaps appear: whilst there are papers on institutional change in New

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[30] See Section 4.6, p. 66.

Zealand, how resistance to reform was overcome has largely been neglected. The matter of why NZP was corporatised but never privatised is another question overlooked thus far. Additionally, considering NZP as an example of institutional change to which Japan is compared also produces questions that, when examining New Zealand in isolation, are not necessary to ask. The interview responses will therefore address these gaps.

4.4.1   Using interviews with subject experts

Expert interviews are a well-established method of gaining insights in economics. Bezemer, Stanikunas, and Zemeckis (2006) use them to design an ordered probit model that addresses agricultural reforms in Lithuania. Other reform studies using interviews include Donner (2010), Gugushvili (2009), Wilder (2009), and Lukauskas and Shimabukuro (2006). Expert opinion features in longitudinal studies focusing on inter-temporal labour market dynamics (Weymann, Reinhold, & Matthias, 1999). Song (2011), conducts a thematic analysis of Chinese retail brands using 16 retail experts to study investment strategies.

Expert interviews commonly feature in IE. Hirschauer and Zwoli (2008) develop a game-theoretic approach for reconstructing incentives for players in a setting of economic misconduct. They state that expert interviews are vital for determining the technical processes and business practises used in principal-agent models. Perkmann (2006) uses interviews to better understand the institutional realms of Southern Italy. Lange (2009), studies institutional embeddedness in Germany and England where expert interviews improve understanding of the institutional environment.

As mentioned earlier, the major shortfall in the literature concerning the New Zealand experience relates to reform resistance and how it was overcome: an extensive search shows very few insights and expert participants therefore helped to illuminate this otherwise dim area of knowledge, thus answering research Question Three. With respect to the drive for reform (research Question Two), the literature describes the goals of the state but not their respective importance. These unanswered matters were therefore included in the interview questions (see Appendix A for questions). Interviews were conducted on a standardised open-ended basis. Whilst standardisation can complicate coding, it permits similar answers amongst respondents to be collated and improves the validity of the data.

The following criteria for expert selection were inspired by and adapted from Whitefield et al. (2007). Interviewees had to satisfy one or more of the following:

1. their knowledge of NZP was referred to in the literature,

2. they were employed by an academic institution and had published papers surrounding the reforms,

3. they held a position of authority within the government or NZP itself and were involved in the transition, or

4. they were referred by an interviewed participant satisfying any of the first three criteria.

Four experts for New Zealand were interviewed between July and August, 2012. Another important point to note is that the simulation model does not apply to New Zealand, only Japan[31]. The experts called upon to assist with the New Zealand experience (research Questions One through Four) were different to the experts involved in the Japanese side of the thesis. Similarly, the New Zealand experts were not involved with matters relating to the simulation. Owing to confidentiality clauses in the ethics approval, I am unfortunately unable to disclose the names of participants.

4.4.2   Collecting and processing interview data

Interviews were conducted in person, or electronically when physical meetings were impractical. Regarding the processing method, this study used the 'general inductive approach', described by Thomas (2003). The technique is widely cited and outputs are very similar to grounded theory approaches (Thomas, 2003). Material from interviews was transcribed from digital audio files and through multiple readings, emergent themes and categories[32] were revealed and condensed. Initial sweeps often produce many categories but further passes enable subordination and combination into higher order categories. Not every piece of text has to be coded. As with other qualitative methods, the determination of codes is not essential prior to data collection. Rather as the reading progresses, excerpts are coded under their associated themes as they become apparent.

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[31] See pages 65 and 94 for specific details on how experts for Japan assisted with this thesis.

[32] With regards to the general inductive approach, the term 'category' is interchangeable with the term 'factor' in explaining phenomena.

The general inductive approach often involves reading entire transcripts at once. However, the semi-structured nature made it possible to analyse specific questions one at a time, which is advocated by Atkins (1984). After multiple readings, when coding is completed and categories finalised, results are then counted and tabulated (Atkins, 1984). Thomas (2003) prescribes that each category be labelled and supplied with a commentary that describes it and its meaning. Excerpts from the raw data that support this interpretation are then inserted.

4.5   The Model for Japan

The model describing Japan's experience follows the same path as the New Zealand model although the resulting post-reform institutions will be determined from the simulation. In very brief terms, the simulation examines key issues and the interactions of parties involved in reform negotiations. Expert surveys, interviews and media reports provide the data needed for the simulation. By phrasing the issues in terms of reform proposals, the probability of each issue's success can be determined as well as an overall probability of success of the reform proposal. Figure 4-2 illustrates Japan's model.

Figure 4-2 Progression of institutional environment in Japan
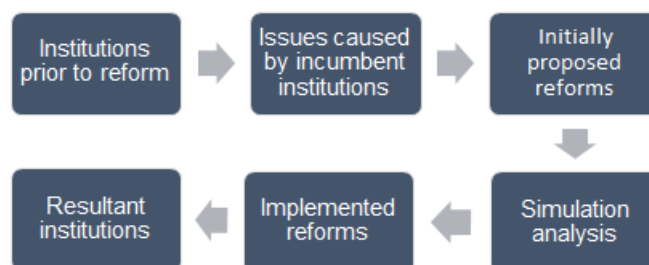
4.5.1   Tracing the course of reforms using media reports

Postal privatisation enjoys considerable (if sporadic) media attention. These reports are a valuable source of information for tracing overall progress as well as highlighting the issues most discussed by significant actors including their relative stances. These secondary data provide an informative background in addition to aiding preliminary issue identification, which were vetted through expert opinion.

Media reports are a practical tool in economics. Shama (1996) uses newspapers to acquire information on companies and identify interview participants. Hale (2010) identifies players, issues, and their relative importance through newspapers. Heppell, Crines, and Nicholls (2010) analyse newspapers to track

voting behaviours of Labour parliamentarians in England. Data from media reports surrounding issues and positions also form the crux of the work done by Helbling and Tresch (2009) and Kriesi et al. (2006). Media reports are also timelier than academic journals.

Media reports serve two purposes in this thesis. Firstly, they produce a chronology of major events that shaped reforms from 2001 and thus contribute to answering Questions Five and Six. Secondly, they show vocal players and issues and therefore assist in setting up the simulation in Chapter Eight. Interviews with subject experts were used to triangulate the data and provide a more illuminating picture of the actors, connections, and pressure points regarding privatisation.

Regional newspapers were eschewed to avoid parochial biases. The two primary sources were the Daily Yomiuri and the Nikkei. Some information was also drawn from Kyodo News and the Jiji Press. Articles were selected by having the words "Japan Post", covering April 26, 2001[33] to March 21st, 2014. In total, 1,913 individual articles were retrieved from the Factiva database and analysed for references to issues, actors, and the disclosures of those actors. Editorials were referred to only when the article made a direct quotation from a political actor, or some other objective statistic.

Data were processed using the same principles as the general inductive approach in conjunction with the core sentence approach (see page 91). Individual articles were coded by issues and the actors who discussed them. Individual actors were then subordinated to their representative factions. Factions were identified by published membership or support and triangulated through expert opinion. Specific issues formed subcategories and after successive passes were combined into dominant, upper order categories, which were then included in expert interviews for verification.

4.5.2   Expert interviews in the Japanese experience

Similar to the New Zealand experience, the literature contains gaps that benefit from the insights of enlightened individuals. Interviews serve a number of purposes in this study. Firstly, they were used to generate a better understanding of political dynamics, specifically between different political administrations and therefore contribute to answering Questions Five and Six in Chapter Six. Secondly,

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[33] The date when Koizumi took office.

they were used to validate the allocation of a particular actor to a faction. Finally, they were used to confirm the validity of issues identified from the media reports and determine whether any other primary issues had been omitted – therefore contributing to the simulation in Chapter Eight. Expert *surveys* (discussed later) were then used to gather the actual input values for the simulation.

Interviews were conducted in the same manner as the New Zealand interviews, using English or Japanese depending upon the preferred language (see Appendix B for questions). The criteria for expert selection were also the same, replacing "New Zealand" with "Japan"; three experts were interviewed between May 2013 and January 2014[34]. Where factional membership was incongruent with the media reports, expert judgements were given preference. Similarly, where issues not suggested by the media analysis were uncovered, these were included in the input survey.

4.5.3   Identification of the elements prior to simulation

Japan's economic growth since the 1970s has been examined by numerous scholars. As such, a large body of work describes the formal and informal constraints; incumbent institutions relevant to JP can therefore be drawn from the literature, as can the resulting issues. Koizumi's intended reforms are widely available through a number of channels, both public and academic. Accordingly, all the information necessary to summarise the initial institutional environment in Chapter Six is provided by the literature. We now move on to a discussion of simulations and how my model is intended to process negotiations and reveal the resulting institutional setting.

4.6   Introduction to Simulations

The term 'simulation' is broad and with increasing computing power and package providers, the pervasiveness and appeal of simulations are growing. Fundamentally, a simulation is an abstract representation of a real-world system that can develop and evolve. Key features include the ability to create an artificial history of events, allowing the user to probe alternative scenarios through parameter adjustments.

Simulations can be tasked to almost every field of study and feature extensively in economics. Examples include: asset price movements (Danielsson,

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[34] Four individuals were actually interviewed, however, one later opted to withdraw from the study.

1994), voter preferences on education subsidies (Borck & Wimbersky, 2014), the role of patrol vessels in fishing waters (Edwards, Hillary, Hoshino, Pearce, & Agnew, 2011), changing inequality and growth preferences (Alesina, Cozzi, & Mantovan, 2012), transport policy reform (Kickhöfer, Grether, & Nagel, 2011), organisation size (Garibaldi, Constantini, Donadio, & Viarengo, 2006), and tax reform (Boeters, 2013).

Economic reforms also have been studied through simulation. Examples include electricity emissions (Fuentes-Bracamontes, 2012), outcome and opportunity equality reforms (Ekmekci, 2013), intergenerational welfare and benefit analysis (Oguro, Shimasawa, & Takahata, 2013) and financial sector reform (Saqib & Waheed, 2011) to name a few.

Because of such wide-ranging applicability, the methodology surrounding simulation modelling is diffuse and relatively loose. This is partly because model complexity can vary widely; some may have a dozen equations, others may have thousands if not more. Another reason for the diversity is the proliferation of software packages that use their own specialised coding languages. As an illustration, among the studies cited above Alesina et al. (2012) use Matrix Laboratory, Kickhöfer et al. (2011) employ MATSim, Böhringer, Wiegard, Starkweather, and Ruocco (2003) describe their model with the General Algebraic Modelling System, and Ekmekci (2013) utilise the NetLogo framework.

New models are frequently inspired by, based upon, and adapted from previous studies. Thus, as with many other lines of research, accuracy and reliability steadily improve as our ability to approximate the real world becomes more sophisticated.

Simulations confer a number of advantages, not least of which is the ability to manipulate time steps to compress or expand dynamic shifts in the variables. Sensitivities can be explored by experimenting with individual variables or clusters. One primary disadvantage, however, is the specialist skills required. This becomes more burdensome when communicating a model, particularly so in terms of the actual coding where it may be necessary to paraphrase the structural mechanics in more common syntax. With larger models, feedback loops and causal links may become particularly long, making tracing the root of anomalies potentially difficult. Some systems also may not allow for data errors, implying that the quality of data collected is particularly important.

Nevertheless, the presence of simulations in economic studies establishes a strong precedent for justifying the model developed here. More specifically, as my model represents an expansion of an existing method, it is necessary to provide a justification of the underlying principles and discussion of the work which has inspired it.

4.6.1 Justification for a new approach

As noted earlier, CIA looks at the process of establishing a new set of institutions. Aoki (2001) uses an evolutionary form of game theory to solve the problem as he maintains that pure game theory cannot offer a complete understanding. Nevertheless, his model presumes a smooth gradual learning process and does not account for political power play (Groenewegen & De Jong, 2008). By comparison, my model estimates institutional change as a direct consequence of political negotiation. As a result, it requires an alternative that is responsive to political power play and circumvents some of the limitations in applying game theory to this situation.

4.6.1.1 Game theory

Game theory as it is known today was founded in the mid-twentieth century by notable mathematician John von Neumann. Initial forays examined zero-sum games, but more recently studies have looked at competitive and cooperative games (Dixit & Nalebuff, 2008). Irrespective of type, one common thread that permeates all games is the principle of interdependence: that the outcome for each participant rests upon not only their own choices but the choice of other participants (Dixit & Nalebuff, 2008).

In terms of deploying a solution concept to 'solve' the game, backwards induction is a common mechanism. It is used in extensive form, repeated, and sequential games where one identifies the best strategy for the last player and progresses backwards through time, alternating between the players and determining their actions before arriving at the game's beginning – effectively tracing the Nash equilibrium of each subgame to the first (Shor, 2006). Sub-game perfect equilibrium is an extension of this idea which also applies to finite games. More recently, the theory has been developed to cover other situations where games may be repeated indefinitely or there is some probability that the game may continue (J. Tressler, personal communication, May 24, 2016). The state-of-the-art is therefore wide and encompasses many potential scenarios.

Nevertheless, game theory has certain limitations. With respect to rational behaviour, Pettit and Sugden (1989) argue that while players may act rationally in the moment, it does not necessarily follow that a player will continue to act rationally in later rounds. This notion has indeed been shown to appear in empirical studies of repeated prisoner dilemma games where players *cooperated* as opposed to following the equilibrium strategies (Htun, 2005; Maschler, Solan, & Zamir, 2013).

Another issue arises when games become complex. In chess from instance, the sheer range of options leads to a state where calculations receding from the endgame are not possible even with computers and therefore players look only a few moves ahead and refer to experience as a guide (Dixit & Nalebuff, 2008). In modelling political negotiations, the number of potential interactions can be such that it overwhelms the researcher (Bueno de Mesquita, 2011) and the outputs can easily stretch into the hundreds of pages (Kugler, Abdollahian, & Tammen, 2000). As a result, when attempting to model and describe the complexity of real-world political negotiations that include a range of disparate views and issues, it can become necessary to move to a more 'applied' approach rather than a purely theoretical one. Such an approach appears in a strain of literature sometimes called 'multi-player multi-issue negotiation modelling'.

4.6.2   Multi-player multi-issue negotiation models

This section describes some of the prominent models that have influenced the creation of my model. They include: Bueno de Mesquita's work (Bueno de Mesquita, 1988, 2011; Wu & Bueno de Mesquita, 1994), the Matrix of Alliances and Conflicts Tactics Objectives and Recommendations (MACTOR) and resultant Multi-issue Actor Strategy Analysis Model (MASAM) (Bendahan, Camponovo, Monzani, & Pigneur, 2005; Bendahan, Camponovo, & Pigneur, 2004; Camponovo & Pigneur, 2004), the 'Stokman' model (Stokman, van Assen, van der Knoop, & van Oosten, 2000), and Allas and Geogiades' (2001) graphical model. The Bueno de Mesquita and MACTOR/MASAM models are mathematical. The Allas model is a practical guide and follows a similar pattern but without the mathematics. The Stokman model is presumably mathematic although they do not elaborate on their mechanics.

Before presenting each of the models, it is useful to note a key universal similarity: in modelling political negotiations, all use three fundamental inputs to

describe the involved players. The first independent variable is called '*position*' and represents a player's preferred outcome, commonly measured on a scale from 0-100 or a five to seven point Likert scale. Lower positions infer increasing opposition to an issue and higher positions represent increasing support.

Salience measures how important an issue is to the player. *Salience* is indicative of the resources the player is willing to mobilise in an effort to secure the desired *position* and is usually codified either by rating it from 0-100, or via Likert scale.

Clout (also referred to as *power* or *influence*[35]) is the player's ability to influence the outcome of a particular issue. This is often a relative measure so it facilitates intrinsic comparisons between players. Please note, however, *clout* is the perceived level of power rather than the actual amount deployed. The reason for this distinction is that player behaviour is determined by the level of *clout* they perceive other players exhibiting.

4.6.2.1 The Bueno de Mesquita model

The work of Bueno de Mesquita (Bueno de Mesquita, 1985, 1988, 2011) has been widely cited and influenced a number of similar applications such as (Allas & Geogiades, 2001; Bendahan et al., 2005; Kugler et al., 2000; Stokman et al., 2000). The approach used in the Bueno de Mesquita model (hereafter referred to as the BDM model) is an 'applied game theory' method that utilises expected utility (Bueno de Mesquita, 2011). Owing to the complexity of negotiations it tries to encapsulate in analysing real-world situations, it introduces a number of key heuristics and simplifying assumptions to operationalise the model (Bueno de Mesquita, 2011).

The fundamental purpose of the BDM model is to predict the outcome of complex negotiations which can end in agreement, conflict, or simply break down (Bueno de Mesquita, 2011). At the heart of the model is the assumption that players are partially myopic: they cannot foresee the final result of the game. More specifically, as it proceeds, the payoffs each player can receive change and expectations about the future are altered. In response to this, players are constrained to pursue options that are only locally optimal: they cannot look to the ultimate

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[35] The Stokman model uses a measurement by the name of *capabilities* but the difference is primarily in name only.

terminal node and work backwards (Bueno de Mesquita, 2011). To accommodate these factors, the BDM considers the game an *iterative* one, not a repeated one.

As players' views of the future are clouded, it falls to the model itself to establish an end point. Here we find a key heuristic mechanism: the game ends when either the net payoffs or utility from the current round are greater than gains in the next (Bueno de Mesquita, 2011). In essence, this means that the model imposes a stop when the average player is made worse off by continuing. The rationale for employing a round-based approach is best conveyed in the words of Bueno de Mesquita himself:

> If we knew the number of iterations ex ante we could, in principle, solve the particular game analytically but this uncertainty about iterations is one of the fundamental features of real-world politics that is simplified away in pure theorizing and that is not simplified away here (2011, p. 73).

In processing the strategic interactions between players, programming all potential bilateral, trilateral, quadrilateral etc. games simultaneously is overwhelming and so the social fabric is broken down into a series of dyadic games which also makes some provisions for how 'spectating' players are expected to interact with the principle pair (Bueno de Mesquita, 2011). Third party involvement is fundamentally a matter of implied support given to the principal player whose position is closer to the third party.

The BDM model has evolved over time, but the essential mechanism up to the 2011 revision is based around the internal decision to challenge an opponent to abandon their position on an issue and take up one that is more favourable for the challenger. In *very* brief terms, the model progresses in the following manner:

1. Players estimate the 'outcome' of the current round by using the *position*, *salience*, and *clout* figures of all players to determine the location of the 'median voter' – an application of Black (1958).

2. Each player then determines their own expected utility from potential dyadic interactions, based on: the current expected outcome, a successful challenge, and an unsuccessful challenge.

3. Challenges are issued and positions are adjusted at the end of the round.

4. A new round of negotiation begins and continues until the global changes in expected utilities are less than an arbitrary threshold (Scholz, Calbert, & Smith, 2011). At this point, the simulation stops.

4.6.2.1.1 Variables and quantification

Position represents the desired outcome on a one-dimensional continuum. *Salience* refers to the importance of the issue and *capability* represents the amount of influence the player has over its outcome.

Inputs are determined by field experts (Bueno de Mesquita, 1988, 2011; Scholz et al., 2011) but selection criteria, sample size, and processing techniques are not widely discussed.

4.6.2.1.2 Analysis and insights

One of the unique features is the calculation of a player's risk aversion based upon realisable utility, in turn affecting the likelihood of issuing a challenge. Challenges result in conflict, capitulation or compromise and the resultant changes in position vary depending on the type of outcome. The model has been suggested to produce accurate predictions in conflict scenarios (Bueno de Mesquita, 1988, 2011).

4.6.2.1.3 Limitations

One of the limitations is the apparent disconnection of issues; processed in isolation, the outcome of one issue does not affect another. This is most likely a simplifying assumption but exploring the interconnections could potentially increase the model's dynamism. A second limitation is the narrowness of options available to the player. In modelling challenges, the model makes a convincing case but it excludes other potential alternatives.

4.6.2.2   MACTOR and MASAM

MACTOR (Bendahan et al., 2004) was designed to examine the interactions between multiple players over multiple issues and was primarily developed from methods presented by Godet (2001, as cited in Bendahan et al., 2004). Whilst it seeks to explore potential outcomes in the same manner as the Stokman and Allas models, it attempts to do so at a more global level than the more focused Allas model (Bendahan et al., 2004). As with the BDM model, it assumes partial myopia and uses a round-based approach to reaching a final outcome.

4.6.2.2.1 Variables and quantification

Position is measured as one of three alternatives: for (1), against (-1), and neutral (0). Each player has a specific position on each issue. *Salience* is measured on a five point Likert scale ranging from least important (0) to most important (4).

The clout variable, known as *influence* in the MACTOR model, represents the power an influencing player has over an influenced player (Bendahan et al., 2004). This is also measured as a five point Likert scale that codifies a range of descriptive terms ranging from 'no influence' to 'very high influence' (Bendahan et al., 2004). MACTOR uses expert surveys to quantify data.

The differences in the more recent MASAM are that *influence* is subdivided into direct influence and indirect influence. In addition, the effects of *salience* have been more disassociated from *influence* (Bendahan et al., 2005). Conceptually, the MASAM model is largely an amalgamation of the Allas model and MACTOR.

4.6.2.2.2 Analysis and insights

MACTOR uses the three variables to determine both direct and indirect influence, where one player can influence another either through their own actions or vicariously through a third party (Bendahan et al., 2004). Comparisons of total influence can then be made to establish which players are more powerful. Strategies are limited to unilaterally polarising a player's own position and position exchanges.

Data transformations of the output matrices determine coefficients for *mobilization, agreement,* and *disagreement*. Pairings of actors can then be made by further transformations to establish relative agreement or disagreement (or ambivalence) over a particular issue (Bendahan et al., 2004). MACTOR produces graphical depictions of the data and displays information similarly to the Allas model. Outputs are as follows:

The *influence and dependence chart* plots the global influence of a player against their dependence, allowing one to determine the more powerful, the less powerful, and the relay players. In this sense, the influence and dependence chart is akin to the *stability analysis* provided by the Allas model.

The *mobilization chart* shows whether the player is supportive or opposed to a particular issue and their propensity to deploy resources in an effort to influence the outcome.

The *convergence and divergence analysis* is similar in many respects to the relationship analysis provided by the Allas model. By measuring the degree of convergence and divergence, it is possible to identify potential allies and adversaries.

Finally, an *issue battlefield chart* depicts the players and their proximity to particular issues. Issues in close proximity to two players will be settled quickly,

whereas issues that are far removed from the placement of the player are contested more forcefully.

4.6.2.2.3 Limitations

The greatest flaw in the model is its treatment of influence. Since only one player's influence over another is considered, it implicitly suggests that each player has equal power over a decision (Bendahan et al., 2004). To say that one has influence does not necessarily mean to say that one has power.

The manner in which indirect influence is measured includes a systematic error. As the number of players rises, the proportion of direct influence any given player has falls relative to the amount of indirect influence they possess. This treatment of indirect influence becomes increasingly disparate as the number of players rises (Bendahan et al., 2004).

4.6.2.3 The Allas and Geogiades model

The model developed by Allas and Geogiades (2001), abbreviated to the 'Allas model' also draws upon the BDM model for its theoretical underpinnings. It was principally designed to act as an aid for managers without the need for complex mathematical processing (Bendahan et al., 2004). The Allas model differs from others cited here by focusing more on the *strategies* available to players than the overall *outcome*.

4.6.2.3.1 Variables and quantification

Position is measured on a scale of 0-100, referring to the player's preferred outcome (Allas & Geogiades, 2001) and usually quantified in increments of ten (Bendahan et al., 2004). *Salience* is measured from 0-100 and is a relative measure of importance compared to the other issues identified (Allas & Geogiades, 2001). *Clout*, measured from 0-100, refers to the ability of the player to influence the final decision relative to other players. Each player is assigned input values for each issue. Inputs are determined by expert judgements.

4.6.2.3.2 Analysis and insights

The Allas model makes use of graphs to produce five analytical tools. The first is an '*outcome continuum*', illustrating the outcome prior to negotiation.

The '*stability analysis*' plots *salience* and *clout* against the player's distance from the initial outcome, determines which players will contest the outcome, and identifies 'heavyweight' players – those with high *salience* and *clout* values.

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The third tool is the '*stakeholder classification'*. This provides information about which issues other players can be drawn on for support, and which players will be confrontational. A distinct diagram emerges for each player.

The '*negotiation landscape'* is a high-low lattice of *clout* plotted against *salience* for a particular issue and allows the observer to identify the *shapers* and the *influencers*. Shapers have high *salience* and *clout* and are more likely to determine the course of the outcome on a particular issue. Influencers by comparison have high *clout* but low *salience*; these players can be lobbied for support.

Finally the '*relationship analysis'* plots the various issues under analysis as data points on a chart described by one player's *salience* values on the x-axis, and another player's *salience* values on the y-axis. This allows the analyst to determine which issues will be debated more vigorously and which can be exchanged.

4.6.2.3.3 Limitations

Whilst this model generates useful outputs, analyses with a large number of players and/or issues require a very large number of individual diagrams [36]. Bendahan et al. (2004) also note that the model is useful for specific purposes and in the event that the researcher would want to conduct a more aggregated study this model could benefit from the addition of other tools to support its findings.

4.6.2.4 The Stokman model

The Stokman model was originally designed for policy analysis and government ministries. It uses a computer simulation to establish the outcome of the negotiation process including the amount of expected conflict (Stokman et al., 2000). The model predicts outcomes both with and without intervention.

The Stokman model states that proper specification of issues is critical. Misspecification is argued as the most common reason for a given analysis to fail. 'Good' issues should have two extremes at opposing ends of a spectrum, intermediate positions are therefore a compromise between the two. More importantly, these intermediate positions must be able to be ordered (Stokman et al., 2000); to borrow a term from expected utility theory, they must adhere to the axiom of transitivity.

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[36] Although creating a software template could speed the process.

4.6.2.4.1 Variables and quantification

Position and *salience* are measured in the same manner as other models but they describe clout as *capability* where it refers to the potential capabilities for the player to mobilise resources to achieve desired positions (Stokman et al., 2000). Players can be added together, combining their relative capabilities to form a more powerful coalition.

Expert surveys are used to quantify inputs. Expert selection is not discussed but in the case of their principal example, rely on the judgments of "one or two experts" (Stokman et al., 2000, p. 134).

4.6.2.4.2 Analysis and insights

Two insights arise, the first being that the combined measures of position and salience produce the expected behaviour of the player as behaviour is tied to the player's incentive structure (Stokman et al., 2000). The second is that the combination of salience and capability produces the player's *effective power*. Effective power can be seen as what fraction of capability a player is willing to mobilise (Stokman et al., 2000).

The model provides for three non-mutually exclusive strategies. The first is *'management of meaning'* and involves changing position by providing information that persuades the player that their incentive structure is better captured by another position. Stokman et al. (2000) note that this usually occurs with close stakeholders, but do not elaborate on the mechanics. *'Challenge'* forms the second option. In this strategy, they adapt the BDM model into their own. *'Exchange'* is the final option, involving the bilateral trade of positions over issues that a player feels are less salient for favoured positions on more important issues.

The Stokman model takes cues from game theory, although it does not appear to be purely game theoretic in design[37]. Instead, it is a simulation performed through a number of iterations to determine a final result.

4.6.2.4.3 Limitations

The authors admit that the model is dependent upon the particular decision-making setting. If changes alter the underlying conditions, issues and input values may need to be re-evaluated. Conditions under which a more cooperative approach, or a more confrontational approach, would be more effective remain uncertain. Similarly, whether confrontation-based solutions produce unfavourable outcomes

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[37] They question a comparison of their model against such a method.

for social welfare, or if confrontational outcomes take longer to resolve are questions that have yet to be answered.

4.6.2.5   Comparing pre-existing models

Table 4-1 presents an overview of the definitions of inputs used in other studies for comparative purposes along with data collection methods.

Table 4-1 Comparative input definitions and data collection methods

Position	Meaning
Allas and Geogiades (2001)	Preferred outcome
Bendahan et al. (2004) (MACTOR)	Preferred outcome
Bendahan et al. (2005) (MASAM)	Preferred outcome
Bueno de Mesquita (1988, 2011)	Preferred policy outcome on issue
Camponovo and Pigneur (2004)	Preferred outcome
Stokman et al. (2000)	Preferred outcome
Salience	**Meaning**
Allas and Geogiades (2001)	How important is the issue compared to other issues
Bendahan et al. (2004) (MACTOR)	Subjective importance of the issue to the actor
Bendahan et al. (2005) (MASAM)	Importance of obtaining outcome relative to other issues
Bueno de Mesquita (1988, 2011)	The degree of importance or salience each group
Camponovo and Pigneur (2004)	"Value of attaining preferred outcome" (p. 140)
Stokman et al. (2000)	Degree of interest in the issue

Table 4-1 continued

Clout	Meaning
Allas and Geogiades (2001)	Amount of power the stakeholder has to influence the decision on the current issue and ability to influence other actors
Bendahan et al. (2004) (MACTOR)	Ability to directly influence the other actors
Bendahan et al. (2005) (MASAM)	Power player has to influence outcome
Bueno de Mesquita (1988, 2011)	The specification of relative power
Camponovo and Pigneur (2004)	"Power to influence issue's outcome" (p.140)
Stokman et al. (2000)	Formal voting power and other influences
Data Collection Method	
Allas and Geogiades (2001)	Expert surveys/interviews
Bendahan et al. (2004) (MACTOR)	Expert interviews. No precise methodology but suggests interviews or Delphi approaches
Bendahan et al. (2005) (MASAM)	Expert surveys – Delphi method
Bueno de Mesquita (1988, 2011)	Expert surveys. They identify the groups, issues and other variables required by the model
Camponovo and Pigneur (2004)	Expert survey (5 respondents)
Stokman et al. (2000)	Expert interviews (1 or 2)

In summary, the three input dimensions are applied in a very similar manner. The single greatest difference appears in the MASAM model whereby *clout* is subdivided into direct and indirect influence. Scalar metrics are usually measured from 0-1 or 0-100 although MACTOR uses a scale of -1 to +1 to show support or opposition more clearly. All of these studies utilise expert opinion for data collection and in most cases only a small number of respondents are needed.

4.6.2.6 A note on systems dynamics

Note that the models described above are distinct from System Dynamics, which assumes a continuous flow of time and changes in resource levels. A key component of System Dynamics is the inclusion of delay functions that prohibit resource levels changing immediately. The BDM model and its counterparts, however, do not treat time as continuous: the length of a round is unspecified and it is quite likely that, in practice, some rounds are longer than others. It is the outcome of the round—the changes to player inputs—that is important and changes are applied immediately and fully at the end of each round, implying that there are no delay functions at work. The reason for doing this is because these models are not processing physical resources, they are processing values and opinions: in the BDM model, if a player loses a challenge for instance, he or she must change their position and this happens at the speed of thought. These same principles appear in related work (Allas & Geogiades, 2001; Bendahan et al., 2005; Kugler et al., 2000; Stokman et al., 2000). Consequently, although the process is an iterative one and different situations may require more rounds than others, this approach to modelling political negotiations is distinct to applications written in System Dynamics.

As a final note, Bueno de Mesquita (2011) invites others to alter the heuristic rules of his model in their own work, in this regard the effect they have upon outcomes can be examined. It is here that I submit a new model, one that is heavily influenced by the underlying principles of the BDM model but seeks to broaden the range of options available to players and thus incorporates ideas proposed by Allas and Geogiades (2001), Bendahan et al. (2005), and Stokman et al. (2000).

4.6.3 A new model: Fundamental principles and assumptions

My model is designed to estimate the likely outcome of political negotiations that include a large number of players wrangling over a large number of issues. Owing to the inherent complexities, it uses the same key heuristics and simplifying assumptions as the BDM model in order to operationalise it. Three fundamental notions are:

1. Players are partially myopic: they are unable to foresee the final outcome and therefore cannot work backwards to determine the 'optimal' solution. The actions they take are therefore limited to what serves their immediate interests.

2. The model considers the negotiation as an iterative process where players attempt to influence each other within each round. Owing to partial myopia, the model itself must determine an endpoint whereupon all players cease interacting with one another.

3. The model deconstructs the negotiation landscape in to an exhaustive series of all possible bilateral interactions. The effect of 'spectating' players upon the principal pair is present in selected interactions but is predominantly held in control.

To determine the expected outcome of a round, consider a unidimensional continuum of positions on an issue ranging from complete support (+1) to complete opposition (-1). The expected outcome is the *median voter location* (*MVL*), which is a function of position, salience, and clout. Calculating each player's utility from the issue is then a simple matter of measuring the distance in Euclidean space between the expected outcome and the player's preferred outcome; the lesser the distance the better.

Once a player determines the expected outcome of an issue and the utility associated with it, the player then has the option to attempt to influence other players in an effort to shift the *MVL* closer to the preferred outcome. My model incorporates three strategies, the first of which is to challenge players to adopt a more favourable position. A second alternative, dubbed 'salience lobbying' potentially increases a player's utility through convincing an allied player to commit further to an issue. A third alternative is to seek an exchange with another player: giving up one's own position on an unimportant issue in exchange for a reciprocal shift in position over a more important issue. The exchange principle is founded on the notion that the utility gained from a given favourable shift in a more important issue is greater than utility lost in surrendering an unimportant issue. Salience lobbying and exchanges increase the complexity of the model as they inherently affect multiple issues simultaneously, and within a single round a player may be employing multiple strategies to multiple players. The choice of which strategy to use is determined heuristically, and is based upon the relationship of the dyadic pair.

At the end of each round players may be compelled to change their inputs from multiple suitors – having received multiple challenges or multiple offers to increase commitment for example. In this case the model assumes that each player

accepts only the best challenge and the best offer in a single round (challenges and offers affect different inputs). The concept of 'best' is also heuristically determined: being the least costly challenge and the most rewarding offer. With respect to exchanges, only one exchange is processed globally per round owing to complications that may arise from multiple exchanges per round. The effects to player inputs as a result of the three strategies are then applied to the respective inputs at the end of the round fully and immediately; all the multi-player multi-issue models cited above do so. A new round then begins.

The process continues until a final outcome is reached; 'final outcome' implies that no further changes to player inputs occur. When the model reaches such an equilibrium there are two potential interpretations: the first, which is less likely, is that a global consensus is reached and all players share the same position over each respective issue. The second alternative is where the outcomes of the issues are not necessarily ideal for the players, but no more changes to inputs can incorporated as players have exhausted their options. Nevertheless, there are also potential cases where the model fails to reach a stable outcome and oscillates endlessly[38].

In the broadest terms, my model proceeds as follows:

1. Define *issues*, *players*, and input values (*position*, *salience*, and *clout*).
2. Estimate the expected outcome of the round without any bargaining.
3. Determine each player's utility from the expected outcome and if sufficiently motivated, employ strategies to secure a more favourable outcome.
4. Establish relationships between player pairs and the expected outcome and determine appropriate strategy.
5. Process the three strategic alternatives:
   a. lobby salience of strong allies,
   b. challenge position of weak allies, and
   c. offer exchanges to adversaries.
6. Process changes to player inputs and incorporate at the end of the round.
7. Repeat steps 2-6 until there are no significant changes to input values.

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[38] Stokman et al. (2000) also found their model could potentially return these outcomes and can be interpreted as the 'breaking down' of negotiations.

A full account of the mechanics can be found in Chapter Seven. There are two reasons for doing so: firstly, it keeps this chapter to a more digestible size; secondly, as model uses a lot of special notation and terminology, describing the mechanics directly before the results eases the burden placed on the reader as these details are still fresh in the mind.

4.6.3.1   Synthesizing and adapting other models

The existing models and their mechanics have played a vital role in constructing my model. Some components have been directly translated, others adapted. This section provides a disclosure of where and how they have been integrated. It also provides a brief comparison of the existing models where their approaches diverge.

Expected outcome calculation (p. 201)

In calculating the expected outcome of a round, my model, and many of the models cited above apply the approach deployed in the BDM model, which in itself is an application of Black's (1958, as cited in Wu & Bueno de Mesquita, 1994) work on median voter theory. The concept of the median voter is described succinctly by Scholz et al. (2011):

> …in a majority election where a voter's attitude is represented as a point in one dimension, if all voters vote for a candidate closest to their own preference and there are only two candidates, then if the candidates want to maximize their votes they should commit to the policy attitude preferred by the median voter (p. 521).

The exact mechanics differ slightly between the models: Allas and Geogiades (2001) show a weighted average between all players but do not elaborate on the specific mathematics. Bendahan et al. (2005; 2004) take the sum of all positions, using a scale of -1 to 1^{39}, weighted only by clout, to arrive at a figure and use the following calculation to determine their expected outcome:

$$Outcome_i = \sum_{a,i} (position_{ai} \cdot \sum_b (FullInfluence_{a,b} \cdot Clout_{b,i}))$$

Full Influence$_{a,b}$ is a measurement of how a player may alter the outcome by influencing other players. *Clout $_{b,i}$* refers to the player's ability to unilaterally

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[39] In the MASAM model, position is normalised to between 0 and 1.

influence the issue. The exclusion of salience from above calculation, however, implies that an actor would fully mobilise all their available resources in an effort to secure their desired position. More informally, it would suggest the actor would put their 'full weight' into their argument over every issue.

My model uses a similar equation as Bendahan et al. but also incorporates an idea present in the BDM model by including salience. The reason for doing so is due to the limiting factor salience places upon a player's actions: a player might be in favour of a particular issue and have a considerable degree of clout, yet if the player does not consider the issue to be particularly important then he/she/they will not deploy all resources at their disposal to secure the issue. To affect the outcome of an issue a player must not simply be powerful; the player must also be sufficiently interested in the outcome.

Utility (p. 214)

The method for determining the utility players can realise from the expected outcome is derived from utility functions in the BDM model and in Bendahan et al. (2005).

Activation calculation (p. 203)

The term 'activation' represents a player taking an active role in the negotiation of an issue with the aim of securing a better outcome. When players are dissatisfied with the outcome, they consider alternative strategies and attempt to change the outcome to one closer aligned to their preferred position. How they go about this differs from model to model.

Recall Bueno de Mesquita's (2011) model focuses primarily on a challenge process; if the challenge is won, the defeated player must take on the position of the victor. In the event of losing, the challenger must forfeit their own position and move towards the position of the other player. Allowances for unilateral shifts in position also exist.

Bendahan et al. (2005) take a different approach. They use an algorithm where a dissatisfied player will incrementally polarise their position in an effort to bring the outcome closer to their desired position. They also allow for the exchange of positions on issues: one gives up issues that one has little stake in for concessions in issues that are more salient.

Allas and Geogiades (2001) also identify exchanges with enemies as a strategy available to negotiators but they also suggest lobbying powerful allies with low salience to convince then to expend more effort on the issue. More importantly for taking action, the Allas model uses a graphical representation to show that players who are dissatisfied and have proportionately high salience and clout will be the ones likely to actively dispute the result. My model draws from the Allas model and expresses it as *activation* where I develop the corresponding equations.

With respect to considering which players are active in the negotiation, the BDM, MACTOR, and MASAM imply that all players are active over all issues, the Allas model assumes that only some players will be active. My model contains a feature that allows the user to switch between these alternatives (see page 205).

Alliances (p.206)

Bueno de Mesquita's models (1988, 2011) do not appear to track alliances. He mentions that lobbying is a potential option but his work focuses upon challenges. Bendahan et al. (2005) look at the possibility of alliances and do so by measuring differences between two players' positions over a neutral value which is then multiplied by the salience values of the pair. Their model considers that players will be more likely to ally with those who have high salience in the issue, and it is necessary to do so as salience is not present in their expected outcome calculation.

To offer a visualisation, consider the Association of Commissioned Postmasters (*Zentoku*) and the postal workers' union (*Zentei*). These two factions are both opposed to privatisation but have traditionally not seen eye-to-eye with one another. Consider also the particular issue of postal network maintenance: it is more important to *Zentoku* than *Zentei* as commissioned postmasters frequently own the premises and lease them to JP itself. The Bendahan model suggests via its expected outcome equation that each group would exert all the force they can muster to defeat the reform movement; as the output is not weighted by salience it implies full mobilisation of all resources. The likelihood of alliances being formed is dependent upon being on the same side of the position spectrum, finding an issue over which they share common ground, and how important it is to maintain ownership of the post offices.

My model, however, uses an approach adapted from the Allas model, which identifies players as allies, enemies, or in-between. The logic is that both of these players will work in concert to defeat the reform movement irrespective of the

existence of alliances or agreements, which is reflected in the calculation of the expected outcome. However, as salience is included in the expected outcome it suggests from the perspective of *Zentoku* that having *Zentei* also on the opposition side of reform will not guarantee victory: *Zentei* must be convinced to commit to the issue, which may necessitate a concession in the process. Alternatively, an attempt must be made to align them more closely with *Zentoku*. Operationalising the Allas model therefore becomes a matter of comparing player pairs with the expected outcome over each issue. In terms of which strategy to use, the Allas model's delineation of relationship types inspired the mechanism used here.

Salience lobbying (p.210)

The principle of salience lobbying is applied from the Allas model. As it makes no suggestion of *how* this can be done, the algorithm describing the salience lobbying process is an original contribution.

Weak ally lobbying (p. 221)

The process of weak ally lobbying is heavily influenced by the work of Bueno de Mesquita (1988, 2011) and is based on the idea of challenging weak allies to give up their current position on an issue and adopt a position closer to the active player. The mechanics and evolution of the BDM model are explained in detail by Scholz et al. (2011), which was referred to frequently in this part of the model. To be clear, this includes: the overall algorithm, probability functions, utility calculations, output type determination, and offer selection process. The major proviso that must be noted is that translating the core of the BDM into this application requires the creation of a number of conditional equations but these are merely checks and balances to ensure the model is working properly.

Whilst the approach is fundamentally the same, one key difference is that my model does not allow for unilateral adjustments to positon. Once a player has determined their initial position, they will not revise it unilaterally – only through interaction with other player can position be shifted.

Exchanges (p. 232)

The concept of issue exchange features in a number of models (Allas & Geogiades, 2001; Bendahan et al., 2005; Bendahan et al., 2004; Stokman et al., 2000). These studies share a common element, which is that exchanges can occur

when a pair of players have fundamentally different views on a particular issue but also share different patterns of salience.

The Allas model is beautiful in its intuitive simplicity but the manual repetition of pairing on a case-by-case basis creates logistical difficulties as more complex negotiations arise. More importantly, being graphical in nature, it does not specify the magnitude of concessions offered or even if they are possible.

Bendahan et al. (2005) use an elegant solution for addressing exchanges requiring only one equation:

$$\frac{\Delta Position_{a,i}}{\Delta Position_{b,j}} = \frac{Power_{b,j}(Salience_{a,j} + Salience_{b,j})}{Power_{a,i}(Salience_{a,i} + Salience_{b,i)}} \text{ (p. 153)}$$

Whilst this reduces the complexity of programming, it does not appear to take into account certain conditions whereby an outcome can be pushed passed a player's position and hence may result in *decreases* in utility. Additionally, their work requires manual linkage of players and issues, which is potentially limited as once an exchange on issue *i* has been performed the involved players may not shift attention to other issues unless the operator manually specifies other issues to trade in later iterations.

Stokman et al. (2000) provide a sophisticated method of exchanges but limit themselves to two bilateral strategies (excepting unilateral shifts in position).

I draw on Bendahan et al. (2005) and the Stokman model in developing the assumptions that govern exchanges. That is, the gains from exchanges are equally shared, the salience patterns must very different, and the players must have fundamentally different views on the exchange issues. My model is distinctive from Bendahan et al. (2005) in that it develops a more comprehensive and automated algorithm. It differs from the Stokman model as it is designed to act in conjunction with concessions *and* challenges and thus advances the complexity of negotiations that can be simulated.

Higher Order Simulation (241)

This is primarily a simple data transformation but one element has been taken from Bendahan et al. (2005), the notion of criticality. Criticality serves a different function in their model but the calculation is the same.

In summary, the determination of initial outcomes are drawn from the BDM model, although a similar mechanic is present in all other models reviewed. The

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graphical Allas model has been adapted to produce the activation process and determine which strategies to use on which players. In terms of the inspiration for strategies themselves, the Allas model relates to salience lobbying, the BDM model for challenges, and MACTOR/MASAM and the Stokman model for exchanges. Figure 4-3 provides a visualisation of the strategies and their antecedents in the literature.

Figure 4-3 Component strategies in the new model

4.6.3.2 Applying the model to Japan

As noted before, the model presumes that there are a number of issues contested by a range of players who exhibit different ideological standings and influence. The term 'player' is an inclusive one: it represents an array of individuals and interests who form a homogenous group as described by the three input metrics. In this regard, a 'player' can incorporate interest groups along with their political patrons. For example, the links between The Association of Commissioned Postmasters (*Zentoku*) and Shizuka Kamei of the People's New Party were so strong they can be represented by a single 'player'. This method is common to the models cited previously.

The probability of Japanese postal reforms being implemented depends upon the outcome of individual issues and the overall effectiveness of reforms is a function of how critical each issue is in the overall context. As a result, this model contains two modules termed the 'lower order simulation' (LOS), and the 'higher order simulation' (HOS). The LOS (listed above in steps one to seven) processes

individual issues as players lobby, challenge, and exchange with each other. The LOS passes it outputs into the HOS, which then weighs each issue according to how critical it is to the reform package. Finally, the HOS outputs a probability for overall effectiveness. A secondary efficacy index, independent of salience, is also provided.

One key advantage is the facility to determine whether failure to reform a given issue may compromise the entire package. Additionally, if an analysis of the underlying institutions has already been performed, the HOS can be used to approximate the amount of change in those institutions by way of examining the probability of change in each issue.

To illustrate, one of the critical factors in the New Zealand experience (described in Chapter Five) was the establishment of the State Owned Enterprises Act and its requirement to produce a profit and only 'have regard' for the community which NZP serves. Without this legislative support, it is likely that NZP would have been forced to continue loss-generating (although socially desirable) services. If the model presented here focussed on the New Zealand experience, the act would be identified as a critical issue and its placement in the HOS would strongly influence the effectiveness measurements.

Rural delivery fees, however, whilst a salient issue for the company and rural communities, would be much less likely to endanger the overall process whether they are subsidised or not. This issue would therefore feature less prominently in the HOS, muting its influence.

4.6.3.3 Contributions

This model is more ambitious than many others by including a greater range of options available to an active player. As noted earlier, most models focus on one or two strategies, but mine considers three distinct options simultaneously: position challenge, salience lobbying, and position exchange. The chosen option depends upon the relationship the active player has with other players. Modelling eight players over seven issues requires some 1.2 million calculations per round and therefore requires significant processing capabilities [40] . Extensive original contributions have been made in salience lobbying; many works cite the importance of lobbying allies, but do not explore it. The exchange algorithm also offers a more dynamic approach to exchange issue offer selection; automation allows for repeated

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[40] I found that a 64-bit environment saving to a solid state drive appears to offer the best performance.

offers and counter offers. Also introduced is a new feature that allows 'default' behaviour to be overridden, allowing for modelling under 'normal' conditions and 'crisis' conditions. This feature can be applied to individual issues or used globally.

4.6.3.4   A note on the choice of software

In programming the model, the vast majority of equations are relatively simple ones, relying primarily on either basic algebra or logical programming. Microsoft's Excel spreadsheet software is sufficient for the most part but as the model uses an iterative process, meaning that changes must be incorporated into the primary inputs, it creates a circular reference that can create problems.

One potential solution is to create a separate worksheet for each iteration or list the iterations in columns. Regrettably, I am no better informed than the players in terms of the number of iterations required for a given run and therefore this solution is unsatisfactory. Excel does provide an iterative solving process: in the options menu, the user specifies the number of iterations to perform and this alleviates the circular reference issue. Even so, this does not solve the fundamental issue of determining how many rounds are needed as the outputs displayed are from the last round only. Additionally, is it useful to visualise the outputs as they progress round by round to see how the players interact with one another, particularly so during sensitivity testing. As a result of these issues, it was decided that the Excel suite was not the most appropriate package for this study.

Venata Systems Inc., however, produce a software suite—Vensim© —that can accommodate circular references easily. The software is primarily designed for System Dynamics and therefore accounts for changes in resource stocks and flows over time by means of Euler integration. Some examples of studies that use Vensim in economics and management include Kim and Oh (2005), who model the decision making process through bargaining power in regards to strategic relationships for quality improvement and new product development. Kundapur and Rodrigues (2012) chart how knowledge workers adopt new technology and integrate it into their work patterns as an aid for policy making decisions with respect to new technology purchasing. Another study examines the costs of quality, including non-compliance and prevention costs (Kiani, Shirouyehzad, Bafti, & Fouladger, 2009).

In calculating stocks and flows the core engine is therefore an iterative solving process and it is this mechanism that expedites calculating multiple rounds. In most applications, Vensim treats an iteration as a division of time – usually in

months or years. In this case, I use Vensim for its iterative solving process but one point must be made absolutely explicit: each unit of time in Vensim simply represents a 'round' in the model. To be sure, this is not to say that a round is equivalent to a month or year, but the mechanism the software's engine uses makes it much easier—for me at least—to approach the problem of running a model that includes circular references, requires an unknown number of iterations to solve, and produces visual objects that track developments as the number of rounds increases. Vensim also provides the same logical equations built into the Excel suite needed to generate the model. As a result, whilst the software is not being used in the exact capacity for which it was primarily designed—System Dynamics—it possesses all the necessary features so solve a programming issue I am otherwise unable to adequately address. Indeed, Venata Systems themselves mention that their software can be used for many applications. Therefore, whilst Systems Dynamics is the primary application, it does not preclude the software's use from other forms of problem solving. The one proviso that must be made explicit, however, is that Vensim output objects often list time on the x-axis. In this application, one must accept those outputs simply as 'rounds'.

4.6.3.5   Inputs

This section details how variables are defined, coded, gathered and measured. All inputs were quantified by using the vetted expert survey. As with other models, respondents are not asked about how they think the issue will be solved, only about the observed inputs of each player over each issue. As will be explained shortly, I also developed my own estimation of *position* from the media reports via the core sentence approach for cross-checking.

4.6.3.5.1 Position

Position defines a player's standpoint on a particular issue. Issues are phrased to elicit two possible extreme responses or a range of intermediate values, which is the principle advocated in the Stokman model. *Position* ranges from +1 to -1. A score of +1 implies complete support for the proposal, -1 means complete opposition, and zero reflects a neutral position[41].

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[41] Due to intra-party divergences and the factional nature of Japanese politics, a three point system as utilized in the MACTOR model is considered to be too polarizing for players who exhibit only a partial leaning to one extreme or the other.

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4.6.3.5.2 Salience

Salience measures the importance of one issue relative to others. As discussed shortly, the expert survey includes seven issues and experts are asked to consider the importance of each one. *Salience* is measured from zero to one, with '1' implying it is the most important issue and everything is subordinate to it, and '0' implying the issue has no importance at all. Middling values imply 'average' or 'moderate' importance.

4.6.3.5.3 Clout

Clout refers to the amount of power a player holds over the decision-making process in regards to a particular issue; this includes actual power and ability to influence others. Players with more clout are better able to realise their desired position.

The survey uses a freestanding measurement of *clout.* Freestanding [42] measurements are more appropriate when there are many players or when power is more unevenly distributed, particularly in cases where there are "800-pound gorilla" players (Dometrius, Burke, & Wright, 2008, p. 91). A freestanding measurement is preferable to paired comparisons, as it does not require participants to make forced comparisons between two players that can lead to manufactured results.

Clout is measured from zero to one. A score of 1 means that the player is dominant and zero means that the player has no influence at all.

4.6.3.6 Acquiring data

Conducting surveys of the political elite is difficult, which has given rise to the development of proxies. Three common proxies are expert surveys, media coverage, and mass surveys. In defining the inputs for the simulation in Chapter Eight, the study makes use of expert surveys; additionally, the accuracy of *position* was triangulated with media coverage.

Media is advantageous as reports are document driven (Helbling & Tresch, 2009). At the same time, the political elite are turning increasingly to the media to engage with the public (Taniguchi, 2007). Media reports also have the advantage of retaining a longer memory than expert surveys and can show gradual changes as well as intra-party conflict (Helbling & Tresch, 2009).

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[42] A 'freestanding' measurement asks respondents to consider player clout individually; it is not necessary to consider the player's clout relative to every possible pairing of players.

The core sentence approach was used to derive *position* from media reports. This involves reducing sentences to their constituent elements to determine the political object[43] and direction of the relationship (Helbling & Tresch, 2009; Kleinnijenhuis, de Ridder, & Reitburg, 1997). In one grammatical sentence, there may be more than one core sentence. As an example, "Koizumi supports lowering the deposit cap to five million yen, but not its removal."[44] This sentence contains two core sentences: the first is support for cap reduction, the second is opposition to its removal. The relationship is typically quantified as ranging from +1 (support) to -1 (opposition) with three intermediary values (Helbling & Tresch, 2009). Overall positions of a party can then be determined by taking the average of all data pertaining to a particular issue (Helbling & Tresch, 2009).

This study used media reports to estimate the position of parties and factions. However, treating the two major parties as single entities is an oversimplification and thus responses were subdivided into 'supporters' and 'detractors'. The interviews show that minority parties are quite united in their stances over issues and thus can remain single entities. The results of the expert survey were then compared against the core sentence approach application to test accuracy of responses.

Whilst position can be successfully approximated through media reports, salience poses a more challenging task (Helbling & Tresch, 2009). Certain proxies do exist, such as a frequency approach as used by Epstein and Segal (2000), but this suffers from two primary limitations: that salience means the same to a political actor as it does to an editor (Epstein & Segal, 2000), and that editorial bias is more significant in the presence of other stories like natural disasters (Helbling & Tresch, 2009). Helbling and Tresch have also gone so far as to show that correlation between expert surveys and frequency approaches to measuring salience are not as strong as they are with position. *Salience* therefore relies on expert participants, a method well supported by the previously cited models.

Clout was also measured by expert opinion. The survey asked participants to make a judgement about each player's three inputs over each issue. Measurements were freestanding. Data were averaged across participants. For

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[43] The political object can be an actor or an issue.

[44] This is an example sentence, not a direct quote from a publication.

convenience, inputs in the survey were measured by indices from 0-100 as it offers an intuitive range. Table 4-2 provides a guide to the expert survey's index.

Table 4-2 Summary of data inputs with descriptions

Index value	Position	Salience	Clout
0	Totally opposed	Completely unimportant	No influence
10	Majorly opposed	Very unimportant	Very little influence
30	Moderately opposed	Marginally unimportant	Some influence
50	Neutral	Average importance	Moderate influence
70	Moderate support	Fairly important	Large influence
90	Major support	Very important	Very large influence
100	Total support	Most important	Dominance

4.6.3.7 Expert surveys

Expert surveys/interviews are used extensively in multi-player, multi-issue simulations (Baranowski & Gross, 2006; Dometrius et al., 2008; Mahoney, 2007). Steenbergen and Marks (2007) note that they have become particularly prevalent in the comparative studies of party positions. Budge (2000) also states that accessibility is a large part of the reason they are so favoured, as is their perceived authority.

An expert is an individual who has a deep understanding of the players involved in the game and the dynamics of the environment. The most commonly-used experts are political scientists drawn from the academic community (Benoit & Laver, 2007; Netjes & Binnema, 2007; Ray, 1999; Steenbergen & Marks, 2007; Whitefield et al., 2007), although participants have also been drawn from business circles and journalistic fields.

4.6.3.7.1 Errors and validity

Budge (2000) analyses the issues of using expert surveys to quantify party positions. His primary concern was the possibility of random error entering the data, often from ambiguity in the interpretation of survey questions. Examples include whether the expert is evaluating the party leadership or activists, whether intentions and preferences are being considered or concrete actions, and what timeframe the expert is considering (Budge, 2000). Whitefield et al. (2007) also note the possible appearance of random error but argue that as it is statistically measureable, it can be controlled for by using a mean squared error.

Systematic error, however, cannot be controlled for in the same way (Whitefield et al., 2007). This can be illustrated by expert bias; for example, if a

party is considered left-of-centre, an expert might then note all of their policies to be left-of-centre as well.

Political volatility is a potential source of error; frequent political change might imply that two expert surveys conducted at different times would produce differing results even if individually accurate (Whitefield et al., 2007).

A fourth concern is the possibility of 'telescoping'– recalling facts from the wrong period of history (Steenbergen & Marks, 2007). This can occur when experts are asked to make judgements on events in the distant past.

Consequently, research has been conducted to determine if expert surveys are a reliable source of data. Helbling and Tresch (2009) examine three common proxies: mass surveys, expert surveys, and party manifestos, to measure position and salience. They find expert surveys offer high correlations with manifestos and produce consistent results. Netjes and Binnema (2007) also find expert surveys are in fact superior to comparative manifesto analyses in measuring issue salience as experts are able to balance manifesto promises and actual behaviours.

Volkens (2007) concludes that expert surveys are a good proxy for measuring position and validity increases with the number of experts. In measuring party positions, expert surveys have the smallest error compared with other proxies (Benoit & Laver, 2007). Even in difficult cases of political change, they have been found to be effective (Whitefield et al., 2007), and have yielded consistent results when used with comparative manifesto projects (Steenbergen & Marks, 2007).

4.6.3.7.2 Application in this study

To ensure the survey was indicative of the players and issues involved in postal reform, literature, media reports and interviews were analysed and processed before developing a full instrument. The literature and media reports provide an illustration of the parties and issues. Between these two sources, the general inductive approach was used to condense lower order issues into higher order issues and produce a list of player groups. Higher order issues and player groups were then vetted through expert *interviews* and the resultant lists featured in the expert *survey*. The survey was then finalised and disseminated (see Appendix C for questions)[45].

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[45] Please note that the disseminated survey includes eight issues. The last one, removing public servant status, was dropped from the simulation as this had already been finalised by the time the simulation was ready.

In addition to experts identified through the literature, media reports also produced a list of extra potential participants. The criteria for identifying these participants were as follows:

(a) the participant was quoted as being a member of the academic community,

(b) the participant was quoted as being a leading member of the business community and had been called upon to make a judgement relating to the particular news article surrounding the privatisation,

(c) the participant was quoted as belonging to JP or its affiliated unions, either in the present or past tense,

(d) the participant was quoted as being affiliated with private or government sponsored institution or think-tank,

(e) the participant had some official capacity in the Japanese government and had been called upon to make a statement relevant to the particular media report, or

(f) the participant was referred by an interviewed participant satisfying any of the first five criteria.

4.7 Post-simulation Japanese Institutional Environment

The issues that are presented in the simulation represent reform proposals. Since the LOS returns probabilities for each proposal passing, higher values suggest a greater likelihood of change and therefore institutional shift.

Proposals themselves are underpinned by the institutions envisioned by their progenitors. As an illustration, one of the institutions influencing JP is the *distorted savings incentives* favouring JPB[46]. Creating a level playing field would correct this distortion; if successful, it would engender a shift towards *deregulation.* The success or failure of proposals from the simulation therefore determined the new institutional environment.

4.8 Post-simulation Comparison with New Zealand

The most critical elements of NZP's reform, which are described in Chapter Five, were identified through the data collected from experts. The simulation in Chapter Eight identifies critical issues through the HOS and efficacy index. Cross

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[46] See Chapter Six for details.

comparison of post-reform environments with a particular view to internal consistency appears in Chapter Nine and will expose similarities and differences in the two cases. Also in Chapter Nine, changes in critical issues will present a measurement of how effectual Japanese reforms could potentially be.

4.9   Chapter Conclusion

IE forms the theoretical backbone of this project. Pluralistic IE is the preferred framework, in which the institution itself is analysed and individuals are utility maximising. By using a pluralistic approach, the institutional environments will be identified and the resultant issues and pressures for change followed. Referring to institutional change, TCE allows for a comparison of the New Zealand case. CIA, however, has been eschewed in favour of multi-player multi-issue negotiation theory and the simulation is built around principles therein. Post-reform environments will then be developed for comparative analysis.

To trace reform evolution in New Zealand, a synthesis of the literature provides a good illustration of the pre-reform environment and attendant problems. Further questions, especially concerning resistance, have been identified and data gathered from interviews with subject experts will show explanatory categories for each question.

The initial stages of the Japanese model follow the same principle: the initial institutions, issues, and drivers are distilled through literature analysis. Media reports, processed via the general inductive approach and core sentence approach, add further detail and estimate position. Expert interviews will also help seal gaps in the literature and finalise the list of players and issues that will feature in the simulation.

The simulation follows the methods used in a particular strain of multi-player multi-issue negotiation modelling. It will produce an estimated post-reform institutional environment by encompassing an array of players and issues that represent political factions and simulate the outcome of proposed reforms. Outputs will be expressed as probabilities of particular proposals succeeding. Lower order outputs will then be inserted into a higher order module that offers an overall estimation of reform effectiveness.

The simulation synthesises ideas from other models and makes extensive contributions in regards to the three strategies available to a player. Three inputs, *position*, *salience*, and *clout*, measure players' standpoint, the importance of the

issue, and players' power over the issue. Inputs are quantified by expert survey and *position* will also be triangulated with media reports for improved accuracy. The multi-player multi-issue models that have been drawn upon–and my resulting model–are not purely game theoretic, nor are they applications in Systems Dynamics.

Post-reform institutional environments will then be compared by analysing the results of simulation. The LOS provides expected changes to individual proposals and institutions, showing whether reform elements will succeed or not. The HOS will offer an overall figure, and taken together, the LOS and HOS approximate the amount of change allowing Japanese reforms to be compared against New Zealand's.

5 The Experience of NZP

5.1   Introduction

This chapter builds upon the examination of reform literature presented earlier but focusses on NZP through the lens of institutional economics. It is a retrospective observation of the process of changing a state-owned public entity into a profit-driven enterprise.

The chapter offers a contribution by synthesizing the existing literature and supplementing it with interview data I collected from expert participants. Resistance from the rural sector is widely acknowledged but internal resistance has not drawn much attention and thus formed a key section of the interview questions. Owing to a lack of attention in the literature, relationships between NZP and the unions also featured in the interviews, as did the reason why NZP was corporatised but never privatised.

The chapter is organised by tracking NZP's progression beginning with the institutional environment. The issues created by this environment are identified, leading to the drive for reform. Following this, the reforms are catalogued. The presence and influence of resistance forces are examined, including concessions and accommodations made. Underlying contextual factors, such as the macroeconomic climate, that may have affected reform implementation are discussed. The new institutional setting is identified and performance measurements are provided. A discussion of key factors in the New Zealand experience follows. Chronologically, Kiwibank was founded several years later and is therefore not included in initial analysis. As re-establishing a state-owned bank does at first appear contradictory, the chapter also includes a section focusing on Kiwibank's consistency with the reform ideology and placement within the new institutional environment. The chapter concludes by restating key findings and caveats concerning future developments at NZP.

5.2   Pre-reform Institutional Environment and Performance

The word 'institution' uses the demarcation provided by North: a formal or informal constraint upon human behaviour. An organisation is not an institution *per se*, but can be depending on the level of analysis. Consider a particular mail centre for instance, its institutional environment would include government-imposed

constraints *and* internal policies of NZP. In this study however, the post office ('NZP' after corporatisation) is considered in its entirety and is therefore not considered as an institution, but rather as an organisation. The component institutions comprising the environment are specifically the government regulations and policies imposed on the post office firstly as a government department and later as an SOE. Whilst broader, societal constraints do exist, this study holds them constant as they influence organisations throughout New Zealand.

Figure 5-1 illustrates the major constraints prior to reform. The outer ring represents the constraints themselves and the post office is placed at the centre, being affected by them.

Figure 5-1 Pre-reform institutional environment
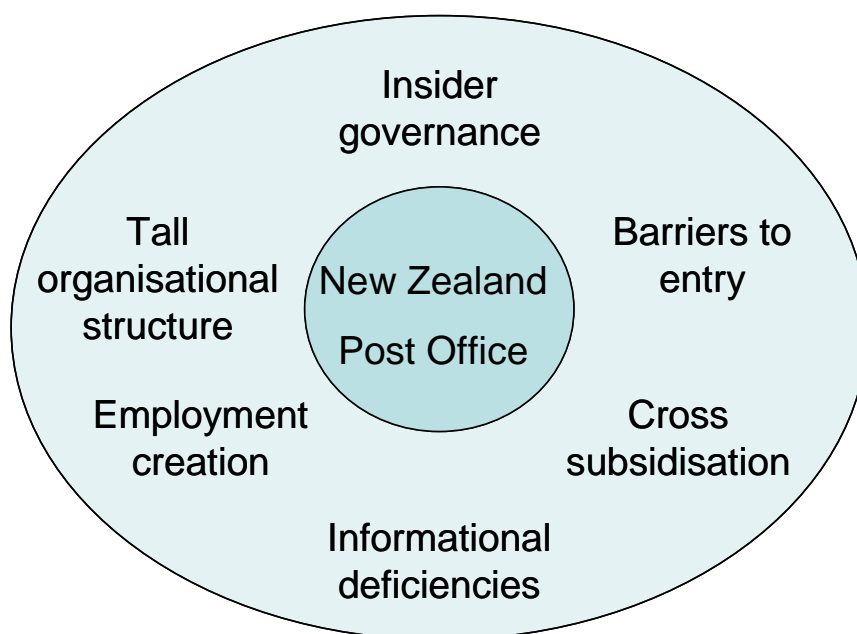
The New Zealand Post Office prior to corporatisation in 1987 operated as a department of state responsible to the Post Master General, a Minister of the Crown (Fogelberg, 1992). Corporate governance literature describes this arrangement as *insider governance* and creates a host of issues including internal resistance to change, opportunism, and agency problems. This constrained operations, as commercial goals were in direct conflict with social and political considerations (Evans, Grimes, Wilkinson, & Teece, 1996; Fogelberg, 1992).

The post office operated in a tightly regulated market and enjoyed protective monopolies in all operations; input and output prices were determined by government, with commercial concerns often subordinated to social or political objectives (Saunders, 2006). As well as providing postal services, the post office

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also regulated the postal industry (Evans et al., 1996; Saunders, 2006). This explains in part why the statutory monopoly was particularly strong. Together, the existing legislation along with the ability to regulate its industry autonomously formed powerful *barriers to entry*. Prior to 1987, there were no competitors in standard mail delivery and it would not be until 1998 that the industry became fully open to competition. Unsurprisingly, Saunders (2006) notes that operations, especially sorting, were highly labour-intensive and not automated.

The post office also provided banking and telecommunication services (Saunders, 2006; Toime, 1997). Cross-subsidisation was commonplace; telecommunications accounted for approximately 60% of total revenue and was often used to subsidise postal agency services (Fogelberg, 1992). *Informational deficiencies* is the name coined to describe the flow of information available to upper levels of management. Accounting methods were cash based (Dale & Ball, 1996). Coupled with a lack of accountants (less than 10), accurate information was rarely supplied and often delayed (Fogelberg, 1992).

The post office was also a source of job creation: when unemployment figures rose, staff numbers at the post office increased accordingly (Erakovic & Wilson, 2005; Fogelberg, 1992). Toime (1997) concurs, suggesting the cross-subsidisation of postal services made it possible to conceal structural unemployment and was an explanatory factor in combining communications and posts. Prior to corporatisation, it employed approximately 40,000 people (Fogelberg, 1992), operating a network of 906 full post offices and a further 338 postal agencies (Saunders, 2006). This institution has been labelled *employment creation.*

Finally, Kelsey (2003) notes that the department had a *tall organisational structure,* with as many as 15 layers of management (Erakovic & Wilson, 2005).

5.2.1 Links between institutions

The institutional environment in Figure 5-1 was the product of an interventionist state. The institutions were interlinked and self-reinforcing, creating many issues. These links produced a stagnant environment resistant to change as workers had no efficiency or productivity incentives.

Insider governance was strongly connected to every other institution. Regulatory authority was a critical factor in creating *barriers to entry*; any rational actor given the ability to remove competition would invoke such power. Placing

telecommunications and postal operations under a single ministry facilitated *cross-subsidisation.* Fogelberg (1992) notes that it was a political decision to subsidise the post, a typical flaw of *insider governance. Employment creation* also appeared via *insider governance*. The link between these two institutions explains to a degree why the post office exhibited such a lack of strategic capital expenditure as greater mechanisation would have reduced the government's ability to increase labour inputs, or at the very least complicated the justification of such staffing decisions.

  Barriers to entry were related to *cross-subsidisation.* Statutory monopolies prevented private entry, allowing posts to be subsidised by telecommunications without fear of losing market share. *Barriers to entry* also strengthened *employment creation*; isolating the post office from competition placed it in a position to absorb excess labour supply. It was simpler to increase labour inputs than to install sophisticated sorting equipment for instance, which also contributed to the state's goal of providing welfare. The absence of competition negated the need for strategic decision-making and therefore entry barriers smoothed the job creation process. *Insider governance, barriers to entry* and *employment creation* were therefore a trinity of sorts, with *insider governance* providing the political motivation for *job creation* and *barriers to entry* granting the post office the logistical means to carry out the policy.

  Barriers to entry were also connected to the *tall organisational structure*. It was inevitable that increasing layers of management emerged from operating as a traditional government department with a bureaucratic design. Such structures confer advantages of standardisation and a strong chain of command, which a government may well wish to capitalise upon, although they may also result from rent-seeking opportunism deriving from insider governance. Removal of barriers would create competitive pressure to reduce the hierarchy, particularly middle management, creating strong incentives to resist change. Postal workers were public servants, represented by a single powerful union, and had considerable backing which likely further increased their resolve to oppose changes.

  Barriers to entry also reinforced *informational deficiencies.* In a competitive environment, transfer of useful information on a timely basis is critical to organisational survival. In the absence of competition, there was little incentive to improve information systems and thus the legislative monopoly linked directly to the ineffective use of information. This linkage contributes to the explanation of

the inefficiencies and subsequent annual losses the department created as protection fostered complacency and reduced innovation.

Cross-subsidisation linked to *employment creation*. In effect, receipts from telecommunications were used to pay additional personnel. Without cross-subsidies, labour costs would have had to be financed through other alternatives, diverting funds, additional taxes, or public debt. *Cross-subsidisation* was therefore an expedient solution to *employment creation*. Adding employees to postal operations was simpler than telecommunications for a number of reasons. Firstly, the lack of capital investment implied that labour inputs had to be used instead[47]. Secondly, skill requirements for postal operations were less than telecommunications, and thirdly, the use of temporary, casual, and non-classified staff offered an easy way to increase staff numbers. Indeed from 1981 to 1986, temporary, casual, and non-classified staff numbers increased by 14.4% whilst permanent staff levels remained almost constant (Statistics New Zealand, 1986).

The combination of being isolated from competition, governed internally with poor information systems, hampered by an inflexible organisational structure and burdened with a large pool of (often inferior) labour created an organisation that was ineffective in terms of customer satisfaction and unwilling to change. These factors produced an institutional environment incompatible with service performance and lacked incentives to foster productivity and efficiency, resulting in annual losses, poor customer service, poor asset management, and cross-subsidisation. In other words, there was no economic rationale for improvement; the pre-reform organisation was simply not designed with competitive efficiency in mind.

5.3   The Drive for Reform

The intention to corporatize NZP was set within the context of sweeping public and private sector reforms. New Zealand's global competitiveness had fallen and the country faced a number of economic and political issues (Wood, 1995). Many of the proposed reforms were drafted under the intellectual climate of neoliberalism, which had gained much credibility both domestically and overseas (Cardow, Tripe, & Wilson, 2011; Kelsey, 2003; Woods, 2006). Under the principle

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[47] The total amount of consigned deliveries in the early '80s was increasing, further easing the justification for more employees.

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that the state should own major national infrastructure but not control it (Cardow et al., 2011), there was also an underlying belief that governments should focus upon governance and not the production of goods and services (Fogelberg, 1992). To illustrate the scale of state involvement, "10% of national income in 1986 was spent on the Post Office, the Lands and Survey Department, the New Zealand Forest Service, and the Ministry of Energy" (State Services Commission, 2002, para. 30).

One of the government's primary aims was to reduce state presence in the economy and many state-owned assets were prepared for eventual privatisation. However, even if considered in isolation, the post office presented a number of issues. Another driving influence was the desire to disentangle conflicting objectives. Social and commercial requirements created internal inconsistencies and it was evident that social requirements were given more credence by preceding administrations (Fogelberg, 1992). Saunders (2006) notes a third goal was to raise profitability. In 1986, the year prior to corporatisation, the post office booked a $37.9 million loss despite raising standard postage stamp prices from 25c to 40c. The shift in economic thinking championed by the Chicago Business School led many of the government's more influential officials, particularly in Treasury (Wood, 1995), to focus more on economic efficiency.

Kelsey (2003) also states that the post office was inefficient and privileged. She cites some of the reasons why it created such a drain on public funds, chiefly through over-employment, excessively labour-intensive operations, over-capitalisation in property with a large number of loss-making rural offices, and provision of services below full cost. This is reinforced by Toime (1997), who states that the cross-subsidisation receipts from telecommunications removed the incentive to improve productivity. A fourth aim therefore, was to raise efficiency and separate the business entities thereby necessitating self-sufficiency.

The literature does not describe the relative importance of these goals. When asked to place the objectives in rank order, data collected from the interviews produced a broad consensus indicating that reducing state presence was the most important. Table 5-1 elaborates.

Table 5-1 Rank order of government objectives

Goal of reforms	Rank of importance
Reduce the presence of the state	1
Disentangle social and commercial concerns	2
Increase efficiency	3
Raise profitability of the postal SOE	4

These results were largely consistent among the interviewed experts despite differing ideologies. During the sessions, one comment made was that increasing efficiency was always going to be an important aspect. Postal services have been said to be an element of a country's infrastructural services along with telecommunications (Participant 4, Personal communication, August 27, 2012) and as such, maximum efficiency should be pursued to avoid unnecessary resources being diverted from more productive areas of the economy even if profitability itself were not possible. Government did not fully expect the post office could be made to produce a profit and therefore profitability appears as the least important objective.

Figure 5-2 summarises the issues that the pre-existing institutional environment created. These issues produced the perceived drive for reform. Note that as part of a wider reform programme, exogenous pressure has been omitted for clarity.

Figure 5-2 Issues leading to drive for reform

I also questioned whether the post office was a critical element of the reform process or if it was included as a matter of expedience. Data show four major factors why the post office was made part of the overall package:

1. aggregate reform,
2. Telecom separation,
3. banking separation, and
4. public salience.

With respect to aggregate reform, inclusion was a matter of course as exclusion would have been inconsistent with the ideology and necessitated specific legislation. As participant two mentioned, "…there were several things happening at the same time, there was Telecom, that was happening, rail was happening, post was happening, they probably [thought]: get on and do the lot." (Personal communication, July 26, 2012).

Separating Telecom from the post office raised an interesting point. Whilst there was a desire to reform the post office, the telecommunications arm was particularly attractive as it was seen being more lucrative. As a result, reforming the post office was requisite to privatising Telecom. This is encapsulated by a submission from participant four:

> …in the UK by now the 'T' part of the P&T department had been split off and so the telecoms were going their own way; telecommunications [were] clearly becoming the bigger force, so that was a pretty easy call to make. (Personal communication, August 27, 2012).

Separating the Post Office Savings Bank from the other two entities was also a relevant point as a matter of consistency. Whilst the bank was much smaller than postal services or telecommunications, it was salient in terms of the underlying ideology. The bank's social functions conflicted with neoliberal ideologies and the Mason-Morris review[48] engendered these principles, recommending that the postal bank be made into a third distinct entity.

The final point of public salience suggests that whilst not central to the process, NZP and Telecom would come under closer observation than other elements as changes here would be more keenly felt by the average citizen. The two organisations would also serve as unifying banners for support and opposition, and used as precedents for other SOEs.

In summary, the post office was an important part of the reforms as it included a number of infrastructural services but it was not at the core of the programme, as was the case in Japan. It was significant however, in the sense that it would be a pioneering SOE.

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[48] A government-commissioned external review.

5.4   The Proposed and Implemented Reforms

The Mason-Morris review recommended the department be divided into its three constituent units (Fogelberg, 1992; Saunders, 2006). Regulatory functions would be separated from operations and transferred to the Department of Trade and Industry[49] (Saunders, 2006).

The separated business units then became SOEs subject to the State Owned Enterprise Act of 1987. This law clarified the objectives of an SOE through three major stipulations. An SOE must:

- be as profitable and as efficient as a comparable business that is not owned by the state,
- be a good employer, and
- have regard for the community in which it operates when able to do so (Fogelberg, 1992; Kelsey, 2003).

The Act charged management with realising profits as a private company would, distinctly removing conflicting social and corporate objectives. Should the government request an SOE to carry out socially motivated operations, the Act also required commensurate compensation payable to the SOE (Fogelberg, 1992).

Separating the three units was a critical development and therefore was a focal point of the interviews. The data suggest four major explanatory factors:

1. commitment to reform,
2. desire to sell Telecom,
3. driver disassociation, and
4. change management.

'Commitment to reform' represents both the will and the means to carry out changes. The desire to make government departments into viable private-sector entities was a key motivator, and the SOE Act was the manifest output of that desire. The government also held an enviable position, backed by the public, business leaders, and the media. Expectations of improved services, wages, and working conditions contributed to this support. Additionally, the speed of reforms was important. The government passed reforms rapidly, so much so that many of the

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[49] This later became the Ministry of Economic Development.

major elements had already been implemented before some of the costs became apparent.

Telecom's sale was expected to produce considerable funds but the government was doubtful about finding domestic buyers and thus had to appeal to overseas investors. Separating postal operations from telecommunications was logical as the two industries faced different drivers and competencies. Prospective buyers would also not have suffered universal service obligations pertaining to postal networks lightly.

In regards to differing drivers, operating the various services under a single government department involved either complexity in training or replication of cost centres. Indeed, under the old system there were heads of the three different units already present so a state of quasi-separation was already in effect. Formal severance would therefore allow each company to pursue efficiency autonomously without conflicting business drivers.

Change management is the final factor and this was more important for separation proper. The data indicate that decisions were made at high levels and executed very quickly. Importantly, these decisions were made under the principles of outsider governance by private sector players. However, participants two, three, and four note that unions and workers were handled carefully; conflict was actively avoided and a more conciliatory approach was pursued[50]. This helped reduce internal friction and contributed to reform implementation.

NZP shares were initially held by the government; 50% by the Minister of Finance, and 50% by the Minister of State Owned Enterprises (Fogelberg, 1992). The shareholders then appointed a board of directors and met every three years to reach contractual agreements on the nature and scope of activities as well as performance targets (Saunders, 2006). The government expected to sell its stake in NZP within a few years. While Kelsey (2003) noted that the government intended to use as many outsiders as possible, the first board of directors only made two outside appointments at senior management levels. Further outside vision was brought in later (Participant 4, Personal communication, August 27, 2012). NZP was subjected to the same system of checks and balances as others in the public sector (Saunders, 2006).

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[50] At least in the postal service. Telecom's experience was much less conciliatory.

New legislation addressed the competitive environment. The Postal Services Act of 1987 reduced the monopoly to apply only to letters weighing less than 500 grams or where the postage payable was equal to or less than $1.75, however it preserved NZP's authority as sole issuer of stamps (Saunders, 2006). The act also imposed changes to NZP's financial accounting and reporting procedures (Saunders, 2006), requiring transparent accounting arrangements that would prove that it was not using its monopoly over standard mail to cross-subsidise other operations open to competition (Fogelberg, 1992).

One of the important features was the lack of a *legislative* universal service obligation; instead, a Deed of Understanding was drafted. This was a *contractual* agreement between NZP and the government, specifying the frequency of deliveries, penetration of the network, and pricing limits on standard mail (Saunders, 2006). The requirements were imposed in exchange for maintaining the statutory monopoly NZP enjoyed regarding official stamp issue (Erakovic & Wilson, 2005). The Deed's terms could be renewed every three years and if the government were to consider allowing other operators to issue official stamps the terms would be reviewed (Saunders, 2006).

The 1998 Deed is still current in that NZP must maintain a network of 880 outlets including at least 240 post offices[51]. In 2010, however, minor variations surrounding delivery on public holidays were installed (New Zealand Post, 2010). Similarly, the actual number of Post Shops[52] and post outlets currently in operation are considerably more than the Deed specifies (Saunders, 2006). Prices for standard letters as per the 1998 Deed were capped at 45 cents for three years (New Zealand Post, 1998). The most recent Deed does not specify any pricing caps (New Zealand Post, 2013a). Thus, whilst this may give the appearance of a universal service obligation, it is important to note that requirements were, and still are, rather loose.

When the Postal Services Act was amended in 1998, it fully deregulated the industry. Private operators can now deliver standard mail. NZP is still the sole issuer of official stamps although private operators may join the Universal Postal Union if they wish. None have applied to date (Kenny, 2009) but there is a provision that

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[51] Recall that as a government department, the network included 906 post offices.

[52] Post Shops are staffed by NZP employees, post outlets are outsourced.

allows them to sell their own unofficial stamps[53] (Saunders, 2006). Interestingly, the true threats that NZP faced were not from direct competition, but technologies that have replaced postal services (Participant 2, personal communication, July 26, 2012).

Reforms to unions were also proposed and there is now no union specifically for postal workers or postmasters. They were incorporated into the Engineering, Printing and Manufacturing Union – one of New Zealand's largest (Kenny, 2009).

Finally, having separated the business units and prepared them for eventual deregulation, the intention was to privatise them (Kelsey, 2003). Postbank and Telecom were sold but NZP remains a corporatized SOE. The reason for not privatising NZP is not apparent from the literature, but the data provide three explanatory reasons:

1. political unpopularity,
2. the success of NZP, and
3. regulatory conditions.

By 1989, privatisation had fallen from public favour as the costs of transition began to bite. Privatisation became politically divisive whereby constituent support was often based upon the member's position. Experiences with forestry and Telecom left many disillusioned and it was not politically feasible to privatise NZP in such an environment. Even so, management had prepared the groundwork and NZP was due to be listed following Contact Energy's initial public offering, however upon National's defeat, further privatisation plans were indefinitely postponed.

NZP had also become commercially successful, returning dividends and taxes whilst building a strong public image. In addition, to this day there is a sense of pride in the company and consequently little reason to sell it. Kiwibank has further strengthened the aforementioned points.

Finally, the regulatory conditions today are such that privatisation is somewhat redundant. The current situation is one of 'effective privatisation' via deregulation. Under the Deed of Understanding, prospective buyers would have to

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[53] Such stamps cannot bear the words "New Zealand" unless they form part of the company name, which must appear unabbreviated in the same type face and scale as the company's registered trading name.

shoulder those responsibilities. By comparison, the protective monopoly has been removed, network access is assured, and entry barriers to postal delivery have been eliminated. Should an organisation be motivated to begin operations it would be simpler to invest privately than attempt a take-over of NZP. It is possible to suggest, however, that standard mail delivery[54] constitutes a natural monopoly. Whilst some private operators have intermittently entered, few have survived (Participant 3, personal communication, August 3, 2012). Those that remain tend to focus on niche markets such as business customers, rural deliveries and courier services. Even so, competition is fierce and working conditions are harsh (Participant 2, personal communication, July 26, 2012). As of this writing, the entire market is populated by 22 operators including NZP (Ministry of Business Innovation and Employment, 2013). Given that the market is competitive and effectively dominated by an efficient natural monopoly, there is little reason for complete privatisation.

5.5   Vested Interests, Lobbying, and Resistance

5.5.1   Operations level management

Privatisation often faces resistance from management or employees, and sometimes both. The literature surrounding NZP provides no significant evidence of either and therefore was a point of interest in the interviews. Three explanatory factors have been identified:

1. oppositional marginalisation,
2. employee engagement, and
3. change management.

Staff at NZP were largely unable to resist changes because similar events were unfolding throughout the public sector. Employees were understandably anxious, particularly middle and lower management, but they accepted that changes had to be made in light of the reforms being implemented on a national scale. The unions were also cautious of public action and the internal handling of initial challenges weakened the unions later on. Unions themselves were being restructured; being placed in competition with one another reduced their power. Consequently, the weak position of employees and unions meant there was little they could do.

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[54] Excluding courier services and rural mail.

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Nevertheless, employees were given opportunities for advancement, promotion, and responsibility, and were excited to be a part of the reform process. At the same time, NZP offered generous exit packages, which incentivised supporters to stay and detractors to withdraw. Employee engagement was articulated soundly by participant three: "Yes, I think they relished it, the people who remained with the reformed business." (Personal communication, August 3, 2012).

Change management is the third factor identified in explaining the lack of internal resistance. NZP pursued a cooperative approach with unions and employees, going so far as to assist transfers to the new union. They also kept as many employees as was economically viable. Corporate culture was transformed and the shift in paradigms resulted in much greater involvement. Participant four provided an excellent example of this: employees initially argued for price *increases* to reduce the pressure to improve productivity but now are actively engaged in efficiency drives and looking for ways to *reduce* prices. Employees at NZP today exhibit an unwillingness to return to the pre-reform paradigm, such was the acuity of management in fostering change.

5.5.2   Divisional and strategic level management

Fogelberg (1992) states that in preparation for the 1987 transition, an interim board of directors was appointed by the shareholding ministers and consisted of five individuals from the private business sector, one trade unionist, and two political nominees. Later, a permanent board was assembled, consisting of six non-political appointments drawn from private businesses (Fogelberg, 1992). The data indicate two factors that reduced resistance to change.

The first has been termed 'management revitalisation'. The appointments of Harvey Parker and Elmar Toime by the board headed by Michael Morris were a clear example of agency theory. Parker came from Australia following the privatisation of Telstra. Under Toime, NZP began appointing more outside managers as incumbents retired. Bringing in these new personnel injected new ideas and thinking, helping convert the organisation into a commercial entity.

'Employee engagement' reappears as the second factor. Incumbent managers who supported the changes were heavily invested in. A strong working relationship with the union was also important; participants two and three both acknowledged that during the transition the union itself worked alongside

management, persuading line-level staff to adopt changes. Consequently, these two categories indicate how outside management was instrumental in reducing internal resistance.

5.5.3   Union relations

An important aspect in terms of overcoming resistance from employees was the early involvement of the unions. According to Kenny (2009), both management and the unions wanted to preserve industrial stability; neither party saw advantages in drawing attention to the organisation and this reduced conflict. Toime (1997) states that involving the workers' union from the outset and emphasising the need for change and competitive behaviour resulted in a cooperative relationship allowing changes to be implemented quickly and purposefully. The interview findings concur, but they reveal a limiting factor: NZP was the first significant negotiator under the new system and prudence had to be exercised in light of any precedents set. From participant four:

> …but in this one we were on our own, we were a flagship negotiation and so if we had agreed to a significant wage increase or something like that, that would have been a bellwether for the economy. (Personal communication, August 27, 2012).

This caution exposed management to a degree but was mitigated by a constructive relationship and recognition of new drivers. Growth and productivity also meant strong jobs were being established, assuaging union concerns.

Fogelberg (1992) also states that the trade unions saw reform as inevitable and accepted it with reservation but not resistance. Unions received advanced warning of the company's intentions regarding strategic direction and their reactions were taken into account when implementing changes. The data corroborates this but also indicates that removing public servant status made union negotiations easier as agreements were now private as opposed to affecting all public servants. Similarly, union power had diminished significantly by the time reforms were implemented. Kelsey (2003) however, notes that there were industrial disputes regarding working conditions and pay but does not say if the workers were opposed to reforms themselves. Nevertheless, the collaborative approach between management and the unions was an important factor in reducing resistance.

5.5.4 Rural reaction

Resistance was apparent in the rural sector, particularly from the Federated Farmers Women's Group (Participant 3, personal communication, August 3, 2012). The government received some 300 submissions opposing post office closures in rural areas, although rural delivery only made up 8.9% of delivery points (Saunders, 2006). Several legal attempts to block closures were dismissed by the courts, who concluded that the new corporate directive implied that NZP only had to 'have regard' for the community and was not obliged to maintain unprofitable services (Kelsey, 2003).

The literature suggests that it was not the loss of postal services rural residents opposed[55] (Scott, Bushnell, & Sallee, 2005), but rather the loss in banking services previously supplied through Postbank (Saunders, 2006). Although electronic banking has since become more common, there is not sufficient evidence in the literature to suggest this was able to overcome rural resistance. The data however indicate that much of the rural opposition centring on NZP resulted from its symbolic status of reform. Whilst irresistible changes were being made in other parts of the economy, there was a sense that certain concessions could be gleaned from NZP or the state.

5.5.4.1 The rural delivery fee

In 1991, the National party (conservative) took power and continued the reform process (Kenny, 2009). The party had a large number of rural votes and allegedly attempted pressuring NZP to cross-subsidise rural deliveries (New Zealand Business Roundtable, 1992). Nevertheless, in 1992 the annual rural delivery fee was doubled from $40 per year to $80 (Kelsey, 2003; New Zealand Business Roundtable, 1992), although this decision was not made without consultation (Smith, 1997). NZP met with Federated Farmers, who were initially supportive and understood that the company now had to respond to commercial drivers. The doubling of the fee was made during the time of least profitability and rural deliveries were still being cross-subsidised; even then it was a compromise between the two parties (Smith, 1997). The increase therefore was consistent with reform ideology but also reflected management's conciliatory approach.

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[55] The number of postal agencies actually *increased* from 1987 to 1989.

Nevertheless, rank-and-file members of Federated Farmers grew increasingly frustrated with higher fees. Members of the National party also began to add their own voices and the leaders of Federated Farmers were forced to reverse their position (Smith, 1997). The organisation sued NZP to remove the fee but the case was dismissed, following the same legal precedent as post office closures (Kelsey, 2003; Smith, 1997). Later however, in 1995, NZP unilaterally removed the fee completely.

The incumbency of a National government coupled with the removal of the fee in a reformed, neoliberal environment has drawn some criticism, arguing that the move was politically motivated. This study therefore placed particular emphasis on the matter to develop a clearer understanding. The interview data were narrowed and refined until three broad explanatory factors were uncovered:

1. political pressure,
2. economic rationalisation, and
3. strategic decision making.

It would be naïve to suggest that there was not at least an attempt to exert political pressure. Federated Farmers was a powerful interest group working closely with National party members. However, there is an absence of evidence in the literature to suggest that following the losses in court, pressure was successfully directed at NZP. The data offer a stronger case to the contrary: "…the doubling of the rural fee was internal, and its removal was totally internal – there was no advice, suggestion, [or] discussion with [the] government on that point" (Participant 4, personal communication, August 27, 2012). Similarly, referring to the economic and strategic rationale, from participant three: "[A top manager] told me why they did it – I stand by that earlier answer" (Personal communication, August 3, 2012). Note that public sector reforms were specifically created to remove cases of undue influence such as this. Whilst the removal of the fee in a user-pays environment does appear to be inconsistent, it can be better explained via economic and strategic rationale.

By the mid-1990s, many of the company's operating costs had been significantly reduced. Similarly, the expansion of courier services and substitute technologies also played a role, participant one stating, "…there has been a huge decline of mail vis-à-vis courier, but there has also been a huge decline of mail vis-à-vis electronic communications. So the importance of the snail mail is hugely

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diminished." (Personal communication, July 25, 2012). Saunders (2006) also notes that the policy was enacted as part of a wider rebalancing of prices and efficiency gains the company had made, passing savings on to customers. Participant four also noted that the expansion of contracted rural carriers converted many fixed costs into variable ones – a particularly important attribute for what was described as a "fixed-cost industry" (Personal communication, August 27, 2012). As the service was now profitable, removal of the fee was economically justifiable.

Most important was strategic decision making. Post office closures and legal battles had damaged NZP's public image and the rural delivery fee was seen as further provocation. The company recognised that brand value and positioning would become greatly important in a potentially competitive and deregulated environment, thus the decision to remove the fee was a strategic choice to improve public perception. Losses in revenue from the abolishment of the fee were more than compensated for in gains to intangible assets, as indicated by participant four, "…public favourability was an important component in a State Owned Enterprise and therefore it was worth it for the brand value" (Personal communication, August 27, 2012).

This also had long-term implications as the company foresaw physical mail giving ground to electronic and thus had a business plan to reintroduce banking at some future point. A strong public image would aid future developments, once again drawing from participant four: "And so later on when we wanted to argue for Kiwibank or do some other diversifications and so on, there was a high degree of support and trust for the company" (Personal communication, August 27, 2012). In conclusion, the actions taken by NZP were not politically influenced, nor were they inconsistent with reform ideology: the dictum of shareholder wealth maximisation was adhered to by favouring long-term profitability over more immediate results.

5.5.4.2 Later concerns

Further opposition from the rural community was evident through submissions regarding the 1998 amendment to the Postal Services Act[56]; Federated Farmers wanted to secure free rural delivery in law (Kelsey, 2003). Other submissions against the bill were largely based around costs of services, security, privacy, and liability for damages on the part of private carriers (Kelsey, 2003). The

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[56] Although the Act was widely supported by postal management, business interests, *and* competitors.

government appeared to yield to this pressure as the 1998 Deed of Understanding – signed under National – specified that NZP may not reintroduce a rural delivery fee (Kenny, 2009). Intuitively however, NZP would most likely never reintroduce the fee as it would damage their carefully built image.

An analysis of the interview data presents three distinct categories that demonstrate how rural opposition was negotiated with and minimised:

1. internal factors,
2. external factors, and
3. regulatory factors.

Whilst NZP inherited the postal network and concluded it was too costly to maintain in its present state, the company also realised that in order to build goodwill and brand value a 'balanced score card' approach was needed (Participant 4, personal communication, August 27, 2012). This measurement framework includes strategic non-financial metrics[57] as well as traditional tools, providing managers with a wider view of organisational performance. Increases in service performance, broader agency networks, removal of the rural delivery fee, lower standard postal rates, and the establishment of Kiwibank were all initiatives that added value for the public, offsetting societal losses of post offices proper.

As previously discussed, banking services were one of the most salient issues. Despite its prior connections, the banking entity was now separate and thus NZP cannot be accountable for service deterioration. Whilst it created transitory issues for rural residents, the expansion of the ATM network, internet, and mobile banking has made much progress in returning services.

Finally, the SOE Act clearly defined SOEs as profit-oriented businesses, not social agencies. Regulatory factors were instrumental in settling legal debates; if specific social considerations were to be included they would have to be explicitly funded under Section Seven. The other key component was to separate the government from the SOE thus preventing undue influence. Indeed, the very motions initiated by rural groups were attempts to apply political pressure that the reforms were designed specifically to *remove*. The regulatory factors therefore were particularly effective in overcoming resistance but NZP saw them as a last resort as there were costs in terms of public image to consider.

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[57] Examples include customer satisfaction and organizational learning.

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5.6   Factors Aiding and Hindering Reform

The underlying macroeconomic conditions were conducive to reform. Many writers note that the government of 1984 realised that New Zealand was facing a broad range of issues (Kelsey, 2003; Scott et al., 2005; Wood, 1995). From the interviews: "There were pressures and adjustments that were needing to take place" (Participant 1, personal communication, July 25, 2012); "The New Zealand economy had been kept in a straitjacket between '80 to '83, '84" (Participant 3, personal communication, August 3, 2012); and finally, "And so in thinking about the entire economic competitiveness of the economy of trying to break it out of this high level of protectionism exactly as you've described, one facet was the reform of the public sector" (Participant 4, personal communication, August 27, 2012).

The sheer scale of reforms and the government's single-minded approach was a contributing factor. Additionally, Wood (1995) states that the consensus among New Zealand's central leadership was that no interest group would be impervious to change or permitted to sway the course of reform. Kelsey's (2003) viewpoint differs, asserting that any arguments against the proposed changes were dismissed as lobbying by vested interests. The data also show the government's drive to implement change was a key factor. As might be expected, some described this resolve as 'determined' whilst others labelled it 'ruthless'. Irrespective of one's view, the motivation and unity of the government aided the process of reform.

Another contributing factor was the freedom granted to reduce labour inputs and outsource to external contractors. Being far less profitable than urban delivery, rural delivery is commonly a point of conflict. In the case of NZP, contractors were selected via a bidding process. Those who won the contracts then collected rural mail from a local mail centre, sorted, and delivered it (Saunders, 2006). Contracts were renewed every three years subject to performance. Freedom to outsource to external organisations enabled fixed costs to be converted into variable costs (Toime, 1997). This freedom to reorganise operations without interference was an important factor in aiding reform. It also serves as an illustration of the internal consistency of the New Zealand reforms as the selection of rural delivery contractors can be seen as the use of competitive tendering to achieve a potentially competitive outcome.

Management at NZP competently implemented changes and took a path much less divisive than Telecom. The pain of downsizing employment was

carefully approached; management were concerned about maintaining favourable relationships with employees and unions.

Findings taken from expert interviews show that reforms were easier to implement as the 1984 National party was unable to respond after losing support from its central bastions to Labour. The lack of a strong opposition party meant that Labour could implement policies with minimal resistance. The public were exhausted with industrial action from the 1970s, blunting union power. Additionally, NZP was not the single focus of attention as much wider changes were taking place.

In summary, the data suggest five interrelated factors whose presence aided the reform process:

1. macroeconomic conditions,
2. political determination,
3. managerial acuity,
4. governance institutions, and
5. minimisation of opposition.

With respect to factors hampering reforms, towards the end of the 1980s and mid-1990s privatisation developed a stigma as reform costs became apparent, creating public hostility towards further sales. The National party rallied as ructions and divisions within the Labour party stalled progress. Eventually, the National party claimed power in part due to its campaign of no further asset sales, although they would continue their own reforms. Excluding political divisions and public rancour, the data were unable to define any other external elements that slowed the process.

5.7   Outcomes and Resulting Institutions

During the early 1980s, the post office lost $20 million per year on average (New Zealand Post, 2006). Without change it was expected to be $68 million in the 1987-1988 financial year (Scott et al., 2005) despite raising standard stamps to 45c from 25c (State Services Commission, 2002). Following corporatisation, NZP immediately began booking end-of-year profits (see Figure 5-3), 1988 represents the first year as an SOE.

Figure 5-3 NZP annual profits from 1987 to 2015
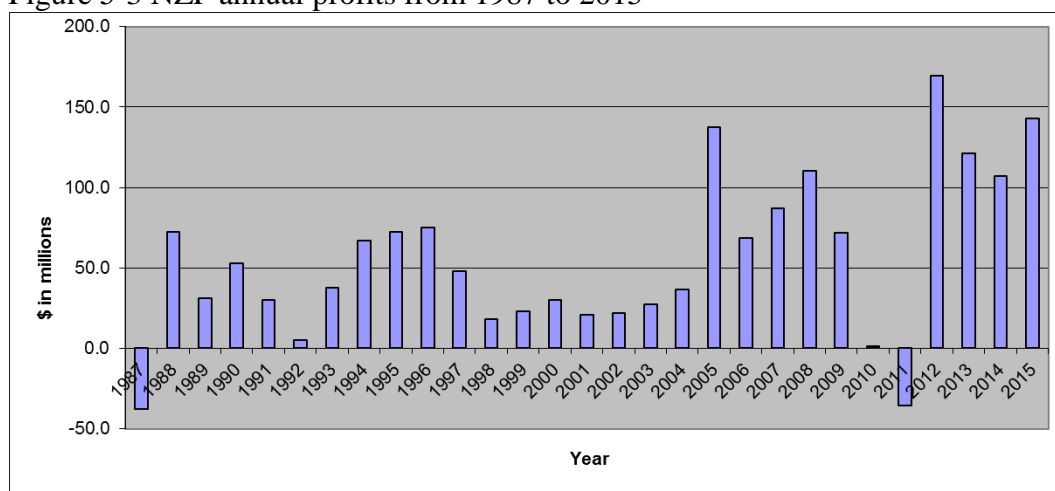
Sources (Kelsey, 2003; Kenny 2009, NZP Annual Reports)

The smaller figure shown in 1992 ($5 million) resulted from absorbing a non-recurring cost of restructuring (Toime, 1997). The 2010 figure of $1.3 million is the non-normalised figure including non-recurring items totalling $72.3 million (New Zealand Post, 2010). These profits were realised even after lowering standard letter prices to 40c, high annual inflation, and increases in consumption tax[58] (Fogelberg, 1992).

Prior to corporatisation, approximately 80% of mail was delivered the next day (Brash, 1996; Fogelberg, 1992). This increased to 98% by 1990 despite shedding 30% of the workforce (Brash, 1996; Fogelberg, 1992). Labour productivity also increased; by 1997, 20% more mail items were being handled by a workforce 40% smaller than the pre-reform post office (Toime, 1997).

Capital spending increased, and machinery investments reduced the cost of sorting by approximately 30% (Kelsey, 2003). Toime (1997) also states that the proportion of labour costs fell from about 75% to roughly 50% and in 1994, NZP was voted 'New Zealand Company of the Year'.

The new institutional environment contrasts starkly with the preceding one, see Figure 5-4.

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[58] Consumption tax is known as Goods and Services Tax in New Zealand.

Figure 5-4 Post-reform institutional environment

Deregulation

Flexible labour market

Contractualism

New Zealand Post

Output based policy

Outsider governance

Shareholder wealth maximisation
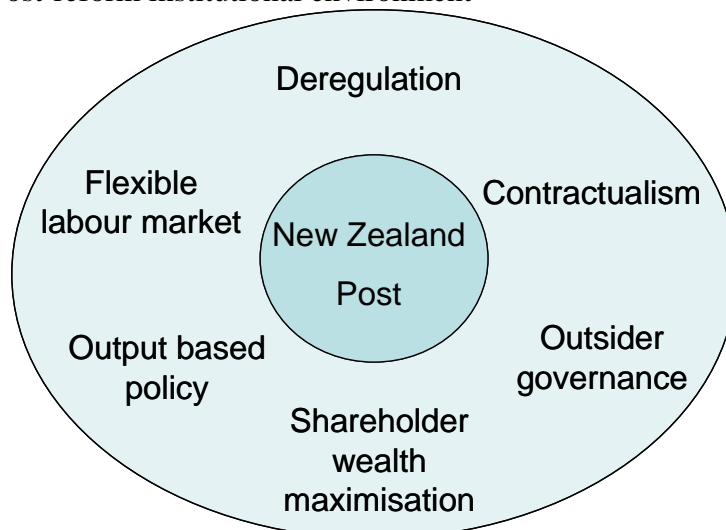
The market is open and lightly regulated, allowing entry subject to registration as a postal operator. As such, *barriers to entry* can be rewritten as *deregulation*, which includes level playing fields, light-handed regulation, and government neutrality.

At the time of writing, there are less than a score of companies competing with NZP. Economic theory suggests, however, that implied or potential competition provides incentives for efficiency and productivity, not just actual competition. Whilst exact figures of market share do not appear to be available, ITA Consulting (2010) notes that Freightways is the second largest competitor, occupying 5% of the postal market (Post & Parcel, 2006). As such, considering NZP's dominant position and the scale economies it can realise, the company resembles a natural monopoly. Nevertheless, physical mail volumes have been decreasing globally and NZP is responding by further increasing efficiency and exploring supplementary operations. Thus, whilst other firms are a source of direct competition and market entry is relatively simple, replacement technologies and services are providing much of the impetus for NZP to remain innovative and competitive.

Cross-subsidisation has been removed. What we now observe is a term other authors have described as *contractualism*. This arrangement no longer requires that one part of the business support another and the increased transparency of contracts, bidding processes, and accounting methods act as checks and balances to that effect.

Outsider governance and *shareholder wealth maximisation* are the new constraints guiding managerial decision-making. The presence of directors not

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appointed on political grounds is widely advocated by the privatisation. Similarly, the principles of *shareholder wealth maximisation*, which prioritises returns to owners, is an essential element in establishing an incentive structure that removes the influence of conflicting commercial and political objectives. Under the old system, corporate governance mechanisms could be better described as *stakeholder wealth maximisation*, providing socially admirable but uncommercial services. *Shareholder wealth maximisation* by comparison, as explicitly stated in the SOE Act, dictates that the organisation's objective is to produce profits and it need only have regard for the public. In this sense, NZP is no longer constrained by political goals and is only as accountable to the public as good corporate social responsibility models advocate.

The Employment Contracts Act and other reforms produced a more flexible labour market. The government also now designs policies based upon outputs and uses contracts extensively and has been described as 'government by contract' (Dale & Ball, 1996).

5.7.1   Links between institutions

The new environment is also interconnected and self-reinforcing although designed with different motivations and ideologies. As with the old environment, governance principles influence all the other institutions. *Outsider governance* is linked to *output based policy* as the state is now more concerned with outputs rather than inputs, implying much less (if any) direct involvement in the operations of the enterprise and enabling governance by outsiders. The state is therefore a passive investor and does not interfere as it once did.

In facilitating *outsider governance*, *contractualism* is the bridge that connects the state to the enterprise, specifying the objectives and requirements of the investor. The contractual obligations of NZP are specified in the SOE Act and Deed of Understanding, and NZP has the autonomy to pursue these objectives. Contractualism also extends to lower level agreements; NZP has contractual relationships with its postal agencies and rural delivery operators based on commercial principles.

Outsider governance is strongly tied to *shareholder wealth maximisation* as an embodiment of agency theory. In addition, the new charter for an SOE to function as a private firm provides the guiding principles for management to ensure

decisions are made with respect to commercial objectives for the express purpose of increasing shareholder wealth.

The *flexible labour market* is also tied to the governance institution by allowing management to autonomously determine labour inputs. No longer is the company used as a vehicle to absorb structural unemployment. Additionally, the removal of public servant status has simplified working relationships with employees as negotiations can be handled internally.

Finally, *outsider governance* is connected to *deregulation* as a requirement for consistency. The presence of an organisation operated by the state in a deregulated market presents an image of an uneven playing field. Such a scenario could result in the government using its powers to dominate competition artificially. NZP receives no such favourable treatment and thus must be self-reliant. This arrangement ensures that whilst NZP may be the dominant competitor, the playing field is level.

Shareholder wealth maximisation is reinforced by *output-based policy*. The focus on results, specifically profits, presents a clear objective and ensures management maximises shareholder wealth. This principle also applies to *shareholder wealth maximisation* and *contractualism*: the SOE Act is similar to a contract in that it specifies the obligations of an SOE. Explicitly requiring that the organisation be as profitable as a private firm encourages NZP to adopt the principles of *shareholder wealth maximisation*.

There is also an association between *shareholder wealth maximisation* and the *flexible labour market*. In pursuing maximum returns to investors, labour inputs must be carefully controlled, evidenced by the pre-reform figure of approximately 40,000 (Fogelberg, 1992) being reduced to 11,432 in 2010 (New Zealand Post, 2010). The ability of NZP to restructure its labour force is due in no small part to new labour regulations and this has directly, and positively, affected annual net earnings.

Lastly, *shareholder wealth maximisation* is supported by *deregulation.* Competitive threats ensure that the company remains lean and innovative. The minimization of costs and diversification into related products and services is a direct response to this. Thus, the deregulated market encourages *shareholder wealth maximisation* by providing competitive incentives.

Output-based policy, *deregulation*, and *contractualism* contribute to aiding the separation of governance and ownership. The contractual relationship specifies

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the roles and authority given to management whilst deregulation provides ongoing competitive pressure to remain efficient. Focusing primarily on outputs then separates government from operations. This triumvirate is important for reducing state presence in the economy whilst ensuring NZP remains competitive in an industry where the government has a significant investment but very little active involvement.

The *flexible labour market* shares a relationship with *deregulation* and *contractualism* for reasons of overall consistency. Market entry would still be possible given the reduced barriers but tight labour conditions would undo some of efficiency gains generated by the reforms. Likewise, giving NZP freedom to administer labour inputs autonomously is greatly supported by their own use of contracts – particularly so in postal agencies and rural delivery. Whilst the institutions of *outsider governance* and *shareholder wealth maximisation* create incentives to act as a private company, the interrelatedness illustrated here provides the lubricant for transactions to be conducted efficiently in the new institutional setting.

Combined, the new institutional setting produces a very specific objective: profitability. Whilst NZP offered concessions to rural residents, employees, and competitors (via competitive access rates), these decisions were made internally to reduce conflict and build goodwill. Fundamentally, these tenets serve to improve long-term profitability. This has been done within the context of an open market that is amiable to new entrants and provides the framework for business to be carried out with minimal interference. Ultimately, the new setting is unambiguous in its motivations and facilitates competition and efficiency.

5.7.2 Potential flaws

Despite these achievements, the interviewees identify some reservations and potential flaws. One surrounds rural communities, particularly in terms of access to communications technology and the greater prevalence of poverty in those areas. As access to communications could be argued to be a public good, these caveats are perhaps more an issue for the telecommunications industry than NZP but are still a salient issue for reform. Still, the interviews suggest that NZP could be considered as an infrastructural service, and providing that service as efficiently as possible is therefore important as it allows business customers to allocate scarce resources to more productive activities. Nevertheless, the reforms were designed to place service

provision on a commercial footing, hence some 'gaps' are inevitable. A second prevalent concern related to jobs displaced by restructuring not being reabsorbed elsewhere in the economy, although this is not unique to the experience of NZP.

Another possible flaw in the reform package was the failure to recognise future threats to postal operations from new technologies. The Mason-Morris review centred on separating the different units as per prevailing wisdom, but did not appear to consider changes to postal services owing to new technologies. Separating the different units followed international precedents, but perhaps providing the opportunity to restructure the postal network and take advantage of potential economies of scope may have proven a more effective long-term solution given the new commercially-oriented objectives. The subsequent establishment of Kiwibank to bolster profitability illustrates this point quite succinctly.

5.8   Key Factors in the New Zealand Experience

Several factors were instrumental in the New Zealand experience. These have been placed under three interrelated higher-order categories.

5.8.1   Political factors

- Political power and unity,
- speed of reforms,
- intellectual climate (neoliberalism),
- economic conditions conducive to reform, and
- consistency with reform ideology.

The Lange government of the early 1980s enjoyed unprecedented support and shared almost singular unity. The government had committed itself to state sector reform and there was a consensus that it had to be done. Tellingly, additional reforms began to flounder in later years owing to the formation of political rifts as the costs of reforms were felt and the public began to feel disillusioned with further privatisations.

The speed of reforms was an important factor. Rapid implementation took advantage of making vital but difficult changes whilst support was still strong. A more protracted and staggered approach may subject the populace to less pain at any given point but it also raises the possibility of dilutions or complete reversals

as political power wanes. Whilst the impacts of rapid reform are subject to debate, in the New Zealand experience, it was a critical factor in bringing about change.

The intellectual climate was another key feature. The view was that New Zealand would only prosper if all parts of the economy were open to competition (Wood, 1995). Brash (1996) makes a similar statement and points to the belief that the market is a better allocator of resources than government, a belief which the 1984 Labour party ascribed to. This was supported by Fogelberg (1992), who stated that the government believed that the business of government is governance, not the production of goods and services.

Economic crises can often spur action. The literature and data concur that New Zealand faced challenging conditions. The data also confirm that this was a motivating factor behind structural reform.

The final element coded under political factors is *consistency with reform ideology*. Corporatising an organisation is one thing, but preparing the regulatory framework and having the entity function as a private firm would is quite another. The new legislature gave SOEs the ability to pursue those goals in a competitive environment with minimal political interference (Kenny, 2009).

Respondents also note that the Deed of Understanding is consistent with reform ideology. Whilst similar to universal service obligations in some respects, it is a contractual arrangement. In the words of participant four: "Now in other countries because they are so politically weak, for example in the UK…it's an act of parliament. In New Zealand the Deed of Understanding could change just by agreement with the government of the day" (Personal communication, August 27, 2013). Importantly, NZP significantly outperforms all requirements set by the current Deed, indicating that its conditions are not a hindrance to the organisation. When placed in contrast with universal service concessions made in other cases such as those described by Baumol (1993) or Campos e Cunha and Cooper (1998), it can be seen that the New Zealand approach is internally consistent.

5.8.2 Legislative factors

- The State Owned Enterprises Act.

Expert data maintain that the SOE Act was vital because it specified the role of the company as a profit-oriented entity, applying *shareholder wealth maximisation* as a direct consequence and giving SOEs the ability to diversify and

divest where necessary. Furthermore, the Act provided the framework to separate ownership from governance and allowed managerial autonomy. These two elements form the final higher-order category.

5.8.3 Governance factors

- Separation of ownership and governance, and
- managerial autonomy.

The state appoints a board of directors who then assign management authority. Shares are held by two different ministries and regulated by a third. The Commerce Commission observes the behaviour of NZP to ensure fair competition (Kenny, 2009). With respect to the intellectual climate, this is an internally consistent arrangement as it separates ownership from control, reducing potential conflicts of interest. According to research participants, this is also important as it implies that any debates surrounding public policy and NZP are carried out at higher levels and removed from shareholder ownership issues.

By allowing NZP to make decisions in the same manner as a private company, the organisation was able to pursue its new corporate mandate. Kenny (2009) notes that NZP was freely able to start new business lines.

Managerial autonomy also extends to outsourcing and contracting. NZP has more than twice as many post centres than it does post offices (New Zealand Post, 2006). These are staffed by contracted agents (Saunders, 2006) and Toime (1997) asserts that this helped reduce costs. A restructuring of the organisational chart decentralised authority and reduced the layers of management which now number four or five (Erakovic & Wilson, 2005). Decisions regarding employee numbers can be made by local management (Kelsey, 2003). Similarly, following the removal of subsidies in 1988, NZP was able to close unprofitable post offices without interference. Finally, the founding of Kiwibank—whilst championed by The Hon Mr Anderton—was a proposal internally developed to remain competitive given shrinking physical mail deliveries.

Lastly and whilst not a factor unique to the case presented here, managerial acuity played an important role. A management team that engendered a change in paradigms but was also sensitive to the concerns of the workers and unions made progression much easier. Placing high importance to favourability ratings was a key

part of this and involving staff was significant in bringing about the necessary change in culture from public servant to employee.

5.9   Kiwibank

As part of NZP's corporatisation, the Post Office Savings Bank was sold to the Australia and New Zealand Banking Group in 1989 (Cardow et al., 2011). One may well question the establishment of the state-owned Kiwibank in 2001. This section offers a brief history of Kiwibank as well as a commentary on its placement within the institutional environment and ideology.

5.9.1   The formation of Kiwibank

Whist NZP was profitable, management foresaw reductions in earnings as new communications technologies arose (Cardow et al., 2011). Declines in mail volumes were also accompanied by greater levels of competition in parcel delivery as regulations were eased (Price, 2010). Banking, however, represented an attractive adjunct and management saw an opportunity to bolster earnings with financial services (Cardow et al., 2011).

Public opinion of the banks played a large role in the formation of a business strategy (Price, 2010). With the consolidation and deregulation of the banking industry, many branches were closing and extra fees were being introduced (Cardow et al., 2011). The banking sector had become dominated by large offshore players, predominantly Australian (Hess, 2008), and the combined decline in services, fee increases, and profit repatriation led to negative perceptions creating a call for a local bank that would look after the 'little people' (Cardow et al., 2011).

A business case was presented to the Taranaki Savings Bank and the Southland Building Society, the two largest New Zealand-owned financial institutions. Both declined. Support was later found with the leader of the minority Alliance party.

In 1999, the Labour party took power but only with the support of the left-leaning Alliance party (Marsh, 2005). This granted The Hon Mr Anderton significant influence and he expressed an interest in establishing a 'people's bank' (Cardow et al., 2011). The government was initially hesitant. Luke (2008) notes that SOEs are supposed to raise funding from private sector institutions and these agreements are based on standard commercial terms. Similarly, the Labour government had *removed* financial services from the post office in the 1980s.

By 2001 however, enough political pressure had been applied and Kiwibank was founded with $78.2 million (Cardow et al., 2011). Many argue that the decision was political rather than economic (Cardow et al., 2011; Fifield, 2003) as the business case itself was considered weak (Cardow et al., 2011; McIntyre & Tripe, 2009). Arguments for Kiwibank were familiar political rhetoric: railing against foreign dominance, and cries for supporting rural communities (Cardow et al., 2011). Kiwibank capitalised on these ideals in its marketing strategy, positioning itself as leading the 'New Zealand Resistance Movement' as its chairman, The Rt Hon James Bolger, puts it (Price, 2010).

5.9.2 Profitability

Nevertheless, Kiwibank exceeded expectations and was able to profit within three years of incorporation (Marsh, 2005). The CEO maintained that the low fee structure, local ownership and accessibility were key factors for building market share (Fifield, 2003). Another advantage was Kiwibank's late market entry because technology acquisition costs were lower than for more established banks (Marsh, 2005). The bank targets small to medium sized enterprises, as well as acting as a community bank for rural communities (Price, 2010). Financially, it has performed admirably, with lower impaired and past-due asset ratios than industry averages (Cardow et al., 2011). Disregarding losses in the initial years of growth, Figure 5-5 presents the profit figures from 2005 to 2015.

Figure 5-5 Kiwibank profits from 2005 to 2015
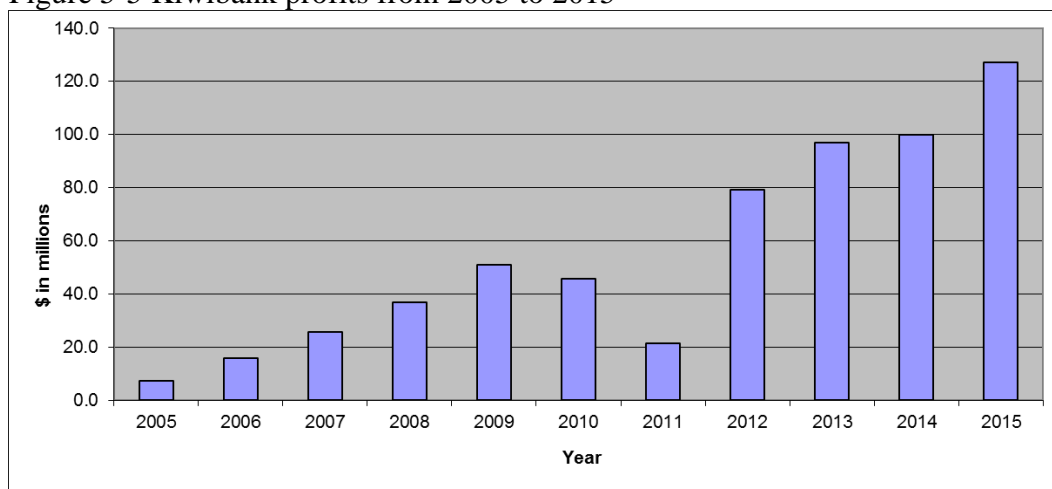
Source: NZP Group Annual Reports (2005-2015)

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Despite these successes, there are potential concerns. Low average deposits and high customer numbers present a risk in terms of transaction processing costs (Fifield, 2003). Secondly is the contribution to the group's total profits as Figure 5-6 illustrates.

Figure 5-6 Contribution to NZP from Kiwibank

Group profits in 2010 are drawn from the normalised annual profits which removes the effect of one-off, non-recurring items. In 2011 the group booked a loss although Kiwibank itself was profitable. Contributions to group net earnings are presented in Table 5-2.

Table 5-2 Contributions to NZP from Kiwibank

Year	Group profits	Kiwibank profits	% contribution
2005	137.2	7.2	5.2%
2006	68.7	15.8	23.0%
2007	86.8	25.5	29.4%
2008	110.2	36.8	33.4%
2009	71.8	51.0	71.0%
2010	73.6	45.8	62.2%
2011	-35.6	21.2	-59.6%
2012	169.7	79.1	46.6%
2013	121.0	97.0	80.2%
2014	107.0	100.0	93.5%
2015	143.0	127.0	88.8%

The data show Kiwibank becoming a vital component of total net earnings. A continuation of long-term trends presents a possibility, although remote, that returns from postal operations may become unprofitable whilst overall gains are predominantly attributable to financial services. This could potentially develop to the point where we may observe a return to cross-subsidisation.

5.9.3 Kiwibank's place in the new institutional environment

In terms of *deregulation*, Kiwibank is congruent with the new setting despite some irregularities. Kiwibank is situated in a competitive environment and operates on an equal footing to private banks. The restraint shown by government in not isolating Kiwibank from competition and allowing it the same autonomy as a private bank prevents it from being an exception to neoliberal ideology.

Political influence likely played some role in bank's founding as the Alliance party enjoyed the luxurious position of 'king-maker'. Yet although the provision of financial services touted as a 'people's bank' does contribute to achieving social objectives, these services are provided without special conditions. More to the point, they are profitable, which is the founding principle of the SOE Act.

Viewed from the perspective of NZP, establishing a bank within its network makes sound commercial sense given declining physical mail. Ignoring the source of capital funding, the motivation to establish Kiwibank was profit-rather than socially-oriented. As a result, whilst there was a degree of political motivation in Kiwibank, commercial interests were the key component. The creation of the bank is therefore consistent with the ideals of shareholder wealth maximisation.

Compliance with shareholder wealth maximisation is also visible from recent decisions to close six branches in Christchurch (Brown, 2009). This was said to be the result of signals from government to SOEs to lift dividend payouts. Providing management is charged with profitability and has the mandate to restructure as it sees fit, the bank will likely continue to operate consistently within the new setting.

There is, however, the issue of government funding[59]. Two factors partially mitigate this, the first being that whilst the government does technically own the bank it does not govern it. The second is that the concentration of government funding in relation to total financial liabilities is relatively small, 4.84% in 2007 (New Zealand Post, 2007) and 5.88% by 2010 (New Zealand Post, 2010). Interestingly enough, the National Government signalled that it might consider the possibility of selling shares in Kiwibank to New Zealand investors as part of its 2011 election campaign (Cardow et al., 2011).

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[59] Recall, SOEs are supposed to raise funds from the private sector.

In terms of governance, the board of directors consists of seven individuals, four of whom are related parties by extension of the parent company. Only three are fully independent (McIntyre & Tripe, 2009). Transforming data provided by McIntyre and Tripe (2009), 43% of Kiwibank's board is composed of independent directors, slightly less than the industry average (49%). A redeeming quality however is the presence of directors with varied political stances, the Rt Hon James Bolger having served with National and the Hon Dr Cullen from the Labour party.

The largest concerns lie in potential conflicts of interests with the parent company and possible returns to cross-subsidisation. McIntyre and Tripe (2009) show that total assets of the parent are $2.5 billion, while Kiwibank's total assets breached $10 billion in 2010 (New Zealand Post, 2010). As it stands, NZP is Kiwibank's guarantor (McIntyre & Tripe, 2009). Whilst the state owns NZP group and does not guarantee its debts, it is not unheard of for governments to offer rescue packages to large financially troubled firms. Indeed, the current National government has extended an uncalled capital facility to Kiwibank (New Zealand Government: Government support for NZ Post plans, 2010). This allows NZP to use the fund under certain conditions if an event occurs that cannot be covered by either Kiwibank or its parent (New Zealand Government: Government support for NZ Post plans, 2010). Whilst it must be noted that this change occurred within the context of multiple global financial crises, it can be seen as a proxy for a government guarantee.

Financial services through the postal network provides convenience for customers and increases market presence, but it implies that costs are determined by transfer pricing. McIntyre and Tripe (2009) note that prior to incorporation, 'Agency Service Fee Revenue' used to appear under NZP accounts, whereas now they appear under Kiwibank's. They contend that a stronger board is necessary to maintain fairness and consistency, and that whilst not improper, the situation is very fluid. Mr Bolger stated that the board aims to ensure that one part of the group will not support another (Price, 2010), although there is the risk that internally generated transfer prices can implicitly subsidise postal operations. Falling profits from the parent do not alleviate these concerns.

Overall, Kiwibank does present some internal inconsistencies within the context of the original reform intentions although the environment today is very different from the 1980s. Chief was its inception on politically motivated grounds via the actions of a minority party. The possibility of a return to cross-subsidisation

is also concerning and requires strong, independent governance. Herein is the third inconsistency: the board is not governed by a majority of outsiders.

The ability to draw upon government funding in certain dire conditions also presents a quandary, but is a measure of last resort. Although never traditionally guaranteed, the government installed temporary deposit insurance over much of the financial sector in reaction to the global financial crisis; Kiwibank is therefore not the sole recipient of government attention. Since the New Zealand banking system is relatively isolated from the ill effects of the global financial crisis, this may only be a marginal concern.

It must be mentioned though that Kiwibank operates in an environment that encourages competition with minimal governmental interference. In this respect, Kiwibank is consistent with reform ideology as it is simply another contender in a competitive industry. Many authors have in fact noted that Kiwibank has made strides to *increase* competition as cost-leader efforts affect other players. Mr Bolger notes that globally, profits from postal operations are falling and banking is a good complement to their organisations (Price, 2010). Ultimately, consistency with reform ideology is, and will be, determined by the neutrality of government and the autonomy to pursue commercial objectives. Restraint from using Kiwibank to achieve social policies and a board dedicated to ensure that inefficient postal operations are not unduly maintained will also be necessary. Despite these caveats, Kiwibank appears to be more congruent than not.

5.10   Chapter Conclusion

This chapter has presented an examination of the reforms executed in New Zealand from the mid-1980s to the late-1990s. It has summarised existing work and supplemented the knowledge with interview data I collected, adding details previously overlooked.

The pre-reform context comprised economic institutions not conducive to the efficient operating of a government department or related infrastructures. The post office was isolated from competition, cross-subsidised via banking and telecommunications, and governed internally with a tall organisational structure and poor information flows. It was also used as a source of job creation.

The department lost money every year and with economic conditions worsening, the government embarked on a radical restructuring of the entire public sector. Chief among their goals were to reduce the presence of the state, to

disentangle political and commercial concerns, to increase efficiency and thus raise the profitability of the newly created state owned enterprises. Specifically relating to posts, there was a strong desire to transform the department as telecommunications were becoming a global force and represented an opportunity to extract significant value from its sale.

Two major pieces of legislation were enshrined. The State Owned Enterprises Act defined the role of an SOE as a profit-oriented business that would be given the autonomy to pursue corporate objectives and was expected to be as competitive as a private company in the same industry. The Postal Services Act defined the regulations of the postal industry proper and specified the monopoly NZP would maintain. The department was then separated into three distinct units: postal delivery, postal banking, and telecommunications. The latter two were sold to private interests. NZP entered into a contractual relationship with the government known as a Deed of Understanding, describing the minimum penetration of the postal network, and pricing and delivery requirements for standard mail. The market was gradually deregulated until 1998 when it became fully open to competition. NZP was never fully privatised; the data indicate that as the company had become so successful there was little call to sell it. Additionally, privatisation fell out of favour with the public, which restricted its sale.

In terms of overcoming resistance to reform, the New Zealand experience provides some potential lessons for Japan. At the political level, the scale of reform in New Zealand represents an important factor. Covering numerous areas of the economy and public sectors simultaneously caused the concerns of individual interest groups to pale by comparison, because vocalizing their opposition could be contextualized as asking for 'special treatment' and therefore more easily discredited by pro-reformers. The State Owned Enterprises Act reinforces the argument of scale as it covered all SOEs under a single legislative blanket and any revisions to its stipulations would therefore affect all SOEs. The legal challenge surrounding the rural delivery fee, for example, affected only a small area of operations of a single SOE in the context of some 30 entities. Therefore, the crux of this lesson suggests that resistance can be overcome if the reforms are sufficiently large.

Similarly, resistance was further weakened by disaggregating potential factions. The SOE Act specified that workers would lose their public servant status and become private employees. This action simultaneously reduced the state's

payroll and divided a once-large collective with similar interests and incentives into smaller groups that would then negotiate with respective employers on a private basis. Concessions would therefore be confined to individual SOEs and not threaten the overall integrity of reform to the same degree. This could perhaps be seen as a modern interpretation of 'divide and rule.'

Speed was another important factor. Delivering changes in rapid succession capitalized on widespread public support and also prevented opposition forces having the time to muster a significant counter-offensive. Speed also ensured that by the time some of the transition costs began to manifest themselves, most (if not all) of the intended reforms had already been delivered.

The SOE Act was critical in establishing the regulations governing SOE operations and therefore narrowing the legal grounds upon which resistance forces could argue their case. The legal challenges brought against NZP were defeated on the grounds that an SOE cannot be forced to provide uneconomic services. Given that much of the populace's opposition to postal reform often derives from the services it provides, the SOE Act provides an uncompromising solution. The lesson for Japan in this case is that a clear separation of social and commercial objectives with supporting legislation can overcome reform resistance, but this particular option may be more difficult to transfer given Japan's long history of intertwined objectives.

If the description of New Zealand's lessons at the political level evokes military imagery, the organisational level lessons are far more pacifist. Offering generous exit packages and opportunities for career development provided strong incentives for employees of both inclinations. Close working relationships with the unions and the creation of strong jobs also assisted in quietening resistance[60]. The unilateral abolishment of the delivery fee was a clear concession to rural residents and addressed their opposition directly, but it also added to the company's brand image which would return dividends in the future. In summary, the conciliatory approach of NZP management was a critical factor of overcoming resistance, both

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[60] Recently, New Zealand Post has been forced to reduce staff numbers owing to increasing competitive pressures and although management are still working closely with the unions to relocate workers, current economic conditions may complicate matters Tanquintic-Misa, E. (2014, February 27). NZ post slashes jobs, more to follow. *International Business Times*. Retrieved from http://au.ibtimes.com/nz-post-slashes-jobs-more-follow-1333449.

internal and external. Applying a similar approach to JP could produce similar results.

An analysis of the new institutional environment shows that the market is open to competition, policy is implemented contractually and based upon outputs, boards are populated by outsiders, the labour market is more flexible, focus is placed on shareholder wealth maximisation, commercial and political goals are separate. This new environment is self-reinforcing and promotes competition and efficiency.

The macroeconomic conditions at the time reforms began were important in providing an incentive to change as the sense of crisis was a great motivator. Ultimately, the data indicate that political power and unity, the speed of reforms, the SOE Act itself, and political consistency with reform ideology (via neoliberalism) were the most important aspects in fostering change.

Kiwibank's introduction is interesting. Whilst it could be suggested that the bank's founding and its champion's motives conflicted with the original ideology, the bank is highly profitable in an already competitive industry and operates without special concessions. The legislation provides NZP with the autonomy to pursue profits wherever it sees fit and diversification into banking is the manifestation of that endowment. The fund which NZP group can call upon is of concern as this is tantamount to a government guarantee but in light of the international crises at the time of writing and temporary insurance of other banks, this concern is less troubling. A greater fear lies in the prospect of a return to cross-subsidisation if mail volumes continue to decline and this requires transparency from the board and management. Overall, Kiwibank appears more consistent than not with the original ideology as the regulatory environments were already in place and have not been altered to accommodate the new player.

Having completed an analysis of NZP, attention is now turned to Japan Post, whose pre-reform institutions and reform evolution is covered in Chapter Six. The simulation described in Chapter Seven will then be applied to estimate the final post-reform state of Japan Post and the overall image of Japanese experience can finally be compared to New Zealand to search for commonalities and differences in institutional change.

6 The Experience of JP

6.1   Introduction

This chapter describes the Japanese postal service and a chronology of changes wrought from the Koizumi era until today. In doing so, the details provided here are a synthesis of literature, expert interview[61], and 1,913 media reports referring to Japan Post since April 26, 2001.

The chapter first discusses the pre-reform institutional environment and its corresponding problems. Koizumi's reforms are described, including how his administration was able to pass reform bills in the face of strong opposition. Reform evolution is then traced through succeeding administrations until the present day, which translates to the initial settings of the simulation model in Chapter Seven. The combined findings of this chapter and the simulation therefore provide an illustration of Japanese postal reform from beginning to end. Whilst NZP was a significant employer in relative terms, JP's payroll was greater by factor of ten at incorporation, formed the core of the financial system (Takenaka, 2007), and was the largest financial institution in the world by deposits (Tsuda, 2006).

Although perhaps a crude metric, to illustrate the importance of postal reform relative to its corresponding country, consider that Japan's population is approximately 28 times greater than New Zealand's. Prior to reform, the New Zealand Post Office Savings Bank carried $2061.5 million in government securities, representing 78.4% of total deposits (Statistics New Zealand, 1986). Government securities[62] held by the banking component of Japan Post made up 90.8% of the bank's total assets. Whilst these figures are proportionately similar in a general sense, the scale of postal banking relative to population is an entirely different matter. Figure 6-1 compares the two banks by converting Japanese Yen into New Zealand dollars at a rate of JPY70:NZD1.

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[61] The calibre of individuals polled counterbalances the relatively small panel of experts interviewed.

[62] Including JGBs, local government bonds, and deposits held in the Fiscal Investment and Loan Fund.

Figure 6-1 Comparative size of New Zealand Post Office Savings Bank and Japan Post banking prior to reform
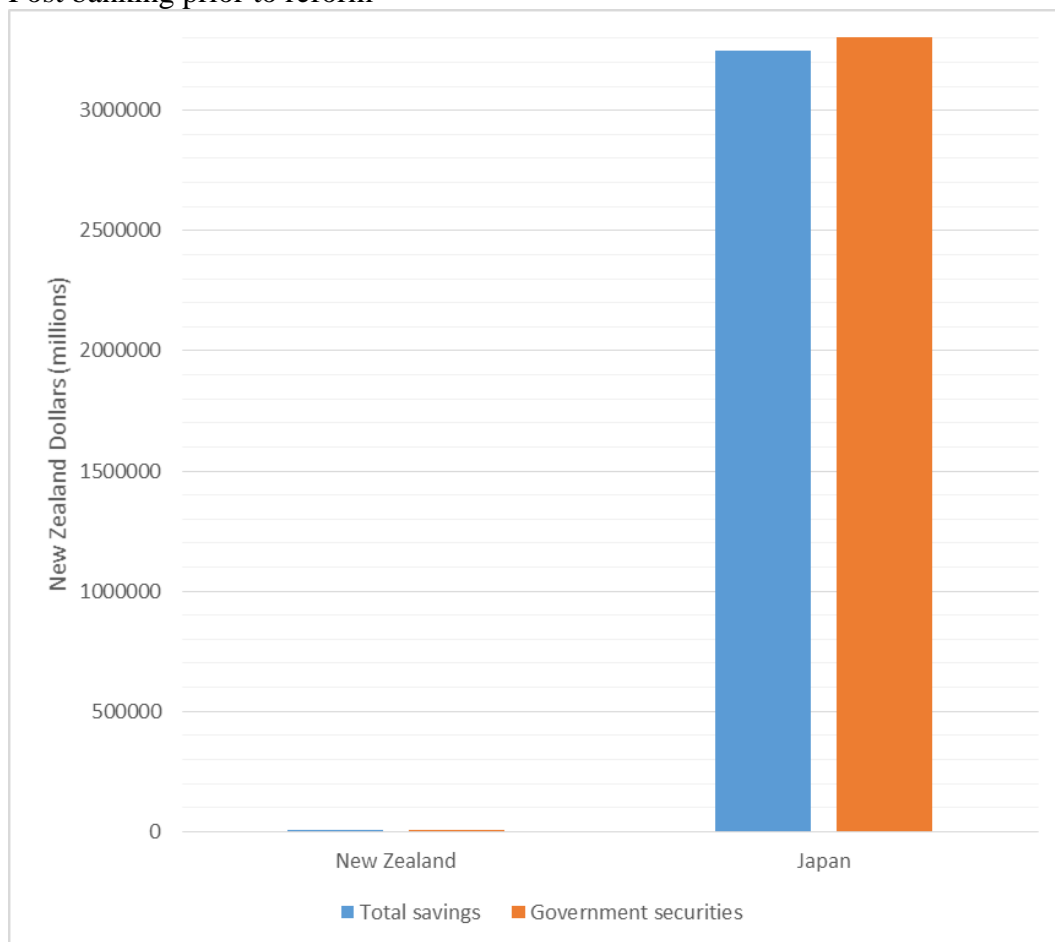
Source: (Japan Post Group, 2004a, 2004b; Statistics New Zealand)

Whether measured by savings or by government securities, Japan Post 'Bank'[63] was well in excess of a thousand times larger than the Post Office Savings Bank. Japan Post is therefore much more significant to the Japanese economy than its New Zealand counterpart and hence its reform represents a case of much greater risk.

Japan's economy circa 2001 had suffered greatly from the inevitable bursting of the 'bubble economy'. Seeking to redress the lack of demand, a series of stimulus packages were implemented. Funding was problematic as tax revenues were insufficient. At the same time, households looked for safe locations to store their liquid assets and many turned to the post office. Consequently, a significant proportion of fiscal expenditure was financed through postal savings.

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[63] Please note that at this stage, the bank was not a legally distinct entity. Nevertheless, in the interests of a fair comparison, only data from banking operations were included.

The lack of transparency surrounding Fiscal Investment and Loan Programme[64] budgets led to objectionable spending. Japan's particular style of policy decision making, often conducted between interest-representing politicians and the bureaucracy, effectively removed the executive from the process (Maclachlan, 2004). The resulting arrangement led to what many have called an 'iron triangle' whereby interests are catered to through specially designed legislation and public spending and in turn mobilise votes for their patron representatives. The bureaucracy benefits from the relationship by means of lucrative post-retirement appointments (*amakudari*) and promotion into positions of office.

The postal system's placement within this context was critical as it supplied the funds necessary to maintain such practices. Postal reform was expected to break these relationships. Additionally, it was envisioned that as the post office shrank, its deposits would shift into private banks, revitalising both the financial industry and the wider economy.

6.2 The Structure and Institutional Environment of JP Circa 2001 - 2003

6.2.1 Structure

In early 2001, Prime Minister Mori[65] reorganised the national bureaucracy, transferring the administration of postal services to the then Ministry of Public Management, Home Affairs, Posts, and Telecommunications (Maclachlan, 2004). Under Koizumi, it was converted into a public corporation, Japan Post Inc., on April 1st, 2003, with the state as sole shareholder.

At the time of incorporation there were three types of post offices: 1,312 general post offices, 18,916 commissioned post offices, and 4,550 basic post offices (Maclachlan, 2004). General post offices were usually staffed by more than 40 people, offering postal delivery, banking, and insurance. They were state-owned and operated by postmasters on the basis of seniority and performance (Maclachlan, 2004).

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[64] The Fiscal Investment and Loan Programme is operated through the Ministry of Finance and predominately extends loans to targeted projects and corporations. Sometimes it is also known as Japan's 'second budget'.

[65] Predecessor to Koizumi.

Some commissioned post offices offered home collection services, while others did not (Maclachlan, 2004). Many of the non-collecting branches operated at a loss. Nevertheless, all offered financial services and accepted deposits (Amyx et al., 2005). Commissioned post offices were privately owned and leased to the state at premium rates, although some have since been sold (Maclachlan, 2004). Postmasters for commissioned offices were appointed on political grounds (Amyx et al., 2005) and up to a third of positions were inherited through bloodlines (Amyx et al., 2005; Maclachlan, 2004).

Finally, simple post offices were essentially kiosks operating out of retail stores in rural areas. Their scope extended to the sale of stamps, postcards, and occasionally the distribution of welfare payments (Maclachlan, 2004). Workers had no bureaucratic status. Figure 6-2 illustrates the original structure of JP.

Figure 6-2 Simplified JP structure as at 2003
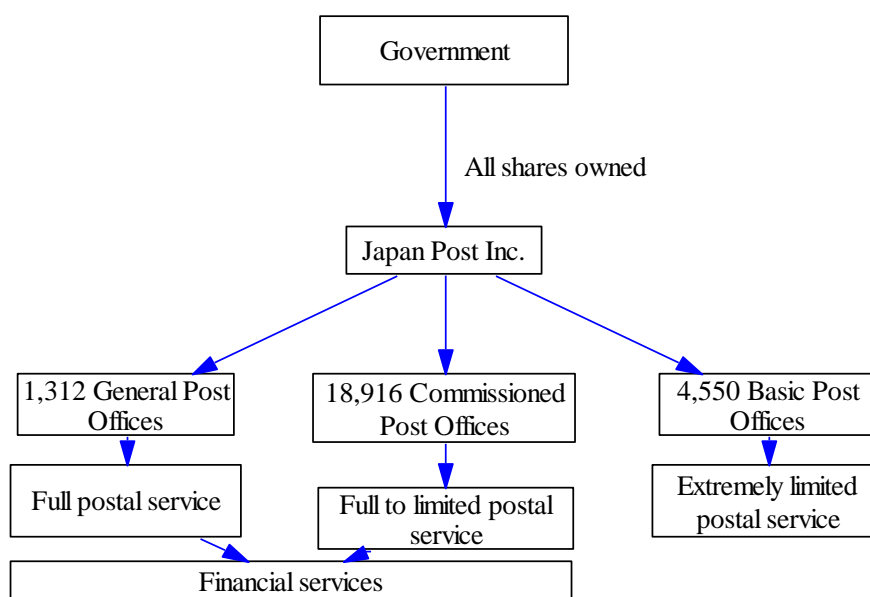
6.2.2 Institutional environment circa 2003

How an enterprise operates is determined in no small part by the institutions that constrain it. In the case of JP, many of these institutions had long historical precedence, having been established when the state assumed a much more paternal role in the economy. Some led to an entanglement of socio-political and economic

objectives. Others, by their opaque nature, fostered opportunism, rent seeking, and inefficiency. Consequently, many issues surrounding the Japanese postal system were a product of the institutional environment itself. The following section details eight key institutions[66] applicable at the time of incorporation.

Firstly was the *diversion of public funds*. From its early beginnings, the post office collected funds from the public and all branches offered postal savings (Amyx et al., 2005; Maclachlan, 2004). It has also been argued that during the mid-1950s Prime Minister Kakuei Tanaka raised the number of commissioned post offices to expand vote-gathering activities and increase access to funds not under government oversight (Maclachlan, 2004).

Prior to 2001, funds deposited in postal savings were obligated to be placed in trust funds held by the Ministry of Finance and then distributed to Fiscal Investment and Loan Programme agencies as loans (Amyx et al., 2005). Fiscal Investment and Loan Programme budgets were opaque, not subject to debate or approval, and often favoured special interest groups (Survey: How did it get into this mess?, 2002). In many cases, Fiscal Investment and Loan Programme expenditures increased when LDP support began to fall (Amyx et al., 2005). Heizo Takenaka, Koizumi's chief economic advisor, admits that some LDP members engaged in pork barrel politics that were funded at least partially through the post office (Takenaka, 2006).

From 2001, deposits were no longer required to be held in the ministry's trust funds, although in practice most were still invested in JGBs or Fiscal Investment and Loan Programme bonds (Amyx et al., 2005). Disallowing JP from engaging in commercial or retail lending strengthened this institution.

Supporting the diversion of public funds were *distorted savings incentives*. Postal savings were guaranteed by the state (Amyx et al., 2005) and offered a small premium above private banks, whose rates were not permitted to match postal savings rates (Takenaka, 2007). This altered the public's incentive structure in favour of the post office.

A third institution is *lobby influence*. Maclachlan (2004, 2006) and M. Takenaka (2007) identify the postal lobby as one of the strongest in Japan, having successfully resisted proposed changes in the 1980s and 1990s. The postal lobby,

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[66] The use of the word 'institution' adheres to the definition supplied by Kingston & Caballero (2009) and refers to constraints, either formal or informal.

comprised of postmasters and sympathetic politicians, has been cited by many, including Koizumi, as one side of the 'iron triangle' between the post office, the government, and Fiscal Investment and Loan Programme agencies. Amyx et al. (2005) note that through the Fiscal Investment and Loan Programme, almost every ministry benefited from the arrangement and therefore gave the lobby significant influence to maintain the status quo.

Further evidence of the strength of the lobby can be observed by appointments of pro-postmaster politicians to senior cabinet positions (Maclachlan, 2004) and the presence of postal lobby politicians on the Policy Research Council[67] (PRC) (Amyx et al., 2005). Mishima (2007) shows that policy was drafted primarily through the PRC, not cabinet, where the postal lobby could influence policy formation.

The strength of the lobby derived largely from its ability to muster votes. Postmasters were firmly rooted within the local communities, particularly so in rural areas, and held sway over public opinion (Maclachlan, 2006). In a mutually beneficial exchange, postmasters gathered support for local LDP members and were then favoured with prestige, political opportunities, and other material rewards (Krauss & Pekkanen, 2010). Unsurprisingly, politicians in areas with large numbers of post offices were some of the most vocal opponents of reform (Imai, 2009).

Another prevalent institution was *insider governance*. Postmasters were politically appointed public servants who enjoyed lifelong tenure and were very close to the LDP (Amyx et al., 2005). This behaviour has been noted elsewhere too; in Japan, linkages and relationships between bureaucracy, politics, and private business were (and still are) seen as the best way to get things done (Colignon & Usui, 2001). As a result, by means of appointments either on political grounds or through bloodlines, the post office was a classic example of an organisation run by insiders. In addition, the presence of the institution of *amakudari*[68] offered these stakeholders considerable economic rent, providing strong incentives to resist changes.

Amakudari is the 'glue' that binds the bureaucracy and politics to private business (Colignon & Usui, 2001). Over a period of 12 years there were 28 documented cases of *amakudari* with individuals coming to rest within the post

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[67] The PRC was previously also known as the *Policy Affairs Research Council.*

[68] *Amakudari* was first described in Chapter Three; it refers to outgoing officials landing lucrative post-retirement positions, often in the very companies they once regulated.

office[69] (Colignon & Usui, 2001). There were also cases of postmasters granting contracts to supporting companies that they themselves owned. The *amakudari* process can also happen in reverse, as postmasters often became party members (Maclachlan, 2004). Such positions and appointments carried significant financial benefits and required little effort from the recipient.

Corporate governance institutions shared similarities to *keiretsu* networks. This is not surprising, as within such networks, businesses and government share close relationships and many *amakudari* appointments are made to large firms within the *keiretsu* (Colignon & Usui, 2001). Political involvement is quite high and similar motivating ideals are present, such as *cross-subsidisation* (Miyajima & Kuroki, 2005); mail delivery was consistently supported by banking services (Amyx et al., 2005).

Stable shareholding is another key principle of the *keiretsu* system (Miyajima & Kuroki, 2005; Yoshikawa & McGuire, 2008). The arrangement is based on cross-shareholding but more specifically, on not selling those shares when their value falls or a particular firm is weakened. The principle is to protect the weaker link from adverse events including hostile takeover (Yoshikawa & McGuire, 2008). This ideal became manifest after the post office became a public corporation.

Finally, JP governance objectives focused on *stakeholder wealth maximisation*, a trait that also exists among *keiretsu* networks. Rather than placing emphasis upon maximised returns to equity, share value, and dividends, *keiretsu* provide stakeholders with job security, lifetime employment, mutual support, risk reduction, and insulation from market pressure (Matsuura et al., 2003; McGuire & Dow, 2009; Tezuka, 1997; Yoshikawa & McGuire, 2008). The post office exhibited comparable traits. Postmasters and politicians expounded the post office as a bastion of traditional values, providing social benefits and not something as crass as mere profit (Maclachlan, 2004). Mr. Arai of the LDP explicitly states that the post office is not about putting shareholder interests first, its purpose is to deliver valuable services to the community (Arai, 2005).

Monitoring mechanisms for *stake*holder wealth maximisation differ subtly from *share*holder wealth maximisation. Agency theory suggests that the use of external managerial markets is a powerful controlling force for a shareholder-

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[69] As a matter of linguistic curiosity, retirement to a public corporation such as JP is sometimes known as *yokosuberi* lit. sideslip.

focused firm. The post office however, with its insider-based management structure and inherited positions, was not subject to the same influences. Agency theory necessitates financial performance and maximum returns to company owners, which explains the behaviour observed in profit-oriented postal services like New Zealand. JP however, was guided by other principles.

Figure 6-3 shows displays the institutional environment circa 2003.

Figure 6-3 JP institutional environment as a public corporation
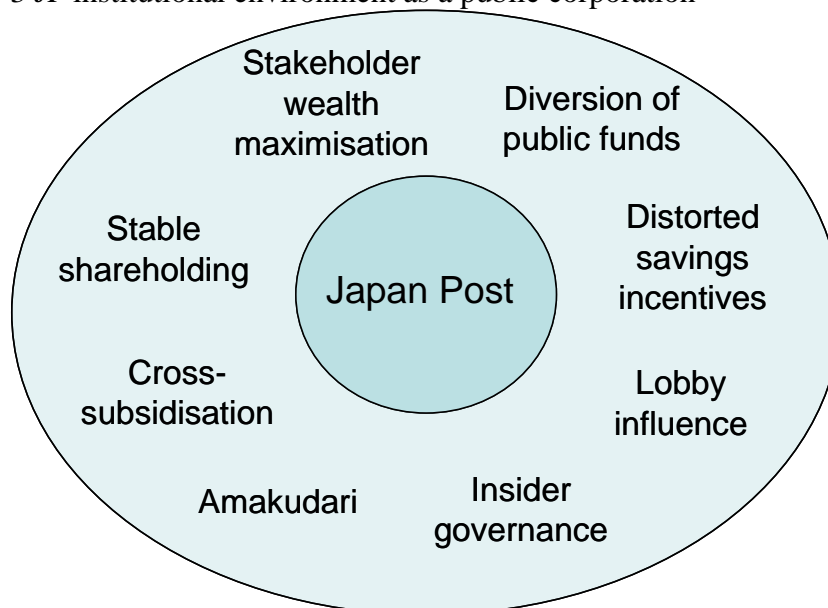
In summary, prior to reform the post office operated in an environment that diverted funds from the private sector by distorting saving incentives. Postmasters and their Diet patrons formed a powerful lobby that was reinforced and maintained by a self-perpetuating insider governance structure. Incentives to maintain this state of affairs derived from the mutual exchange of votes on the part of postmasters, and economic rent on the part of politicians. Meanwhile the actual manner in which operations were conducted shared similarities to a *keiretsu* network characterised by cross-subsidisation, lifetime employment, stable shareholding and stakeholder-based corporate governance motives.

6.2.3   Links between Institutions

The institutional configuration shared many links. The *distorted savings incentives* strengthened the *diversion of public funds*. State guarantees and the premium attached to postal deposits encouraged households to invest in postal savings, which were funnelled through the Ministry of Finance to Fiscal Investment

and Loan Programme organisations. The *diversion of public funds* linked to *lobby influence*; the postal lobby's influence was directly linked to funds dispersed through the post office. Fiscal Investment and Loan Programme spending translated into votes for representative politicians and material and social benefits for postal officials. Declines in the quantity of funds channelled through the post office would directly reduce the influence and payoffs these individuals received hence there was a strong incentive to maintain the status quo.

Insider governance and *lobby influence* were mutually related; politically appointed postmasters, pro-postal politicians in senior positions and interest representation on the PRC ensured unity of purpose and provided a strong presence in policy formation. This arrangement granted the ability to resist reform proposals.

A triangular relationship existed between the *diversion of public funds*, *amakudari*, and the *insider governance* structure. Transfers to Fiscal Investment and Loan Programme agencies were maintained by insider governance practices, creating the diversion of funds, and the *amakudari* processes ensured that players were rewarded for doing so. Opaque Fiscal Investment and Loan Programme budgets exacerbated the issue. Similarly, the presence of *insider governance* allowed for the continuation of *amakudari*. Whilst *amakudari* was (and still is) resilient, it is unlikely that quite so many appointments would have been made under outsider governance structures.

Cross-subsidisation between mail and financial services produced a rationale to maintain the *distorted savings incentives* and severe restrictions left no real alternative other than JGBs or Fiscal Investment and Loan Programme bonds. *Cross-subsidisation* was further sustained by the *lobby influence*. As previously stated, the lobby had significant political resources to resist change, implying continued transfers from financial services. Indeed, without subsidies, the postal network would likely have shrunk, representing a loss of welfare and economic rent to its benefactors. Consequently, there were firm logical grounds for the lobby's wish to maintain the institutional context.

Stable shareholding was compounded by the *lobby influence.* As discussed later, the postal lobby pressured the government on several occasions to ensure the state remained the sole shareholder. *Stable shareholding* also linked to the *diversion of public funds* through the principle of *stakeholder wealth maximisation*. If the

objectives of the state were to pursue stakeholder wealth[70], the state would have been more inclined to retain shares since outside buyers would have been motivated by profits. In this case, JP would continue to need large deposits to maintain services and therefore the attendant distortions that provided these deposits.

Stakeholder wealth maximisation was further reinforced by the *lobby influence* and *insider governance.* Lobby members *were* stakeholders in JP, including workers, postmasters and representative politicians. Clearly, their interests were served by the incumbent structure and the lobby would have vigorously opposed changes that threatened the benefits they received. The link can be considered as the *lobby influence* exercising control over JP through *insider governance* to maintain *stakeholder wealth maximisation*.

6.3   The Drive for Reform

During the post-war expansion, little thought was given to changing the system. The economic development model sponsored cooperation between the state and the private sector (Szekeres, 2005) and with rapid growth, few challenged it. However, the bubble burst in the mid-1990s; falling stock prices and real estate values produced considerable bad debt and bank failure. The older systems that had served well now hindered recovery. In response, the LDP implemented numerous fiscal rescue packages and the post office[71] was a primary source of funding owing to its obligation to the Fiscal Investment and Loan Programme. Many of the packages included unnecessary and unprofitable construction projects (Jones, 2003) and postal savings were a means of delivering pork to special interest groups in exchange for political support (Amyx et al., 2005; Hwang & Schaefer, 2002; Maclachlan, 2006; Tsuda, 2006). The post office itself was seen as a nexus of corruption and inefficiency (Hwang & Schaefer, 2002).

Koizumi came to power in 2001 and privatisation became the focus of his career. His objective was to break the connections of what he described as an 'iron triangle' between the post office, Fiscal Investment and Loan Programme, and the LDP (The man who remade Japan, 2006). By creating a publicly traded company,

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[70] Even Koizumi did not want to reduce the size of the network or the number of postal employees; the postal lobby had an even stronger interest in postal stakeholder wealth.

[71] The term 'post office' is used generically in this instance, as it was a government department until 2003.

market oversight and outsider management mechanisms would ideally remove politically motivated spending.

6.3.1   JP's placement in Japanese reform

In comparing the Japanese case with New Zealand's, participants were asked if JP was meant to be part of an overall package or a standalone issue. The results were fascinating in the sense that both answers were valid depending on the scope being considered.

For Koizumi, postal privatisation was a freestanding reform. Long before becoming prime minister, he had cultivated a loathing for the postal system as to him it embodied the special interest politics hindering economic progression. Government, however, saw it as a key element in greater structural reform. The cabinet assembled by Koizumi and the committees formed during his term wanted market reform, to address the state of public finances, and a general movement towards smaller government. Postal privatisation represented the last major hurdle as it had always been widely politicized. The aim was primarily to change the Fiscal Investment and Loan Programme system because it was responsible for maintaining inefficient rent-seeking companies who would in turn often provide *amakudari* positions for retiring bureaucrats in exchange for Fiscal Investment and Loan Programme contracts. JP was instrumental in perpetuating this system and postal reform would serve a number of goals:

- Privatising the post office and subjecting it to market-based incentives would shift preferences away from investing solely in Fiscal Investment and Loan Programme bonds, resulting in a reorganisation of Fiscal Investment and Loan Programme itself as funding dwindled (Participant 8, personal communication, January 17, 2014). This was expected to weaken connected politicians in the Diet by eroding the non-merit based system of power.

- Greater fiscal responsibility would arise. Corporations that could only survive via subsidisation from the programme would cease to exist and more productive areas of the economy would benefit from postal deposits being divested away from Fiscal Investment and Loan Programme bonds. The postal service itself would be turned into a more efficient enterprise (Participant 6, personal communication, July 10, 2013).

- Bureaucratic intrusion would be reduced. The Ministry of Internal Affairs and Communications in particular had a strong interest in preserving this

system, many of whose officials were attached to the post office via special corporations[72].

The data therefore reveal that whilst postal privatisation was an issue of singular importance to Koizumi himself, it was also important to future transformations of the Japanese economy and therefore seen as part of wider structural reforms. This was also the case in New Zealand, although the significance of postal reform in Japan was much greater.

In 2003, JP was Japan's largest employer with approximately 380,000 employees of varying types (Tsuda, 2006). Removing these employees from government payroll would significantly reduce the size of the state (Takenaka, 2006). Takenaka also contends that the post office distorted capital markets as private banks could not compete on equal terms. Consequently, small businesses and entrepreneurs struggled to raise capital, stifling economic development. Breaking up the post office would modify the incumbent institutions to more market oriented ones and allow capital markets to function properly.

Another issue was the proportion of JGBs held by the post office and the long-term effects of relying on debt. Increasing levels of public debt raise the potential for downgrades in credit ratings (Yao, 2009). Revaluations of bond yields would have negatively affected capital. Amyx et al. (2005) also cite this as a salient issue and the revaluation problem was a result of the initially formal and later informal constraint of requiring JP to purchase JGBs. Figure 6-4 represents the issues caused by the pre-reform institutional environment. These issues produced the motivation for change.

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[72] These corporations often supplied logistical support for postal operations and were often founded or run by ex-ministry officials.

Figure 6-4 Issues leading to the drive for reform

In summary, the drive for reform arose from the desire to disentangle public funds from special interest groups, to reduce the size of government, and to remove market distortions fostered by the incumbent institutional arrangement.

6.4 Changes Under Prime Minister Junichiro Koizumi

This section discusses actions the Koizumi administration took to convert the Postal Services Agency (PSA) into a public corporation. It examines the resistance and its effect upon outcomes secured before Koizumi's tenure expired.

6.4.1 Intentions for the postal system

Taking office in early 2001, Koizumi was elected on a platform that centred on structural reform as the only way Japan could return to sustained growth. At its core was the intention to privatise the PSA.

Plans emerged in 2003 to split the post office into three separate entities (postal services, savings, and insurance) and privatise them as early as April 2007. Financial and postal units would operate on equal terms to their private-sector counterparts. The amassed savings would be used in revitalising the private sector through lending to SMEs. A private postal system would also reduce the size of the state.

Initial deliberations within the Council of Economic and Fiscal Policy (CEFP) proposed in January 2004 that JP become a special joint-stock corporation beginning with 100% government ownership. The CEFP, chaired by Koizumi and Takenaka, used the precedent set by JR and suggested that the postal savings business be separated into between 7-10 regional units with an accompanying national postal service along with two to three insurance-based units. Joint-stock

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corporations in Japan each have their own specific legislation and the objectives of the new entities would be enshrined in statute. Members of the LDP however, resisted the idea of regionalised postal savings and argued for a single entity[73].

The CEFP explicitly stated that privatisation should not reduce service levels and as early as 2004 specified that universal services obligations and uniform charges on mail delivery would form part of the bills. Indeed, article one of the Postal Law stipulated that JP should deliver to all addresses at a uniform cost as fairly and as cheaply as possible. Additionally, their objective was not explicitly to reduce the number of post offices as they mentioned that the current network should be maintained.

However, universal financial services were not intended to be part of the legislation. Some LDP members disagreed, including the Minister of Internal Affairs and Communications, Taro Aso. The CEFP argued that no other postal system in the world offered universal financial services and used this as part of their reasoning to exclude it from the bills. They did however recommend that each business unit use its own accounting system so that internal transfers and abuse of state-granted regulations could be seen if they occurred.

The council also advised an incremental transition from state to private ownership over 10 years due to the quantity of deposits held in postal savings. Financial arms would be gradually permitted to expand operations into products such as loans, mortgages, and medical insurance. Similarly, postal operations would be given license to conduct other forms of business such as international distribution. In preparation for entry into private markets, a committee of five outside experts was established to estimate the impact of market entry.

By September 2004, the plan had evolved to the point where the public corporation would be split into four units; postal services would be subdivided into two entities, one would focus on mail collection and delivery, the other would manage the physical network and other fixed assets. Management would have authority to break down these units further into regional providers after the transition was complete. Deposit and insurance caps of ¥10 million would remain in place over the transitory period.

At the same point, a government-owned holding company became a preferential option as it became apparent that a special corporation would probably

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[73] This topic is further discussed in Section 6.4.3.

not pursue privatisation after Koizumi's tenure expired. Share sales would be conducted periodically, savings and insurance would be sold completely over a series of floats beginning in 2011 and completed by 2017. The government also would gradually reduce its holdings and by 2017, was expected to retain approximately one third of outstanding shares. However, in March 2005 the LDP raised concerns about the possibility of foreign takeovers and argued that the state should maintain a 50% stake in the holding company or include a 'golden share' that granted veto rights[74].

In terms of personnel management, details emerged in October, 2004, with expectations that the savings unit would account for three to four thousand employees, two or three thousand in insurance, and the remaining 260,000 divided between the delivery and network units. Staff would have limited employment guarantees. Reductions would primarily arise through natural attrition and smaller graduate intakes. In August 2006, the head of JP outlined a plan of the break up in which only 3,800 jobs would be shed. The group would still employ 253,200 full-time employees.

Assets controlled by the network unit would be downsized. First among the expected sales was the series of resorts and conference centres known as *Kampo no Yado*[75]. Many were bought or renovated during the 'bubble' years at significant cost and the majority were loss-making. A plan was announced in April 2005 offering them as bundled packages at reduced prices under the expectation that buyers would be difficult to find. Sales were expected to be completed by 2012.

Ultimately, Heizo Takenaka detailed four pillars of the proposed reforms that were not open to compromise:

- the postal service would operate under the same legal framework as the private sector,
- the corporation would be split into four separate units to spread risk,
- a public corporation would be established to take over the liabilities of the units, and
- postal workers would lose their status as public employees after privatisation and would be private employees under their respective units.

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[74] This argument was unsuccessful but a compromise was reached, see Section 5.4.3.

[75] Literally, 'Postal Insurance Inns'.

Koizumi's administration outlined a number of factors to create a more equitable competitive environment between 2004 and 2006. The sale of over-the-counter insurance policies by banks would be liberalised in 2007. Insurance and savings policies would not be guaranteed after privatisation and JP's corporate tax exemption would be annulled. Similarly, the Ministry of Finance would levy consumption taxes against intra-unit transactions as well as applicable stamp duties.

The committee studying JP would also monitor and control entry into new financial services. Expansion would be subject to tripartite approval from the Ministry of Internal Affairs and Communications, the Financial Services Agency, and the committee itself.

Special correspondence would be largely liberalised and the Ministry of Internal Affairs and Communications commissioned a study to consider opening the postal network to private operators, allowing them to uplift parcels from dwellings and deliver them to JP on a contractual basis. JP would also be given leave to deliver parcels itself. Koizumi wanted to fully liberalise mail delivery and allow open competition but this proposal was resoundingly defeated within the LDP (Uchiyama, 2010).

6.4.2 Forces of resistance and opposition

Broadly categorised, these factions included parts of the bureaucracy, the Association of Commissioned Postmasters (*Zentoku*), the Association of Retired Postmasters (*Taiju*), postal workers and their respective unions, and the LDP itself. Opposition parties such as the Japanese Communist Party, and the Social Democratic Party, whilst generally against the Koizumi reforms as a matter of course, could not influence policy formation although they could vote on it through the lower and upper houses. The position of the DPJ was more complex: it was mainly a reformist party although their opposition to the LDP was based on the *type* of privatisation and its details.

The bureaucracy's resistance to reforms stemmed primarily from the desire to protect against loss of influence. One of the methods employed was to rely upon bureaucratic jargon with statements such as "we'll follow your instructions to the best of our abilities" (Sekine, 2003 para. 3) which were then manipulated or disregarded altogether. Even so, following the establishment of the PSA, attitudes in the bureaucracy became divided. Some saw the advantages of market reforms and desired more freedom (Participant 8, personal communication, January 17,

2014). As a result, whilst there were many within the Ministry of Internal Affairs and Communications who preferred the status quo, there was a growing element of cautious optimism towards privatisation.

Zentoku was prompt in declaring firm opposition to privatisation. Indeed, prior attempts to liberalise postal services that extended beyond the data range had invariably met with strong resistance from *Zentoku*. In lobbying for support, pressure was directly applied to Diet interest representation members. Whilst ties to these members were maintained, the system was based on interpersonal exchanges. Postal lobby members who favoured constituents with roads, trains, and local developments provided postmasters with considerable prestige and sway over public opinion (Participant 5, personal communication, May 15, 2013). The receiving postmaster in turn capitalised on this social capital and fed votes to the representative LDP member. Private interests were nurtured via the institution of *amakudari* and its other two forms.

Much of the actual pressure *Zentoku* applied was directly to its benefactors in the LDP (Participant 5, personal communication, May 15, 2013; Participant 6, personal communication, July 10, 2013). *Zentoku* was a strong lobby, and postal reform galvanised the group. Traditionally, the unions had been at odds with *Zentoku* but the threat of privatisation forced the two groups together and increased the number of votes that could be delivered (Maclachlan, 2011). Today, they do not have the same voice in policy making as they once had (Participant 5, personal communication, May 15, 2013) and support for a particular member is no longer automatically given (Participant 6, personal communication, July 10, 2013). Pressure is still applied at the individual level although in extreme times they will canvas Diet offices and attempt to convince politicians to vote against a particular issue (Participant 8, personal communication, January 15, 2014).

Zentoku's objectives were explicitly described in two cases. Firstly, they wanted to manage all postal business units jointly. The second came about just prior to the bills' submission to the Diet in July 2005; they approached every LDP member they could find in the Diet building, threatening to withdraw their support in the upcoming election unless the bills were voted down.

Postal workers and their representative unions also campaigned against proposals. In terms of productivity reforms, a management system introduced from the Toyota Motor Corporation in 2003 was expected to meet with resistance as workers still maintained the mind-set of a public servant. One executive noted that

the custom of working slowly and receiving overtime benefits had never been challenged before. Head of Japan Post Holdings (JPH), Masaharu Ikuta, also noted in 2003 that improving efficiency was proving to be such a challenge that there was no remaining time to focus upon privatisation.

The two unions, the Japan Postal Workers' Union and the All Japan Postal Union, were united in opposing reforms. Previously, they had been divided over labour–management relationships and policies but Koizumi's actions pushed them into merger discussions largely because they believed that privatisation would diminish their bargaining power (Maclachlan, 2011). Together with *Zentoku*, their combined strength was enough to persuade the Ministry of Internal Affairs and Communications not to continue with its plans to offer area-specific services in 2006.

The Mori faction in August 2003 voiced their disapproval of the CEFP commandeering policy formulation and wanted to be included in discussions. At the same time, Koizumi identified former party secretary Hiromu Nonaka personally as a force for resistance. Shizuka Kamei, a champion of the postmasters, also wanted to keep JP under state control and to expand its social services, extending as far as nursing. Between Kamei and two other figureheads, Takao Fujii and Masahiko Komura, they were able to stall progress by focusing attention on other issues. Data from the interviews suggest that delays were caused by reluctance to confront LDP members with strong ties to the postal regime as the following two paragraphs illustrate:

Despite gradual losses in power and standing, even today postmasters are still a powerful group. This is doubly true in rural areas where, in the words of participant five, "…there are fairly targeted districts that supported certain politicians that would have been adamantly immovable on this issue" (Personal communication, May 15, 2013). Koizumi viewed previous administrations as ineffectual, however he was under no illusion that his reforms would be painful and were aligned against powerful interest groups. Arrayed against such opponents and understanding the consequences, Koizumi took a different approach in the early years of party presidency.

During that time, Koizumi violated his own principles and attempted to cater to both the floating vote and the special interest vote (Participant 8, personal communication, January 15, 2014). It has been suggested that there were probably some accords struck although details will never be made available. His earlier

efforts had produced weak results as he conformed to tradition and used the conventional process of policymaking, submitting proposals to the bureaucracy and the PRC, damaging his image of the stalwart reformer in the process. In 2004, he lost the organised vote in the upper house election (Participant 8, personal communication, January 15, 2014). This marked a turning point whereupon he became a more determined leader, disavowed from special interests and aligned with public interest.

In September 2003, a group of LDP dissenters lamented that the party had to vote to put him in power as he was essential to the election victory in 2001 (Maclachlan, 2011). Kamei claimed at this point that only about 30% of the LDP actually supported privatisation although other government insiders placed the figure around 40% (Participant 8, personal communication, January 15, 2014). The data also describe Koizumi as possibly *the* most popular prime minister in Japan's history (Participant 6, personal communication, July 10, 2013). Subsequently, whilst the postal lobby opposed Koizumi's plans, they had no alternative but to endorse him as leader. Nevertheless, a survey by the Yomiuri in June 2004 found that 51% of LDP members said that a decision to privatise the post office should only be made after the results of reforms were known. Interpreted another way, it would suggest that many within the party felt that by postponing until after the reforms were complete, Koizumi's term would have expired and the state could reassert control over JP.

The most frequently covered issue was the separation of business units; doing so would reveal the extent to which financial services were supporting post offices. In addition, keeping the units together would have made it easier for resistance forces to undermine privatisation efforts. One party member explicitly stated in September 2004 that if the separation of the units could be prevented, turning JP back into a public corporation could be achieved under the next administration. Unsurprisingly, there was much opposition to selling shares in the financial units.

Other ways in which LDP politicians tried to undermine or dilute the reforms included pressing for universal financial services. There was also a drive to postpone the guidelines for the programme: Taro Aso and Kaoru Yosano, heads of the public management ministry and PRC, argued to extend the deadline beyond 2017. Koizumi's plans were challenged, the resistance bloc argued that they lacked details and were not properly communicated to the public. Rather contrarily, it was

then suggested in early 2005 that Koizumi should stop publicizing the issue, possibly in an effort to reduce public support for the changes.

In August 2005, between the DPJ, Japanese Communist Party, Social Democratic Party, and 22 LDP members, the bills were defeated in the House of Councillors by 17 votes.

6.4.3 Overcoming resistance: victories and compromises

In the early years of the Koizumi administration, the pro-reform group realised that quietening politicians representing special interests would be vital. This section details some of the measures that were used in overcoming resistance and some of the compromises made until ultimate approval of the bills on October 14, 2005. Four higher order categories became clear in explaining how reforms were advanced:

1. executive control,
2. carrot-and-stick,
3. implementation style, and
4. leadership.

6.4.3.1 Executive control

One of the key contributing factors was the increased power the executive office held as a result of the Hashimoto reforms ten years earlier (Maclachlan, 2011). These powers, including the ability of the prime minister to form policy committees that transcended the bureaucracy (Maclachlan, 2011), had not been previously utilised as informal institutions within the LDP required that policy pass through PRC after being drafted by the relevant ministry. As such, the established route wound its way through the party and the bureaucracy where it could be filtered and diluted by layer upon layer of interest representation.

Koizumi's administration created a number of supra-cabinet organs including the CEFP and the Postal Privatisation Promotion Office, staffing them with specially chosen reform-oriented researchers, legislative staff and advisors including business leaders and academic economists (Participant 5, personal communication, May 15, 2013). The Promotion Office in particular had considerable influence, as three of its members were deputy ministers. Similarly, drawing personnel from a wider range of people effectively tempered the influence of the postal lobby, whose representatives were not evenly distributed through the

LDP. Cabinet also installed a crisis management clause into legislation in April of 2005, which limited the amount of time postal privatisation could be postponed. This limit was imposed in anticipation of increased resistance forces asserting their positions after Koizumi's retirement[76].

Using these organs centralised power in the executive office and wrested policy formulation from the bureaucracy and rank-and-file party members; this was important as an unnamed LDP politician in September 2004 stated that the PRC was heavily populated by postal lobby members. Following traditional approaches would have resulted in failure, as it had done for many before Koizumi (Participant 8, personal communication, January 17, 2014).

6.4.3.2   Carrot-and-stick

Another key factor was the use of rewards and punishment. This included exchanges with opposition parties, credible threats, and concessions to the postal lobby. It should be noted that whilst Koizumi was an adamant reformer, he was not so naïve as to think he could 'bulldoze' privatisation through the LDP; some concessions were made.

6.4.3.3   Carrots

Koizumi silenced some of the resistance in his party by reaching across the floor and offering exchanges. In exchange for support over one issue, Koizumi softened his position over another, less salient, issue (Participant 6, personal communication, July 10, 2013). This was a useful mechanism as it not only increased support for the bills, but made subversive LDP members appear disloyal to the party should they continue voicing protests. Offering exchanges also served to raise Koizumi's popularity even further (Participant 6, personal communication, July 10, 2013).

It was not the CEFP's intention to provide universal financial services but in mid-2004, cabinet agreed to ensure that insurance and savings would be offered in rural areas in principle, citing the protection of the elderly. In early 2005, although not an enforceable clause in policy, universal service would include savings and insurance for the transition period until 2017. In light of these new constraints, a compromise was brokered regarding potential entrants into general

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[76] Koizumi was one of very few prime ministers to resign due to term limits.

correspondence: firms were required to have their business plans vetted by the Ministry of Internal Affairs and Communications and erect at least 100,000 post boxes nationwide (Maclachlan, 2011). This second stipulation effectively isolated general correspondence and the two main candidates[77] soon abandoned entry plans.

In terms of staff levels, it appeared that the CEFP sought to avoid active confrontation with the unions (Maclachlan, 2011). Also in 2004, a report issued by the CEFP stated that they wished to maintain stable labour-management relationships. In 2005, Takenaka suggested considering placing quasi-government employee status on postal workers; the intention was to maintain employment and keep the corruption rules for public servants applicable[78]. Demonstrating a willingness not to scythe through postal employees, the government expected to mitigate some of the resistance they would face from the labour unions.

In 2005, cabinet allowed cross-shareholding between the financial units and the mail-based units[79] would be allowed to hold shares in the financial arms. Japanese antimonopoly laws specify limits on the percentage of allowable cross-shareholding by industry at 5% for banking and 7% for insurance (Bird, 2002). Companies may be exempted from this restriction either by Cabinet order or if given permission from the Free Trading Commission (Goodman, 2003).

Koizumi and Takenaka relented to pressure and established the Regional and Social Contribution Fund in response to universal service obligations. Managed by the holding company, this fund would compensate post offices for lost income from financial services after 2017. Dividends would pay for the provision of postal services in unprofitable areas. The initial cap of ￥1Tril was later revised to ￥2Tril in October of 2005; six months after the LDP first argued that one trillion was insufficient. This accommodation was made to placate the lobby after having delivered the plans for separation and whilst it was supported by the LDP, it was only begrudgingly so.

Two other compromises were made. The holding company would be permitted to repurchase up to 33% of shares after 2017 (Maclachlan, 2011), and

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[77] Yamato Kyubin and Sagawa Kyubin. Kyubin translates as 'express mail'.

[78] Maintaining public servant status would also technically prohibit them from taking political action, although this obligation had been conspicuously disregarded on many occasions in the past by *Zentoku*.

[79] The mail units were later merged under the Noda administration in 2012.

postal savings would remain a national unit (discussed in detail shortly). Koizumi should not be mistaken for a soft leader however, as the following illustrates.

6.4.3.4 Sticks

The other side of this category includes the expulsion of what famously became known as the 'postal rebels': members of the LDP who had deep connections with the postal lobby and were subsequently ejected from the party or ousted in electorates by Koizumi's handpicked 'postal assassins' (Carlson, 2008). In terms of overcoming resistance, these tools were blunt instruments and drew criticism from some quarters who argued that the dismissals in particular were 'undemocratic'. A rebuttal to this accusation however is that the individuals removed were arguing for the continuation of a system known to be corrupt, which was undemocratic in itself. Irrespective, it demonstrated the degree of Koizumi's conviction to reform the post office.

One of the measures employed in previous cases was threatening to dissolve cabinet and even the House of Representatives itself if opposition could not be overcome. Koizumi had threatened to fire both Taro Aso and Masaharu Ikuta in 2004 if they continued to endanger plans to separate the business units and actually *did* remove Hiroshi Matsui (Ministry of Internal Affairs and Communications Vice Minister of Policy Advice) and Hideo Shimizu (Director of Postal Services Planning Bureau) in May 2005 for distributing a paper opposed to privatisation.

When the bills were resubmitted to the Diet houses in 2005, Koizumi removed another two vice ministers and vice parliamentary secretaries who had openly opposed privatisation. Upon the Lower House's rejection of the bills, Koizumi dissolved parliament and called a snap election, making it clear that he would only endorse supporting members. Phrasing the election itself as a public referendum on postal reform[80], Koizumi led the LDP to its largest ever victory, leaving the 'postal rebels' with no alternative but to side with reformists and approve the bills after parliament reconvened. The resubmission saw no real changes to any of the previous clauses except for a six-month postponement to the beginning of the process, which was delayed from April 2007 to October 2007.

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[80] Although some scholars argue it was more referendum of change versus non-change rather than postal reform.

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6.4.3.5   Implementation style

A third factor not apparent from media reports but gleaned from expert interviews was the logistics of how plans were implemented. Koizumi approached issues methodically and kept plans within his closest circle for as long as possible, reducing the amount of time that policy could be debated and diluted.

Sponsoring anti-bureaucratic sentiment among the public through the media was another factor in reducing opposition. Greater public desire for change and less faith in the incumbent ministries made opposition more difficult to voice without appearing solicitous of special interests.

6.4.3.6   Leadership

Koizumi's leadership was instrumental; previous prime ministers had considered postal reform but had abandoned the idea. Koizumi's determination and single-mindedness were crucial, as detractors within both the party and the bureaucracy had become embedded in the system. Exercising leadership over the party and not developing policy through the normal channels was an unorthodox approach. Koizumi's conviction was succinctly paraphrased by participant eight: "I don't care what they think about me, postal privatisation or die. If the LDP or the postmasters or the post bureaucrats disagree with me, so what? I'll fire them or I'll bring them down in an election" (Personal communication, January 17, 2014).

His ability to promote issues to an otherwise disinterested and perhaps ill-informed public was another important factor; many ordinary citizens did not understand the true ramifications of the changes he sought to implement. Supplementing this, his popularity and proficiency with the media were such that the postal regime realised that without Koizumi, the LDP would most likely have been defeated. Consequently, they had to support him to a degree. All the participants interviewed in this study concluded that he was exceptionally skilled, and exhibited a resolve rarely seen in Japanese politics. In terms of a relative comparison to New Zealand, where the executive approach was quite conciliatory, I questioned whether Koizumi's confrontational approach was truly necessary; participant eight responded: "But there was no other way. No other way." (Personal communication, January 17, 2014).

6.4.3.7 Exogenous factors

Beyond the Koizumi administration itself, other factors were advantageous in the sense that they reduced the power of the postal regime. The postmaster lobby had suffered from a voting scandal centred around Kenji Koso in 2001 and it had tarnished their reputation (Maclachlan, 2011). Similarly, the office held by postmasters had lost much of its lustre and finding replacements for outgoing retirees was becoming more difficult – especially so with hereditary positions. Finally, the passing of Kakuhei Tanaka, one of the greatest spokespersons for the postal lobby, reduced their representation within the Diet.

6.4.3.8 Failure to regionalise postal savings

Amidst pressure from the postal lobby, a decision was made in April 2004 not to divide the postal savings arm into regional units. The argument presented from the postal lobby was that regional units would not have the wherewithal to perform in sparsely populated regions (Maclachlan, 2011). As the single greatest compromise, further analysis was conducted on this issue and expert interviews show two broad categories of concerns.

6.4.3.9 Political concerns: Structure

The proposed formation and structuring of regional units created concerns. One was the matter of bank capitalisation; areas like Kanto and Chiba would have a much higher capitalisation as opposed to more remote areas, hence the division of resources created a complex issue. Similarly, the degree of unit networking and the extent to which they would be supported by central government if the need for bailouts arose created a political challenge. Whilst these concerns were valid, they did not explain fully the *severity* of resistance arrayed. A more likely explanation derives from the potential threat to the lobby's private interests.

6.4.3.10 Political concerns: Iron triangle

Smaller organisations that are closer to taxpayers are often easier to understand in terms of their operations and are often accompanied by a greater demand for accountability and transparency. Greater regionalisation also decentralises power and restricts the ability of the central government to engage in pork-barrel politics (Participant 6, personal communication, July 10, 2013). None of these points is desirable from the opportunistic agent's perspective.

The application of a market-based incentive structure, and not having the size advantage of a national unit, would have placed greater competitive pressure on localised units. In turn, this would have threatened the security of post offices and lessened the intensity of co-ordination. A decline in post office numbers would have reduced the power of the postmasters' vote-gathering network and hence lessened support for embedded Diet representatives (Participant 8, personal communication, January 17, 2014).

Put simply, a regionalised system would have reduced postmaster cross-subsidisation derived from postal financial services, effectively removing the financial foundation the vote gathering and exchange system was built upon, threatening the private interests of its benefactors. The lobby therefore had a strong incentive to oppose regionalisation.

6.4.3.11 Practical concerns: Cross subsidisation and universal service

Postal networking aside, postal delivery presented a valid argument. An envisaged challenge for national postal delivery was the potential for 'cream-skimming' by private contractors unconstrained by universal service obligations. As such, expectations were that postal deliveries would have required subsidisation to endure; the problem was *where* those subsidies derived from. Transfers from a nationwide financial provider provided a more intuitively simple approach. Were regionalisation to occur, discussions of regional contributions to transfers would undoubtedly impose greater transactional costs.

6.4.3.12 Practical concerns: Organisational disentanglement

Another issue the postal lobby raised was the complexity of separating the services. They argued that splitting mail and parcel delivery from financial services was an unnecessarily complicated process and that a degree of national coordination was needed (Participant 5, personal communication, May 15, 2013). The lobby cited NTT as an example that regional units proved to be unviable over time (Participant 8, personal communication, January 17, 2014).

Finally, an accord was reached splitting the postal system into four business units: savings, insurance, postal network operations, and postal delivery services. Masaharu Ikuta and Taro Aso (who later stated that he was against privatisation) were opposed to the idea of individual units and Aso suggested in July 2004 that he

would accept the separation insofar that all capital be held by a holding company. Two weeks later the government agreed to establish Japan Post Holdings.

Ultimately, the administration had to abandon their drive to split financial services into units. Whilst practical concerns over implementation and political concerns regarding capitalisation and universal service are sound points, the most likely explanation behind the strength of resistance was that, if successful, regionalisation would have collapsed one of the greatest postal iron triangles.

6.4.4 Outcomes

Koizumi's resubmitted bills were passed in October 2005, dissolving the PSA and creating four new businesses in its place: Japan Post Postal Service Ltd., Japan Post Network Ltd., Japan Post Insurance Ltd. (JPI), and Japan Post Bank Ltd. (JPB)[81]. All shares were transferred to Japan Post Holding Company (JPH), which would eventually sell its stake in the financial arms but maintain ownership of mail units. Shares in JPH would also be periodically sold although the state would maintain 33% ownership. Mail units were permitted to hold shares in the financial units, and cross-shareholding between the financial arms themselves was also allowed.

A state-owned agency known as the Incorporated Administrative Agency Management Organisation for Postal Savings and Life Insurance was established to oversee the preparation of financial statements and accounting practices of JPB and JPI. It also supervised accounts and policies predating privatisation, which were still be guaranteed by the state.

Figure 6-5 offers a simplified diagram of the ownership structure of the business units and links between them as defined by the Koizumi administration. Also included are the envisioned outcomes in 2017.

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[81] JPB is also more commonly known as *Yūcho*.

Figure 6-5 Koizumi's proposed ownership structure of JP
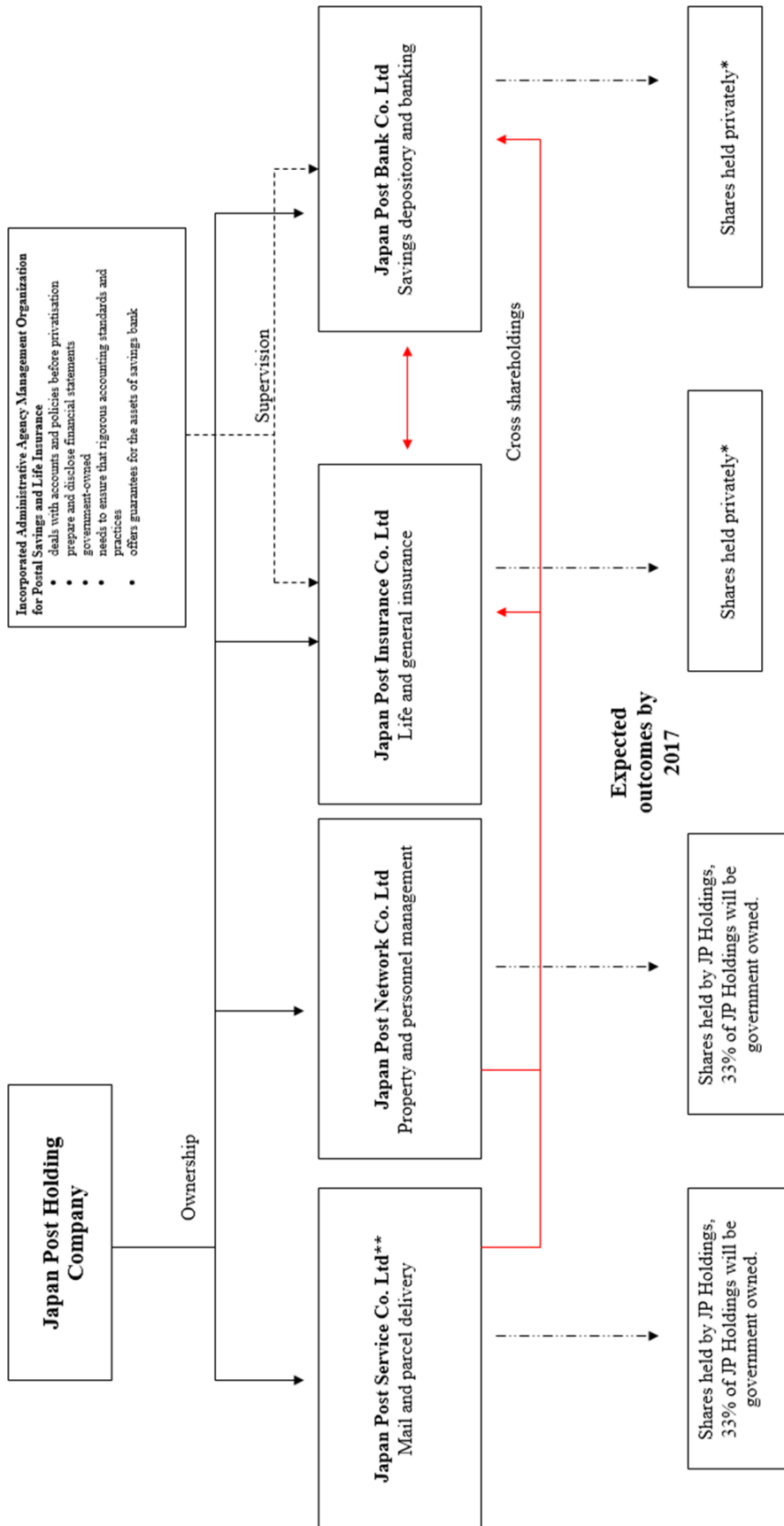
The Ministry of Public Management also passed a ruling surrounding the monopoly status of JP. Direct mail for promotional purposes was considered confidential and as such only JP had the right to deliver it. Postcards, bills, certificates, and invitations were classified as general correspondence. Magazines, catalogues, and physical credit cards however were considered special correspondence and private handlers could deliver these items freely.

JP was granted interim tax exemption during the transition period. Raising delivery prices was subject to government approval although parcels were not bound to universal service obligations. For the financial units, caps on savings and insurance would remain in place whilst the government held 100% of JPH but these limits would be revised later. JPB was permitted gradual entry into other products such as loans and credit cards from 2007. All units were required to improve internal controls and auditing systems in addition to submitting four-year business plans to the Ministry of Internal Affairs and Communications for approval.

Figure 6-6 describes the major events in postal reform that occurred under the Koizumi administration.

Figure 6-6 Major events under Koizumi

Koizumi Administration: Timeline of significant events

Date	Event
Apr-2003	Japan Post Incorporated.
May-2003	Koizumi threatens to shuffle cabinet.
Jun-2003	Plans emerge to privatise by 2007.
Jul-2003	Koizumi threatens to shuffle cabinet.
Aug-2003	
Sep-2003	
Oct-2003	
Nov-2003	
Dec-2003	
Jan-2004	Plans for privatised post developed.
Feb-2004	
Mar-2004	Resistance forces stall plans.
Apr-2004	Separate accounting systems for units urged.
May-2004	Universal service becomes core issue in debate.
Jun-2004	
Jul-2004	Proposal of holding company emerges. No universal financial services proposal debated. JP simplifies parcel rates. JP given access to large parcel delivery from 2007.
Aug-2004	Major debate around post office plans.
Sep-2004	Cabinet approves separation of units and establishment of holding company. Resistance forces seen to strengthen.
Oct-2004	Limited employee guarantee proposed. Government releases guidelines on post office numbers.
Nov-2004	
Dec-2004	Major rift between cabinet and LDP clearly visible. Parcels excluded from universal service obligations.
Jan-2005	DPJ garners support from workers' unions.
Feb-2005	Koizumi proposes Regional and Social Contribution Fund with 1 tril yen cap. Resistance forces secure universal provision of financial services during transition period.
Mar-2005	
Apr-2005	Postal bills submitted to diet. Resistance forces secure cross-shareholding compromise.
May-2005	Koizumi removes two opponents from office.
Jun-2005	
Jul-2005	Shizuka Kamei comes to the fore, announces intentions to kill bills in next round. Postal bills passed through lower house 233 - 228. Koizumi threatens to dissolve parliament if bills voted down.
Aug-2005	LDP defectors form PNP. DPJ says they will lower savings cap to 5 million and preserve universal service. Postal bills voted down by upper house - Koizumi calls snap election. Koizumi removes four more opponents from office.
Sep-2005	LDP wins election by landslide.
Oct-2005	Postal bills pass through lower house. JP network allowed to hold shares in financial units. Fund cap raised to 2 tril yen. Postal bills reintroduced to lower house, pass by 200 vote margin.
Nov-2005	
Dec-2005	
Jan-2006	
Feb-2006	
Mar-2006	Postal operators to submit business plans to MIAC, mailbox requirement remains. LDP considers new postal rules, look to increase competition.
Apr-2006	MIAC considers opening up postal network to competition.
May-2006	
Jun-2006	
Jul-2006	Postal workers' unions hold merger talks.
Aug-2006	
Sep-2006	

6.4.5 Summary

The Koizumi administration engendered the largest change to postal services ever seen in Japan, converting it from a government agency into a collection of distinct function-based companies. The ideal sought was to create a system whereby each of the units would be on an equal footing with privately owned firms, although Koizumi's reluctance to remove the universal mail delivery produced inconsistencies with true freedom of operation.

Postal reform would serve a number of goals. It was intended to break the connection between postal savings and the Fiscal Investment and Loan Programme. This would also weaken the influence of special interests in government and invigorate capital markets.

Strong opposition was encountered and the bills were initially defeated. The administration made a number of concessions including the abandonment of regionalised financial units, the establishment of the Social Contribution Fund, universal financial services during transition, cross-shareholding allowances, the establishment of JPH and its ability to repurchase previously sold shares. Koizumi also used a number of strategies to minimise or coerce opposition, including circumventing established policy-making customs, ejecting postal dissidents, calling a snap election, and capitalising on his personal charisma with the public.

Whilst Koizumi's bills were passed the second time and made much more progress than previous administrations[82], the power of the postal lobby was still sufficient to dilute the amount of changes so that the outcome was less than the idealised goal.

6.5   Changes Under Prime Minister Shinzo Abe

Shinzo Abe succeeded Koizumi on September 26, 2006 and served until the same date a year later. Cited by many as a supporter of Koizumi's efforts, it was expected that his cabinet would cement the efforts made.

The handover of power heralded a time of muted resistance as the legitimacy of Abe's administration hinged upon continued implementation. Additionally, since the bills had already been passed, little could be done. Whilst estimates from party insiders suggested that upwards of 60% of the LDP opposed it (Participant 8,

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[82] Although credit must be given to prior administrations for increasing the powers of the executive office – without which, Koizumi would have had less ability to control the party.

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personal communication, January 17, 2013), there was a broad recognition that the lower house victory of 2005 served as a mandate to support privatisation.

Nevertheless, two months after inauguration, Abe welcomed the 'postal rebels' back into the LDP. Whilst they were forced to sign a pledge supporting the legislation, it was noted that they attempted to stall or delay the privatisation process (Participant 5, personal communication, May 15, 2013). Ultimately, resistance in the LDP was reduced as members recognised they would have to suffer reforms or risk their station (Participant 8, personal communication, January 17, 2013).

It soon became apparent, however, that Abe was not a forceful leader and party unity was more important to him than it had been to Koizumi. In terms of the political landscape, the LDP was in a highly defensible position although there were growing concerns surrounding the upcoming election in 2007 (Participant 8, personal communication, January 17, 2013). The rift created by Koizumi's thrust for privatisation had led to a number of members breaking away and forming the People's New Party, whose primary policy was to return JP to its former state or perhaps to expand its reach and presence. Although the party was very small, it attracted the support of the postal workers unions, comprising some 220,000 members. *Taiju*, the largest professional interest group in Japan with 110,000 members, also broke with the LDP and aligned with the People's New Party. The Yomiuri estimated that *Taiju* was capable of mustering up to a million votes. *Taiju*'s two major policies were to support the postal rebels and the People's New Party. The isolated position of the People's New Party and its size was insufficient to challenge the Abe administration but the party would become a more influential player in later years.

The DPJ was in a poor position. After suffering major defeat, the party was in disarray and it took several months to create a unified front and several more months to articulate their intentions and policy stance. As it was, excluding other issues of the day, the Abe administration faced comparatively little outside resistance that was at once both organised and influential.

On an organisational level, JP expressed intentions to expand operations into foreign exchange, credit cards, mortgages, and trust banking. Competing banks accepted JPB's entrance into securitized markets but the Banker's Association opposed entrance into mortgage lending, arguing that JPB still enjoyed an implicit government guarantee. They also claimed that the practice of collecting deposits through the postal network, even if on a contractual basis, defeated the purpose of

privatisation. As part of their strategy to diversify away from JGBs, management at JPB announced plans to target lending to young women. This market was associated with higher risk and was not a significant portion of private banks' portfolios. JPB's entry therefore was not expected to damage private interests. Despite concerns, in December 2006 the Postal Services Privatisation Committee approved expanded operations in banking and insurance. A month later, they also approved a motion to allow the extension of housing loans in certain metropolitan areas prior to listing on the public stock exchange.

In terms of mail operations, JP announced in September 2006 that it would make deliveries to Lawson convenience stores in rural areas. They also opposed a Ministry of Internal Affairs and Communications-proposed deregulation that would allow area-specific services to be carried out by private firms. The Ministry of Internal Affairs and Communications relented at the request of JP and withdrew the proposal. The ministry expressed a desire to increase competition but agreed to postpone further deregulation measures until 2009 when restrictions to entry and operations would gradually be relaxed.

Streamlining asset management proved less successful. Most of the commissioned post offices were directly leased from postmasters at a 20% market premium. JP proposed a buyout but by April 2007, only 30% had accepted the offer with another 40% categorically refusing. Other efforts to renegotiate ground leasing arrangements also met with significant resistance from *Zentoku* and their patron LDP members. Plans were also formulated to convert JP's central post offices, many of which lay in prime areas, into skyscrapers providing commercial leasing options. Kunio Hatoyama[83] took exception to these plans however, and argued that the post offices should be protected on the grounds of architectural heritage. Through his influence, these plans never eventuated under the Abe administration.

There were also a number of cases where affiliated companies offered *amakudari* positions in exchange for high-end contracts. As per the mandate of the Koizumi administration, JP had discretion to grant contracts and this led to sometimes-questionable practices. The case most prominent under Abe's government involved an official at the Ministry of Internal Affairs and Communications receiving a contract to operate 70 of the 122 cafés and shops at JP's resort chains.

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[83] Kunio Hatoyama was part of the LDP. His brother, Yukio Hatoyama, was part of the DPJ.

Figure 6-7 describes the major events in postal reform that occurred under the Abe administration.

Figure 6-7 Major events under Abe

Abe Administration: Timeline of significant events

Sep-2006	JP to deliver parcels to convenience stores.
Oct-2006	
Nov-2006	JP persuaded MIAC not to allow area-specific delivery services.
	Postal rebels allowed to return to LDP on condition of support.
Dec-2006	JP allowed to expand banking and insurance services.
	Deregulation plans for mail delivery postponed.
Jan-2007	JP allowed to offer housing loans before listing in certain metropolitan areas.
Feb-2007	MIAC plans to gradually deregulate mail delivery from 2009.
Mar-2007	JP faced considerable resistance to land lease restructuring.
Apr-2007	JP plans to renovate central post offices.
May-2007	
Jun-2007	MIAC extends planned deregulation of parcel delivery.
Jul-2007	
Aug-2007	
Sep-2007	JP bank announces plans to enter questionable credit market.

6.5.1 Summary

Overall, the major pillars of the privatisation plan remained intact throughout Abe's term. The forces of resistance claimed a small number of minor victories, mostly in the area of asset management, but not enough to compromise the integrity of the reform as a whole.

6.6 Changes Under Prime Minister Yasao Fukuda

Succeeding Abe on the 26th of September 2007, and serving until September 24th 2008, the Fukuda administration represented a period of relative calm in terms of the frequency of articles related to JP.

Organisational-level events included the merging of postal unions in October 2007. This created the largest corporate labour union in Japan, *Zenyusei*, with 220,000 members. Under the leadership of Yoshifumi Nishikawa, who succeeded Koizumi's handpicked Masaharu Ikuta, JP did not actively reduce staff levels, but decreased the influx of new workers as natural attrition was preferential to downsizing. Additionally, management announced that remuneration would be based on performance measurements rather than the more traditional seniority-based scales.

However, despite drives to increase labour productivity and efficiency, a significant amount of inertia was encountered as employees still operated under the

mind-set of a government department. In February 2008, it was documented that when sales targets for New Years' cards were not met, employees purchased the balance privately and on-sold them at a discount. Other examples included commission charges of ¥100 to issue a ¥50 stamp. Many employees complained of difficulties adjusting to new performance targets and workloads, and retirements rose as a result.

Outsourcing expanded and by June 2008, plans emerged to further contract out mail delivery and other services to Lawson convenience stores and SECOM security in rural areas. Political pressure later became apparent, however, when JP was forced to reopen some of the recently closed outlets despite having outsourced services in the same location.

Deposits at JPB decreased and many promotional campaigns were unsuccessful despite considerable cost. In an effort to stem capital outflows, the bank asked the Postal Services Privatization Committee (PSPC) to remove the ¥10m deposit cap in 2008. Private banks strongly opposed, arguing that government ownership constituted an unfair advantage and threatened to deny access to domestic fund transfer systems if attempts to raise the cap continued.

The PSPC approved expansion into international logistics in June 2008, so long as a level playing field was created. However, this was inconsistent with inward bound competition as the government was unwilling to reduce restrictions on foreign freight companies. Similarly, JP executive staff and members of the LDP opposed foreign ownership stakes. Nishikawa stated that he was opposed to foreign takeovers and a precedent for government intervention had been set when the LDP blocked a UK-based company from acquiring a stake in a Japanese electricity provider the same year.

Asset management was a contentious issue during the Fukuda government. Pressure to postpone or annul plans to redevelop the central post office was championed by Kunio Hatoyama and further bolstered by other Diet members and a cadre of architects. Whilst the renovations were eventually approved, a large portion of the main facade was protected. The concessions and delays imposed costs and overall profit expectations were revised downwards significantly.

Ministry influence during this period was muted. A panel working for the Ministry of Internal Affairs and Communications submitted a recommendation in November 2007 suggesting deregulating delivery service, particularly the 100,000-mailbox requirement, but it was not pursued any further. In preparation for eventual

share floats, the Ministry of Finance established an office to oversee the sale of shares and to ensure that financial markets were not disrupted.

Whilst not directly connected to the post office, perhaps the single most prominent event of Fukuda's term was the supplementary budget that offered targeted support for farmers. ￥80B was offered to promote shifting production from rice to other crops. What is interesting to note is that total agricultural spending between the previous three supplementary budgets amounted to ￥10B. Similarly, Davis and Oh (2007) state that effectively all farmers belonged to a single lobby and are a powerful vote gathering instrument. The members of parliament who supported the farming lobby also opposed privatisation.

When asked about the presence of a relationship between the postal lobby and the agricultural lobby, interview participants unanimously agreed that one most likely existed although there was not a perfect correlation; supporting politicians tended to fall into one group or the other. Both groups shared similar ideologies, favouring isolated and protected markets, and displayed preferences for more traditional models with layers of culture masking the inherent inefficiencies. It is interesting to note that two unrelated participants both acknowledged the Trans Pacific Partnership (TPP) talks as a shared threat, fears including foreign purchases of assets and increased competition.

The alignment of incentives and objectives, similar organisation, and pressure tactics made the postal lobby and the agricultural lobby close potential partners (Participant 8, personal communication, March 4th, 2014). The two groups were also linked economically: many of the subsidies and investments channelled into farming communities were funded directly through postal savings or through Fiscal Investment and Loan Programme bonds (Participant 5, personal communication, May 15, 2013; Participant 6, personal communication, July 10, 2013). It was therefore only logical that rural communities opposed privatisation at the risk of reduced rural spending. Figure 6-8 describes the major events to postal reform that occurred under the Fukuda administration.

Figure 6-8 Major events under Fukuda

Fukuda Administration: Timeline of significant events

Sep-2007	
Oct-2007	Postal workers' unions completes merger.
Nov-2007	MIAC panel submits recommendations for deregulation.
Dec-2007	
Jan-2008	
Feb-2008	
Mar-2008	
Apr-2008	JP presses MIAC to lift deposit cap.
	JP begins to reorganise labour structure.
May-2008	
Jun-2008	JP looks to outsource some services to Lawson and Secom.
	JP allowed to expand into international logistics.
Jul-2008	MOF establishes office to sell JP shares and monitor market impact.
Aug-2008	
Sep-2008	JP reopens closed rural post offices.
	Resistance to redevelopment plans causes delays and costs.

6.6.1 Summary

During Fukuda's term, postal workers merged and JP pressed for increased deposit caps. Political interference continued in regards to asset management and network operations. Recommendations to level the general correspondence playing field were also firmly defeated.

Koizumi's reforms had alienated parts of the LDP's traditional support bases, chiefly among the rural and elderly[84]. Widespread public dissatisfaction with the Fukuda government saw efforts to contain the damage. Growing support for opposition parties, who stated that they would revise privatisation, later placed the reforms in a vulnerable position. The LDP still maintained a strong controlling interest in the Diet from the 2006 general election but waning support and poor leadership increased the possibility of an opposition victory in 2009. As such, the progress of privatisation remained steady during Fukuda's term, but the longer-term future began to look uncertain.

6.7 Changes Under Prime Minister Taro Aso

Taro Aso's term in office extended from Fukuda's resignation, taking effect from September 24, 2008. He served until September 16, 2009. This period was

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[84] These groups received ￥171.9B to stave off increases in health insurance in the supplementary budget.

particularly controversial as the election in 2009 and the LDP's weakened position meant the party had to consider all possible alternatives to avoid defeat.

The political landscape was turbulent. The LDP had lost some of its longest-supporting interest groups as splinters broke away to form the People's New Party or join the DPJ (Participant 6, personal communication, July 10, 2013). *Zentoku* stated goals to modify the programme and to manage the four business units jointly; their ability to influence and mobilize votes in the hundreds of thousands was thought to be a key factor in some of the dissenting views held within the LDP. In the words of Participant 5, "…the LDP lost a lot of rural votes in that election and I think it's fairly easy to see that this was the fallout from the 2005 elections" (Personal communication, May 15, 2013).

At the same time interest in privatisation appeared to have ebbed as attendance at privatisation review meetings had steadily fallen. Prime Minister Aso mentioned in 2009 that he discussed the possibility of reviewing it and of potentially freezing IPOs. The Ministry of Internal Affairs and Communications also proposed to JPH that postmasters should be paid for participation in community events. Many saw these as efforts to win back *Zentoku* support although undoing the efforts to date risked the support of independent urban voters. Nevertheless, securing rural support was an important objective as rural voters had higher turnouts, and because of a peculiar technicality of Japanese electorates, a rural vote was more valuable than an urban vote (Katz, 2003; Stokes, 2007).

Even so, there was still support for Koizumi's reforms. A group of LDP members considered severing ties with the LDP in protest at Aso's reluctance. This group included three high-profile members: former LDP secretary general Hidenao Nakagawa, former Defence Minister Yuriko Koike, and former administrative reform minister Yoshimi Watanabe[85]. Other members expressed displeasure with Aso's leadership and opposed the construction budgets and accompanying fiscal debts. In the absence of an assertive figurehead, the unity of the LDP was compromised and presented an opportunity for opposition parties to gain support for the upcoming election.

The DPJ had gradually gained public support since the latter half of the Abe administration. The three prime ministers succeeding Koizumi failed to meet the public's expectations and whilst approval of each began promisingly, all fell to very

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[85] Watanabe later created the reform-oriented 'Your Party'.

low levels. The opposition coalition of the DPJ, People's New Party, and Social Democratic Party promised to undo privatisation, reintegrate business units, retain share ownership, and exempt JP from private sector regulations, citing perceived declines in service quality and lack of universal financial service as their primary justification. To demonstrate their commitment they drafted legislation that would block share sales and promised to introduce it if victorious.

The People's New Party vocally denounced privatisation. Headed by Shizuka Kamei, the party was fiercely opposed to reform and lamented competition being placed above all else. Kamei's personal relationship with *Zentoku* gave him a significant amount of influence.

JP experienced a number of teething problems. Nishikawa admitted in July 2009 that many targets for new business lines were not met. Trusts and mortgages in particular were far below expectations. To improve corporate governance he sought to create a chair post as well as an advisory panel that would help oversee management of the four units.

Political interference, however, was more prominent under the Aso administration than any other LDP-led government, particularly with respect to asset management. As per the law regarding JPH, the break up and sale of selected assets was supposed to be completed by September 2012. However, doubts were raised when it became apparent that of the 634 sales from 2004-2008, 70% had already been resold, seven at such low prices they were described by the Yomiuri as being 'given away'.

The proposed sale of *'Kampo-no-yado'* to the ORIX Corporation received the most attention. Ministry of Internal Affairs and Communications minister, Kunio Hatoyama, took issue because he believed they were being offered at fire-sale prices to ORIX, chaired by prominent Koizumi supporter Yoshihiko Miyaguchi. Hatoyama wanted an investigation, claiming the bidding process was opaque. Nishikawa argued that overall, the resorts had always operated at a loss and in order to dispose of the particularly poorly performing ones they had to be bundled with better ones and offered at a discounted price[86]. ORIX had expressed interest in purchasing all of the resorts. Nishikawa countered that stricter reporting would have resulted in even lower prices. Following several meetings, one of which

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[86] In my travels, I happened to chance across a *Kampo-no-yado* at a resort town; it appeared to have been completely abandoned and was fenced off.

resulted in the threat to remove Nishikawa as head of JPH, the Ministry of Internal Affairs and Communications eventually halted the sale in January 2009. This action raised concerns that other sales of loss-making assets would be interfered with.

Intentions to redevelop the central Tokyo post office also drew Hatoyama's attention. Whilst JP did not need approval to proceed with construction, Hatoyama wielded considerable power and he was suspected of intervening in these plans in an attempt to roll back privatisation efforts. Through his influence, more of the old building was preserved than initially intended and construction postponed, but his stance softened when business circles reiterated support for the renovations.

Insider-influenced appointments also occurred during the Aso administration. Hatoyama pressured JP into accepting the appointment of three vice-president positions at JPH. These individuals were all ex-postal officials and one in particular, Hiroaki Dan, was given authority over JPH personnel, enhancing bureaucratic influence.

By May 2009, Kunio Hatoyama made it clear that he wanted Nishikawa to resign from his position as head of JP, a stance that his brother, Yukio, mirrored in the DPJ. *Zentoku* also wanted to replace Nishikawa as he supported privatisation. An unnamed LDP lawmaker reportedly told postmasters that he was involved with personnel selection at JPH and pressed for management changes. However, in June, Aso dismissed Kunio Hatoyama over the ORIX debate, stating that it was inappropriate to interfere with a private company. This produced a clash within the Diet, particularly from Yukio Hatoyama. The Ministry of Internal Affairs and Communications also noted their displeasure and wanted an external panel established to review the corporate governance and management practices of JP.

Hatoyama's replacement, Tsutomu Sato, agreed to keep Nishikawa on as president. However, Sato also expressed a desire to hire an outsider to the position. Nevertheless, he appeared to be undecided about his stance on privatisation: whilst he expressed readiness to amend the laws related to privatisation, he also wanted Nishikawa to continue with efforts to turn JP into a private enterprise.

In terms of operations, however, progress remained steady. The Ministry of Internal Affairs and Communications was not opposed to the expansion of JPB into loans to the public and the Board for Postal Privatisation wanted JPB to enter the field. The board also called to lift the deposit cap although competitors remained opposed to any changes and were wary that JPB would receive government intervention or support. They also contended that expansion into loans was unwise

as JPB lacked the experience or the personnel to manage individual loans and mortgages properly. Even so, the PSPC approved expanded banking and insurance activities.

The Aso administration was the last LDP-led government. The rural vote, where *Zentoku* was most powerful, had been lost (Participant 5, personal communication, May 15, 2013). Poor leadership, recurrent scandals, and an unprincipled scramble to gather as many votes as possible left the public disillusioned and weary of machine politics, which resulted in urban and suburban vote losses (Participant 5, personal communication, May 15, 2013). The LDP was defeated in August 2009 by the DPJ, who promised to do away with *amakudari* and break with old traditions. The DPJ also proposed a smaller, more efficient government and claimed that their more revolutionary approach would help Japan recover some of its former growth.

Figure 6-9 describes the major events in postal reform that occurred under the Aso administration.

Figure 6-9 Major events under Aso

Aso Administration: Timeline of significant events

Sep-2008	
Oct-2008	
Nov-2008	
Dec-2008	
Jan-2009	Hatoyama opposes ORIX deal, orders investigation into it.
Feb-2009	Aso confirms willingness to revise reform package.
	PSPC allows JP to expand financial services prior to listing.
	LDP postal privatisation board pressures government to lift deposit cap.
Mar-2009	Compromise reached over post office redevelopment, delays construction and adds costs.
	Hatoyama and MIAC pressure JP to appoint ex-bureaucrat VPs.
Apr-2009	
May-2009	
Jun-2009	MIAC prevents sale to ORIX. Hatoyama dismissed from MIAC.
	Opposition parties announce intentions to reintegrate units, stop share sales.
Jul-2009	Nishikawa admits targets not being met.
Aug-2009	MIAC requests improvement list from JP Holding.
Sep-2009	DPJ produce legislation that will block share sale.

6.7.1 Summary

Political interference with management was common under Aso; legally required sales were blocked and refurbishment plans were delayed. *Amakudari*

appointments also continued. The greatest threat to postal reform stemmed from the LDP's weakened position and Aso's willingness to revise changes in order to secure power. Loses for the LDP translated to gains for the DPJ and their supporters, including the anti-privatisation People's New Party. Irrespective of electoral results, postal reform was in a precarious position.

6.8   Changes Under Prime Minister Yukio Hatoyama

Yukio Hatoyama served from September 16th 2009, to June 8th the following year. An interesting point is that the DPJ's 2005 manifesto stated the party supported privatisation, advocating downsized postal operations. Then leader, Seiji Maehara, suggested that the cap on postal savings be lowered to ￥7M and that opposition for the sake of opposition was irrational (Nabeshima, 2005). The strong position of anti-privatisation became apparent from 2007 although the party line still supported smaller, transparent and more efficient government.

Discussions with expert participants highlighted the stark differences in the DPJ's attitude towards privatisation; the influence of Ichiro Ozawa was a crucial factor. Prior to the 'Ozawa era' the DPJ were more pro-reform oriented with members serving on a non-partisan privatisation study committee (Maclachlan, 2011). In addition, the party was not directly opposed to Koizumi's views: "[The DPJ] understood the political aspects of privatisation…they understood the political implications behind what Koizumi was trying to do" (Participant 6, personal communication, July 10, 2013). Their approach was to offer an alternative plan congruent with their constituent's wishes and distinctive enough from the LDP's to attract voters (Participant 8, personal communication, January 17, 2013).

The DPJ under Maehara considered in 2005 that breaking up the postal network would simultaneously produce their desired neoliberal change and sever the links between the LDP and one of its key support groups. Nevertheless, they were unsuccessful and following a punishing defeat in the 2005 election, the DPJ took a different path.

Ozawa came to the DPJ after defecting from the LPD in 2003 although his 'faction' did not gain strength until after 2005. Ozawa and Kamei had often worked closely together and shared similar views on a number of issues. The newly formed People's New Party formed a coalition with the DPJ and together, they fostered the change in DPJ policy objectives upon realising a broader support network was needed (Participant 5, personal communication, May 15, 2013).

Ozawa himself was described as the 'classic LDP politician' in the sense that he was a machine politician and attempted to draw in as many stakeholders as possible (Participant 6, personal communication, July 10, 2013). Together with the People's New Party, they became the party of the postmasters, taking power in 2009, and began to unravel Koizumi's hard-won gains. It is interesting to note that the DPJ, who once promised to depoliticise the post office, *re*-politicised it after winning power.

In terms of political incentives circa 2005, the DPJ may have indirectly supported Koizumi's intentions because a privatised post office would have significantly weakened one of the LDP's most effective vote-gathering mechanisms. The change in position was perhaps not coincidental following *Zentoku*'s withdrawal of support for the LDP as the DPJ saw an opportunity to gather some of the rural vote. Expanded postal services would both secure public support and provide the DPJ with the very funding they wanted to deny the LDP.

Hatoyama took office in 2009 and pledged to undo changes wrought by previous LDP governments. This stance gained the support of the People's New Party led by Shizuka Kamei. Despite having only three seats, this small party had a disproportionately significant amount of influence as Kamei acted as the champion for *Zentoku* and *Taiju*. As will be demonstrated, Kamei capitalised on his political connections and implemented a number of modifications favouring his constituents.

One of Hatoyama's first actions was to assign Kamei as minister of postal and financial affairs. This appointment produced inconsistency as actual power lay with the Ministry of Internal Affairs and Communications, headed by Kazuhiro Haraguchi. Kamei openly dismissed Haraguchi's mandate and this created internal conflicts; Haraguchi saw the separation of units and market supervision as desirable outcomes and opposed raising the deposit cap.

The separation of business units was perhaps the most salient issue that characterised the dissolution of the old network. Immediately following the election victory, a law was passed that reintegrated management of the business units and blocked share sales. This was congruent with the stance of the People's New Party who wanted all shares in JPH to remain under state ownership. Later in January 2010, Kamei, Jiro Saito, and Haraguchi announced a plan that would consolidate the five entities into three: insurance and savings would both remain specific units, whilst the delivery, network, and holding companies would be merged.

Management and the organisational hierarchy also underwent significant change. Pro-privatisation Nishikawa was forced to resign his presidency of JPH on October 28, 2009. Kamei replaced him with Jiro Saito, formerly of the Ministry of Finance, despite the DPJ's pledge to stop the practice of appointing former vice ministers to such roles. Kamei stated that Saito shared the government's view to postal reform, which led to his appointment. As for the board of directors, Kamei asked for the resignation of four pro-privatisation board members who had served since 2007. He later suggested that the board need not resign *en masse* but would have to adopt new principles if they wished to remain.

The government instigated a number of law changes that distorted the legal process of appointments. Six weeks into the new term, the government doubled the number of directors to 18, and of the five full-time positions, three were former bureaucrats. Most of the other roles were filled by bureaucratic staff; outside directors were drawn from public good entities (who favoured universal service policies). The nomination committee was reduced to a single individual, which made deliberations impossible.

Four vice presidencies were created and of these, Atsuo Saka was a former deputy chief cabinet secretary and Seijiro Adachi was an ex-postal bureaucrat. Final approval of ascension to the board lay with Kamei. Overall, these changes produced a large number of placements filled with official staff, and more to the point, individuals who reflected the pro state-owned view of the new government. This contrasted with the DPJ's pledges to reduce the number of bureaucratic appointments and *amakudari*.

Universal provision of financial services was also an issue that drew rapid action. On October 20, 2009, a law was passed establishing universal financial service. The decision was not completely unanimous however as some within the DPJ suggested that it might be difficult to provide all services at all locations and instead the provision should extend only to basic services such as settlements and remittances.

A much more controversial matter was the debate surrounding deposit and insurance caps. *Zentoku* argued to raise the ￥10M savings cap or remove it completely, citing convenience and administration costs. The People's New Party also wanted to raise the cap but they were less optimistic about the possibility of removal and hence pressed to lift it to ￥30M. They argued that higher profits derived from greater deposits would pay for universal service obligations. Many

within the DPJ also wanted to increase the limit, although there were several high-profile ministers who did not support the change.

The Minister of Finance, however, argued that a higher cap would deprive the private sector of business opportunities and did not support an increase (Japan Noda: Need more debate on Japan Post plan, 2010). Haraguchi of the Ministry of Internal Affairs and Communications was also opposed, as were the insurance and banking associations. Representatives from the credit union association met with Kamei in February 2010 and persuaded him to recant his position on the insurance, but not the deposit cap. Kamei announced after the meeting that he did not wish to damage the private sector but nonetheless continued to press for increases to the deposit cap. By March 2010, the banks even went so far as to threaten to cut access to their networks of ATMs if it was lifted.

The People's New Party also fought to increase life insurance payouts from ￥13M to ￥50M. The National Federation of Life Insurance Worker's Unions were firmly opposed. The DPJ found itself in a difficult position as much of its support derived from business circles. According to the Nikkei, concessions in postal services risked lower voter support. Also in March, leaders from business groups approached the DPJ and asked the government not to acquiesce to the People's New Party, however on March 24, the deposit cap was doubled to ￥20M and the maximum life insurance payout increased to ￥25M. The DPJ considered this a compromise between business interests and the People's New Party. Following the amendment, Kamei announced further intentions to raise the insurance deposit cap to ￥20M.

6.8.1   Cap limit and JGB sales

It should be noted that at the same point in time, sales of JGBs had fallen greatly and previous increases in caps diverted private savings to the post office. Indeed, the Ministry of Finance had even gone so far to begin advertising JGBs in taxis, featuring a popular local actress (Evans-Pritchard, 2009). Discussions from expert interviews presented two factors that explained this coincidence:

6.8.1.1   Alliance with Ministry of Finance

Prior to 2009, the DPJ had never been a governing party and needed support from the bureaucracy. Ironically, one of their few coherent mandates was a drive for administrative reform – a drive that placed the party at odds with many

bureaucratic stakeholders (Participant 6, personal communication, July 10, 2013). Discussions revealed that the DPJ counted the Ministry of Finance as one of its few allies, a position that granted the ministry considerable influence. This relationship became stronger as DPJ administrations continued (Participant 6, personal communication, July 10, 2013).

6.8.1.2   Financing election promises

The data also suggest that the ministry argued for raising deposit caps as a mechanism for relieving pressure on state finances. The DPJ's election manifesto promised a number of fiscally expensive transfers including monthly children's allowances, fuel tax cuts, and subsidies for farming and education. Assuming JPB would commit the vast majority of its assets to Fiscal Investment and Loan Programme bonds, raising the cap was expected to bolster funds travelling into the programme and permit greater government spending in light of poor tax income. As such, the data indicate that the declining sales of bonds and increasing deposit cap were not coincidental events.

Other changes included halting asset sales, particularly the *Kampo-no-yado* resorts and wedding halls in September 2009. Instead of disposing of these non-performing assets, the intention was to bring them to profit by expanding services. The People's New Party suggested that they be converted into nursing centres, thus further increasing the presence of the state. At the same time, Saito announced that he was seeking to expand the post office to include provision of public services. This was in addition to the People's New Party's plans to use postal deposits to revitalise regional economies and rural areas. These statements implied that closing loss-making outlets would become even more difficult.

6.8.2   Temporary worker conversion

A major change in staffing was also enacted at the behest of Kamei and the People's New Party. JP made extensive use of temporary workers: the Japanese equivalent of part-time labour. Temporary workers do not have the same employment status as regular workers and in April 2010, an amendment was included that subject to passing a written exam and having served for three years, an employee would be granted 'regular' status. This expanded JP's full-time employee payroll by an additional 200,000 to 430,000. It has been suggested that this action was taken to strengthen support for the People's New Party. Results from

the interviews provided a more revealing analysis of underlying motivations that can be divided into three categories:

6.8.2.1 Philosophical views

Kamei was fiercely anti-free market and often called for a return to traditional values. He argued that structural reforms were a primary cause of Japan's social ills and that unravelling privatisation could reduce the harm done. His views may have served social purposes in ailing rural communities but had a negative impact upon government finances hence a larger state-run postal service was needed to fund his various campaigns.

6.8.2.2 Public image

Positioning himself as a stalwart defender of nostalgic, community-oriented values was a stratagem Kamei used to increase his appeal in rural Japan. Promoting traditional ideals and methods was expected to strike a chord with older residents —recall Japan has one of the world's oldest populations—and would strengthen his control in the Diet. This links in with the coalitional deal brokered between the DPJ and the People's New Party.

6.8.2.3 Coalitional support

The number of temporary workers at the post office and their affiliations secured many votes for the People's New Party. More importantly, this group exhibited tendencies to vote *en masse* and in Japan's hybrid electoral system where parties could be listed, gave smaller groups considerably more power (Participant 5, personal communication, May 15, 2013). The DPJ and the People's New Party reached an accord promising further rounds of reform unravelling in exchange for support in upper house elections. Ultimately, the People's New Party gave the DPJ the postmasters and increased Kamei's influence considerably (Participant 8, personal communication, January 17, 2013).

6.8.3 Other developments

In the face of shrinking deposits, Yoshiyuki Izawa, the head of JPB noted that the public could not be served unless profits could be generated and there was a realisation that reintegration would impose the greatest financial burden on the bank itself. Staunching the outflow of capital therefore needed addressing. In an effort to allow JPB to cover its increased costs, the DPJ formulated a clause to

include in its overall reform bill that enabled entry into new businesses merely by notification to the Financial Services Agency (FSA). Together with the Ministry of Internal Affairs and Communications, JPB unveiled a plan that included investments in foreign infrastructure. Kamei, however, opposed the idea, arguing that a lack of experience might result in JP being 'burned'.

The People's New Party supplied a counterproposal, exempting JP from consumption tax. They also suggested that anyone living within a five-kilometre radius of a post office be permitted to borrow ￥500,000 interest free. At this point, Hatoyama and others began to exhibit hesitation in accommodating the wishes of Kamei. The Minister and Vice Minister of Finance in particular opposed the exemption to consumption tax. Unrelenting, Kamei threatened to resign if his proposals were not enacted.

The new postal reform bill was approved by the cabinet in April. This covered the reunification of the business units, extended universal service obligations to include financial services, and changed regulations surrounding entry into new business activities. Ultimately, the Hatoyama administration was able to arrest the changes made to date and began a reversal that saw renewed state control of postal services, and increased government budgets. Figure 6-10 describes the major events to postal reform that occurred under the Hatoyama administration.

Figure 6-10 Major events under Hatoyama

Hatoyama Administration: Timeline of significant events

Sep-2009	DPJ blocks JP asset sales.
	Hatoyama appoints Haraguchi to MIAC, Kamei as minister for posts.
Oct-2009	Saito announces plan to expand postal services.
	JP board changed to have four VPs, two appointees are ex-bureaucrats.
	DPJ reintegrates unit management, blocks share sales.
	Kamei appoints Saito as head of JP.
	Three out of the five directors appointed to JP board are ex-bureaucrats.
	Universal financial services put into law.
	Board of directors increased to 18, largely populated by ex-officials.
	Nomination committee reduced to one.
Nov-2009	
Dec-2009	
Jan-2010	
Feb-2010	Proposal to grant full-time status to temporary workers announced.
	Deposit cap lifted to 20 million yen. Insurance payout increased from 13 to 25 million yen.
Mar-2010	Hatoyama expressed concerns over some of Kamei's proposals.
Apr-2010	Proposal to transfer temporary workers to full employees passes.
	New postal reform bill passed.
	Plan announced to allow JP Bank to expand operations by notification only. MIAC releases plan that would see JP involved in foreign infrastructure, Kamei resists it.
May-2010	
Jun-2010	<end of Hatoyama's term in office>

6.8.4   Summary

Hatoyama's government marked a significant reversal in postal reform. Influenced by the postal lobby, Ozawa and Kamei in particular, a large number of political interventions were made, including the reintegration of JP management, blocking of asset sales, and a requirement to provide universal financial services. Pro-privatisation board members were ejected whilst the board itself was expanded and quickly filled with selected ex-bureaucrats sympathetic to the anti-reform movement. Postal deposit and life insurance payout caps were raised and the temporary worker conversion scheme emplaced. In less than a year, many of Koizumi's efforts had been effectively undone although these actions (among many others not connected with the post office) caused Hatoyama's public approval rating to decrease to one of the lowest ever witnessed in Japan.

6.9   Changes Under Prime Minister Naoto Kan

Naoto Kan took the office of Prime Minister following Hatoyama's resignation and served from June 8, 2010 to September 2, 2011.

6.9.1   New postal reform bill (June 2010)

Pressure from Kamei and his associates to pass the DPJ/People's New Party revised bill was immediate following Kan's ascendency. If passed, it would integrate the delivery and network units into a single entity, require nationwide provision of financial services, raise deposit caps and life insurance benefits, and preserve a greater government-owned share in JPH. Barriers preventing JPB entering private lending would be relaxed, much to the chagrin of private banks, some of whose shares sank to 10-year lows on the news. Nevertheless, the Nikkei reported that some DPJ lawmakers were unhappy with the bill's stipulations, which suggested that the party was not united in calling for the return of a pre-2007 model.

Taking advantage of the DPJ's weakened position, Kamei threatened to resign his cabinet portfolios and withdraw his party's support if the bill was not given precedence and passed before the June Diet session ended. The DPJ, however, was more concerned about the upcoming election; the postal bill was not passed, prompting Kamei's resignation and a rebound in bank share prices. Shozaburo Jimi (also from the People's New Party) assumed Kamei's responsibilities as Financial Services Minister in June 2010.

In sharp contrast with Koizumi's legislation, the government decided not to privatise the financial arms, directly preserving cross-subsidisation to the loss-making delivery units. The government was also criticised for freezing share sales as doing so reduced incentives for good corporate governance practices and efficiency drives.

Despite the DPJ's version of the postal bill not passing in either the ordinary or special Diet sessions in 2010, intentions to roll back privatisation efforts remained.

6.9.2   Political stability

The DPJ was in an untenable position; public support for the party had fallen markedly in the wake of various scandals and broken election promises. The Social Democratic Party had severed ties owing to the failure to remove the American air base in Okinawa and the loss of the upper house election in July meant that new

partners had to be found, which required policy shifts (Participant 6, personal communication, July 10, 2013).

Internal ructions also undermined the DPJ as the views of Ozawa differed widely from other DPJ representatives. Kan reorganised his cabinet to place as many foes of Ozawa as he could in key positions, which temporarily reversed falling public approval ratings. Kan also reinstated the Policy Research Committee in an effort to consolidate power in cabinet. Ozawa was still expected to influence Diet affairs indirectly however.

One of the reasons for the fractures in the coalition was the presence of pro-reform members in the DPJ; Cabinet Secretary Yoshihiko Sengoku publically voiced his views that JP should not be expanded. Some commentators mentioned that Kan himself may have been hesitant to roll back Koizumi's efforts as the size of JP and its holdings of JGBs was linked to sovereign risk; JP held almost twice as many as the Bank of Japan.

6.9.3   Activities at JP Group

Continuing the mixed messages of the DPJ's term in office, businessman Yoshiyuki Izawa was appointed vice president of JPH in an effort to show that it was still on track to privatise. Interestingly, the Nikkei noted that over the three years since the 2007 legislation JP Group had returned ¥1Tln in taxes and dividends as opposed to ¥0.96Tln in the four years as a public agency. This was despite falling revenues from all business units.

As expected, deposits at JPB had fallen to ¥175Tln from a high of ¥265Tln. On an operational level, the bank gradually increased the diversity of its asset pool, investing in municipal bonds and shares in emerging nations as JGB yields fell, see Figure 6-11[87]. Even so, the proportion of 'alternative' investments still only accounted for 4% of total assets. Nevertheless, profits rose 6.5% over nine months, partially due to these higher performance assets.

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[87] Even though the 2013 figure represents the smallest percentage in the data range, the actual amount is ¥144Tln.

Figure 6-11 Percentage of JPB total assets invested in government bonds
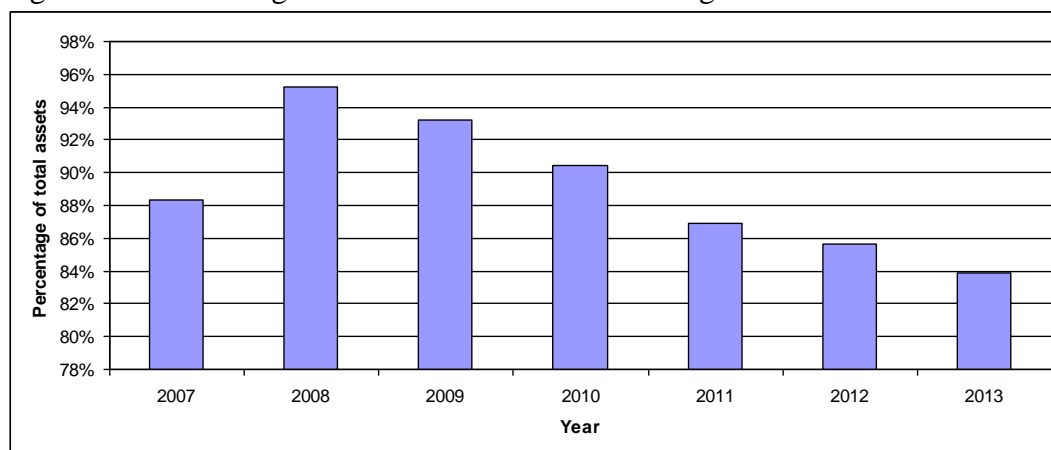
Source: Japan Post Group (2007, 2008, 2009, 2010, 2011, 2012, 2013)

Similar patterns were observed for JPI: total assets had fallen to ¥98.8Tln from ¥126Tln in March 2002, although operating profits were 20% larger. Overall, in spite of the efforts of the People's New Party and others, the benefits of a more market-oriented JP were becoming apparent for the financial arms.

The postal operations however continued to generate losses and make poor managerial decisions. The company acquired the defunct 'Pelican-bin' parcel service and its 4,100 employees – even though its parcel volumes were falling. These workers were then paid going-rates at JP, 20% higher than private operators. Differences in the sorting systems immediately led to delayed deliveries of 320,000 parcels. All told, parcel delivery created losses of ¥12.7B in fiscal 2009 although other mail operating margins improved.

In September, the Nikkei reported that without the financial arms, JP would stand to lose ¥330B per year; stamp and postcard prices would have to increase by ¥22 and ¥17 respectively to cover the difference. The network unit also expected to lose ¥11B in fiscal 2011 as outsourcing revenue received from JPB and JPI fell. The temporary worker scheme saw 34,098 applications for transfer to permanent status, more than half of the total eligible number. A dispassionate observer would possibly conclude therefore that whilst the financial units were making every effort to turn a profit in light of government restrictions, postal services continued to be as inefficient as ever.

6.9.4 Competitor reactions

Unsurprisingly, the business community was wary of the new postal reform bill. The Japan Business Federation, *Keidanren*, argued that a nationalised post

system would disadvantage private businesses, as greater deposit caps would create credit shortages amongst private banks. Nevertheless, the Banker's Association held talks with JPB to discuss their participation, citing the need for disaster coordination[88] and customer security.

Concerns about level playing fields continued to draw singular attention; one article mentioned that some of the operational proposals threatened to violate a number of treaty agreements (NW Interview: Is ACCJ on the same page as Japan Inc.?, 2010). The United States also voiced concerns about competitive fairness surrounding insurance sales and government ownership of JPI. This comment came as Japan sought entry into TPP negotiations and became a contentious issue later on.

6.9.5   Summary

The revised postal bill was designed to solidify the alterations made by the Hatoyama administration but it failed to pass through the Diet sessions – partially due to the government's declining power. In response Shizuka Kamei resigned, an action that may have in fact benefitted reformists. Financial operations were showing improvements in performance but postal operations continued to book losses and needed the support of JPB and JPI. In terms of major changes, Kan's government froze share sales and moved to retain ownership of the financial units

6.10   Changes Under Prime Minister Yoshihiko Noda

Power passed to Yoshihiko Noda following poor performances in the polls and crisis management of the Tohoku disaster in March 2011. He served as Prime Minister from September 2, 2011 to December 26, 2012.

Estimates for reconstruction costs following the magnitude 9.0 earthquake were initially set at roughly ¥15Tln. In terms of funding options, share sales from JP and Japan Tobacco were suggested as well as increased tax rates. Kamei saw this as an opportunity to renew focus on the DPJ/People's New Party postal reform bill; he stated that he would support selling shares to finance reconstruction and thus avoid raising taxes – although he wanted the bill passed first. The LDP and New Komeito opposed the bill but were supportive of unloading shares.

Kamei's enthusiasm to sell shares in JP may have been motivated by genuine concern for those affected, but it also produced an opportunity to advance the

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[88] This was particularly salient at the time, owing to the Tohoku earthquake and tsunami.

wishes of the postal lobby. Under Hatoyama in 2009, legislation had been passed that imposed a moratorium on share sales. Therefore, before any IPOs could be initiated the moratorium would have to be overturned. Understandably, asset sales were viewed as more politically palatable than increased tax rates, and with the sale of JP shares being far more likely, Kamei saw an opportunity to pass his bill in exchange for supporting share sales.

Share sales would be problematic however; notwithstanding the current laws, there were doubts that shares would fetch book value as no earnings models from the group were available. Any further 'reforms' solidifying ties between financial and delivery arms, along with universal service obligations would also be likely to reduce expected receipts from sales.

6.10.1 2012 postal reform bill

Debate around the bill in 2012 saw a number of conflicting agendas. The People's New Party wanted it passed as it would solidify a reversal of the changes wrought by Koizumi's government, lift deposit caps, guarantee universal financial service[89], and increase state control over postal affairs. In this, the Ministry of Internal Affairs and Communications sided with the People's New Party. The Ministry of Finance however opposed the sale of shares; doing so would postpone discussions surrounding tax rate debates. The LDP, New Komeito and even certain elements of the DPJ opposed the bill.

In April 2012, a lower house committee submitted new proposals suggested by New Komeito for a bill to facilitate asset sales. The proposed bill stipulated that postal service and network units would be merged, the requirement to sell all shares by 2017 would be replaced by a pledge to sell them 'as soon as possible' and the state could reserve a 33% stake in the holding company. Washington expressed concerns about the vague terms of the bill's language: it did not specify whether shares in the financial arms would be sold or not. Also included were terms that eased entry into new business operations: once the majority of shares in JPH had been liquidated, JPB and JPI would be permitted to start new operations simply by informing the government.

Heizo Takenaka pointed out that the bill created problems in the sense that it pooled accounting for postal services and preserved government involvement in

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[89] Although no other developed nation provides universal financial services.

financial services. No changes to cross-shareholding conditions were mentioned. Nevertheless, the bill passed on April 27 with support from the LDP and New Komeito, thus the 2009 moratorium was overturned. The new essential structure is pictured in Figure 6-12.

Figure 6-12 Corporate structure of JP Group as per 2012 legislation
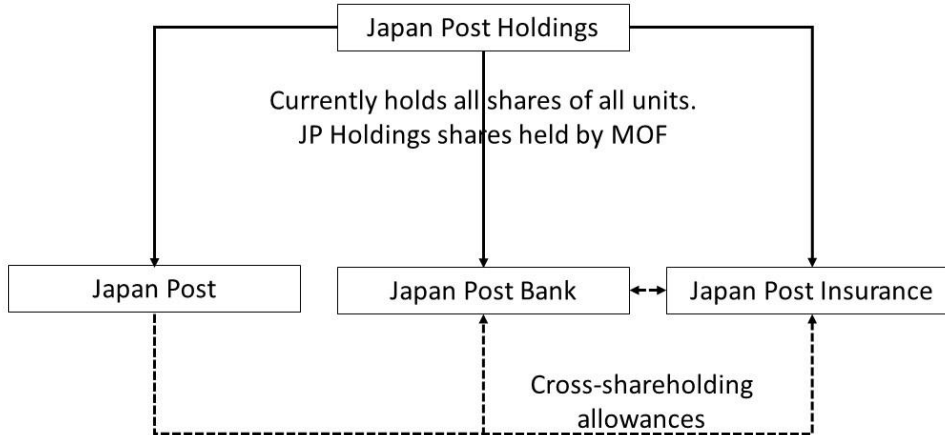
Universal provision of mail, banking and insurance
Non-binding target for sale of shares
New financial business by report after 50% of shares of financial units sold
New mail business by report
State can retain 33% of JP Holdings

Source: Japan Post Group Annual Report 2013, Uniglobal union

6.10.2 State of the playing field

Lincoln (2013) highlights a number of issues in respect to the private sector. Financial organisations were regulated by the FSA, whereas JPB and JPI were regulated by the subordinated Office for Postal Savings and Insurance Supervision, which also happened to be largely staffed by Ministry of Internal Affairs and Communications personnel.

Interest rate controls had been removed several years earlier but JPB still had advantages over private firms: ten year deposits could still be broken without penalty, fees were lower than most private banks and the postal network gave unparalleled market exposure (Lincoln, 2013).

The existence of JPH was inconsistent: holding companies in Japan were not permitted to own banking and insurance stocks at the same time. Similarly, as long as JPH maintained shares in JPB and JPI there was an implicit government guarantee of deposits (Lincoln, 2013). The doubling of postal deposit caps further

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incentivised households to bank with JPB. As of this writing, all of these issues are still current.

6.10.3 Activities at JP Group

In expectation of IPOs, the banking and insurance arms began efforts to improve profitability. JPB offered loans to areas private banks had largely ignored: the self-employed, women, and the elderly. In September 2012, it submitted proposals to the FSA and Ministry of Internal Affairs and Communications to approve private and corporate lending, setting five year targets of ¥790B and ¥350B respectively. The Bankers' Association in conjunction with six other groups held a press conference nine days later and voiced concerns about JPB's effects on the private sector whilst still government owned. Their greatest concerns centred on corporate lending; JPB did not specify how their impact would be minimized.

JPI also applied for approval to start new business operations centred on cancer and educational endowment products. Initial approval for educational endowment insurance was given although eight separate conditions were attached, mostly regarding benefit payments. Expansion into cancer insurance however was abandoned following pressure from the United States regarding the unfair position JPI occupied in the industry[90].

The merging of the delivery and network units was officially completed on October 1st, assuming the name Japan Post Co. One of the first actions conducted as a combined entity was to reinstate remote banking services at 52 locations, which had been removed as part of the 2007 legislation. Efforts were made to improve performance as the unit renewed focus on real estate development. Even so, profits would be elusive; under the five-company system JP Service contributed only one percent of total group returns whilst making up almost half of all the group's employees (230,000).

At the executive level, the DPJ appointed ex-Ministry of Finance Atsuo Saka as president of JPH in spite of election promises to curb *amakudari* and bureaucratic influence. This was probably not coincidental as Participant 6 noted that the Ministry of Finance was one of the DPJ's few remaining allies towards the end of their time in power (Personal communication, July 10, 2013).

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[90] The U.S. required concessions from Japan regarding insurance as one of the conditions for granting approval to join TPP negotiations.

6.10.4 Summary

The greatest change under Noda was the 2012 postal reform bill, which merged the postal delivery and service units, installed universal financial services, removed binding targets for share and asset sales, and eased the conditions for entry into new businesses. The playing field remained tilted in favour of JP and *amakudari* landings continued. The path to privatisation had technically been reopened but with so many requirements and inefficiencies, it was difficult to anticipate fervent demand for shares.

6.11 Changes Under Prime Minister Shinzo Abe

The LDP returned to power after securing 294 of the 480 seats in the December election. Shinzo Abe resumed duties as prime minister on December 26, 2012, and is incumbent as of this writing. In contrast with his last term in office, Abe appears to be a much more forceful leader. His time in opposition likely allowed him time to reflect on past failings and to re-emerge as a stronger, more pro-reform minded premier (Participant 8, personal communication, March 4, 2014).

6.11.1 Reconstruction budget and IPO dilemma

By January 2013, the government had expanded the Tohoku reconstruction budget by a further ¥3Tln and expressed a desire to produce these funds through further asset sales. JP countered, arguing that wider business operations and profitability were necessary to induce better share prices. Whilst initial intentions were to begin listings by spring 2015, delays in approval processes and influence exerted by the US in terms of granting Japan access to TPP negotiations reduced anticipated market values.

One of the greatest issues surrounding stock listing is profitability. JPB for instance has ¥60Tln more in deposits than Mitsubishi UFJ although net earnings are 50% smaller, largely due to the majority of funds being invested in low-yielding JGBs (approximately 70% of total assets). Listing now would result in suboptimal receipts for the state hence the group wishes firstly to increase net income. However, the group needs to expand operations, drawing concerns from private businesses who argue that the group should not be permitted to expand whilst under government control. The FSA has been hesitant to grant approval for new operations, citing weak internal controls.

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In addition to concerns from the private sector, the US raised the issue of insurance during prerequisite bilateral negotiations as a primer for greater TPP involvement. In exchange for approval to join TPP talks, Japan agreed to concessions in the automotive industry and prohibited JPI from offering cancer and educational insurance where the American Family Life Assurance Company (AFLAC) dominates the Japanese market. JP then struck a deal with AFLAC to allow sales of products through 1,000 of its post offices, receiving commission revenue in return[91]. Further outlets would follow later. Approval for entry into private mortgages was also withheld.

To date, JPH has not elaborated on whether savings and insurance shares will feature in IPOs. Whilst these would probably attract more interest, disaggregating the offering would leave shares in JPC exposed and unlikely to find willing buyers.

6.11.2 Activities at JP Group

2013 saw a number of profitability and efficiency actions occur within the group. JP undertook a number of real estate developments, notably including the Japan Post Tower in Marunouchi, Tokyo, a 40-storey tower close to Nagoya station, and conversion of the central post office in Hakata into a commercial building. The company detailed intentions to close down 100 loss-making or unsalvageable post offices, the first action of its kind since 2007. Proposed divestment in unprofitable hotels and hospitals resurfaced too. Whilst Mr Hatoyama was not present to oppose sales this time, the company nonetheless presented a more cautious approach and stated that they would not be engaging in packaged sales; if buyers could not be found, the assets would remain under JP control.

Solar energy sales were also considered as an alternative revenue stream. Scheduled for installation at 286 locations, and estimated to cost ¥3-4B, projected revenues were ¥500M. Other investments within the group included upgraded computer systems, collection and delivery systems, and post office refurbishments with a cumulative investment budget of some ¥1Tln spread over three years.

JP also detailed intentions to restructure labour costs, focussing more on a merit-based system of remuneration. Whilst labour rates would fall to levels closer to private sector figures, provisions existed for greater performance-related bonuses.

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[91] The US drew criticism in this regard, as some argued that it amounted to Washington providing special treatment to a single company.

These negotiations were only made possible as employees no longer held public servant status.

In terms of banking, JPB postponed plans for loan entry after delays in approval from the FSA and TPP concessions. Diversification away from JGBs continued but only gradually: the company noted that carrying such a vast quantity of bonds (some ¥200Tn) affected the creditworthiness of the asset itself. Nevertheless, four months later it was observed that bond holdings had decreased by 7.5%.

Owing to complications surrounding TPP, JPI was unable to launch any new products *per se* but the strategic partnership with AFLAC produced revenue through receivable commission. The arrangement to offer AFLAC products through 1,500 locations was scheduled to encompass the entire network at an undisclosed later date. Contract and payout system investments of ¥200B were announced with expectations of long-term efficiency gains.

Overall, the group returned ¥560B in profits for the financial year of 2012, which also included the first mail delivery profit in four years following cost-cutting measures. The group employed 223,539 full-time workers as at March 31, 2013; 3,227 at JPH, 200,601 at JPC, 12,922 at JPB, and 6,789 at JPI (Japan Post Group, 2013).

6.11.3 Executive staffing

Political interference in a state owned enterprise is an ever-present risk. The Abe administration drew criticism as it conducted a purge of the DPJ-appointed board members as incumbency terms expired. The actions taken by the LDP present the reader with something of a conundrum. Replacing 17 of the 18 members after tenure expired, including a change in presidency from DPJ-appointed Saka to ex-Toshiba and chair of the PSPC Taizo Nishimuro was observed by many as an example of political interference. Nevertheless, the renewal of outside leadership and the conspicuous absence of Ministry of Finance representation on the board leaves the impression that the LDP was committed to a degree of market-oriented governance.

6.11.4 Other political developments

Despite progress, there were potential risks that accompanied the LDP's resurgence. The party's strength in both houses increased the influence of special

interest groups. Tellingly, *Zentoku* defected from the ailing People's New Party and renewed support for the LDP for the first time in eight years in January 2013. Similarly, People's New Party President Shozaburo Jimi requested that the LDP absorb the People's New Party prior to the upper house election in the summer (PNP seeking merger with LDP before upper house election, 2013). Both of these actions appeared to be motivated by a desire to capitalise upon the LDP's majority. As it happens, the LDP declined Jimi's request (PNP Jimi's request to return to LDP rejected, 2013) and the People's New Party was officially disbanded on March 21st whereupon its two remaining members became independent (PNP head Jimi dissolves small opposition party, 2013).

6.11.5 Summary

Abe's second administration was still bound by the 2012 postal reform bill enacted by the Noda administration. In terms of operations, the group made efforts to raise profitability through new business ventures, strategic asset management, and labour cost reduction. The board of directors was purged of DPJ influence but this action in itself could also be observed to be an example of political interference. It is also potentially troubling to note that this purge occurred after *Zentoku* renewed support for the LDP. The evolution of postal reform has now been traced to the present day and the simulation can now be applied to estimate future developments.

6.12   Chapter Conclusion

Japan Post supplanted the Postal Services Agency in 2003. It was incorporated in an institutional environment that skewed household savings incentives towards postal deposits and diverted funds from the private sector into government bonds. Koizumi and other liberal-minded reformers were particularly critical of the role the post office played in the 'iron triangle': the relationship that saw postal savings channelled into inefficient public works projects and special corporations. Postmasters played a vital role in this arrangement, collecting postal savings and gathering votes for their patron representatives. In return, they were rewarded with prestige, material benefits and elevated post-retirement employment. The post office itself relied on the performance of the financial units to subsidise loss-making postal operations.

The institutional setting produced a number of issues that privatisation would address. Among these issues were the losses of competitiveness, ballooning public

debt, growing default fears, capital scarcity in the private sector, heavy interest group representation in policy formation, and skewed incentives leading to poor resource allocation. The Koizumi administration sought to redress these issues by destroying the linkages in the iron triangle; by placing shares in private hands, outsider governance practices and increased transparency were expected to separate postal deposits from special interests. In doing so, the private sector would be invigorated and the size of government would fall by some quarter million staff.

In the face of strong opposition, Koizumi used a number of strategies to push his bills through the Diet. These included a mixture of concessions to the postal lobby, notably, the inclusion of the 100,000-mailbox requirement, the incorporation of JPH, cross-shareholding, and a national postal savings unit. He also made use of credible threats, ejecting opponents within his own party and calling a snap election phrased as a referendum on change. At times, he also crossed the floor and courted opposition parties in order to silence rebellion in his own party. According to the data, his personal leadership style was also a critical factor in passing the reform bills. The group was then split into four business units with JPH maintaining a grip on all outstanding shares.

Succeeding LDP administrations did not greatly alter the bills but political interference became more common as time progressed, culminating in Prime Minister Aso's willingness to review the process. The greatest apparent areas of political interference were appointments to the executive and board level, and hindrances to autonomous asset management.

The DPJ took power in 2009, which marked a turning point in postal reform. Along with coalition partner and ardent defender of the state-owned system, Shizuka Kamei, a moratorium on share sales was introduced and new reform bills were proposed. Under DPJ rule, deposit caps were raised, units were given freer access to new business ventures even though the playing field was significantly tilted, and a scheme to convert temporary workers into full-time workers was installed.

In 2012, an amended bill merged the two mail units into a single entity, obligated universal mail and financial services, preserved a share of JPH for government, and replaced the obligation to sell shares by 2017 with a non-binding target. The ruling coalition also made a number of *amakudari* appointments despite promises to end the practice. Ultimately, the public felt that the DPJ had not been trustworthy and the LDP returned to power in December 2012.

Abe's second term in the prime minister's office saw a replacement of many executive-level staff, but the 2012 reform bill still stands in place. Whilst his government's actions did help to bring about some change in the institution of outsider governance, many of the other institutions remained largely intact. This brings the analysis up to the present day where it now falls to the simulation model to estimate how much effective change can be wrought from the current setting using the issues identified here after being vetted by expert participants.

7 Simulation

7.1   *Introduction*

This chapter presents the actual mechanics of the simulation model first introduced in Chapter Four. Its purpose is to estimate the likely outcomes of negotiations where an array of stakeholders (referred to as 'players' or 'player groups') interact with each other over a specified range of issues. The likelihood of 'winning an issue', that is, realising a desired position, is directly tied to player strength, the amount of support that can be mustered, and the degree of consensus or disagreement over an issue.

The model allows for a wide range of possible scenarios. Describing one issue in terms of one player's position, salience and clout in increments of 0.1 produces over 2,000 permutations. Increasing either the number of players or issues raises the total number of possible input scenarios exponentially. For this study, it was necessary to construct a model with seven issues populated by eight players. Ignoring political persuasion, this produces over 300 trillion input permutations and some 3,000 pages of code. This is clearly far too much information to handle via thought experiment and therefore requires a powerful processing engine and considerable reserves of computer memory. The Vensim© suite developed by Venata Systems Inc. is well suited to such applications and my model is coded in this programming language[92].

The process begins by identifying the number of relevant issues and players. Inputs are entered for each player's three metrics over each issue. All issues are simultaneously analysed in the LOS where outcomes are expressed in terms of final positions. Interactions can span multiple issues via position exchange strategies or concessions offered on a lobby candidate's primary issue (see active player strategies).

Upon generating lower order outputs, these are automatically fed into the HOS where an overall probability of reform effectiveness is calculated. This stage determines whether certain issues will be instrumental in overall success or failure, or if the proposed package can withstand significant lobbying and concessions. In terms of complexity, the LOS is the more involved phase but the same process and

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[92] For readers unfamiliar with Vensim's programming language, equations have been expressed in more common syntax.

calculations are used for each issue present. Figure 7-1 offers a simplified guide to the overall process. Whilst three issues are depicted, any number of issues could theoretically be analysed in the LOS given sufficient computing power.

Figure 7-1 Overview of HOS and LOS with three issues
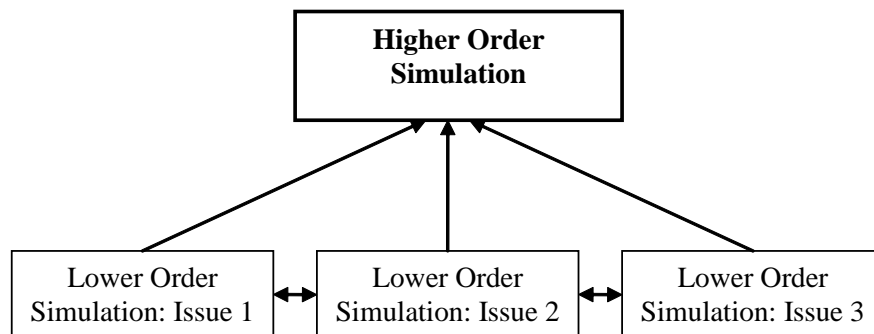
Issues in the LOS are linked together through strong ally lobbying in terms of concessions over the candidate's primary issue and through position exchange between rivals. Beyond this, I recognise that economic links can arise such as *postal network maintenance* affecting *managerial autonomy*. These links however are held as exogenous in the present model. Further research could examine these links more fully but will require a different metric than measurements of position.

7.1.1 Opening notation

$N = \{a, b, c, ..., n\}$ refers to the set of players present within the simulation. A player can represent an individual, a group or faction, or any other collection of stakeholders. When depicting a group the inputs describe the consensus action that group exhibits.

$I = \{1, 2, 3, ..., i\}$ is the set of key issues that the actors are conducting a multilateral negotiation over.

P_{ai} is the *position* of a given player *a* in regards to the specified issue *i*

S_{ai} is the *salience* of a given player *a* in regards to the specified issue *i*

C_{ai} is the *clout* of a given player *a* in regards to the specified issue *i*

Please note that Vensim does not have the capacity to display superscript or subscript fonts.

7.2   Lower Order Simulation

For each issue analysed in the LOS, a number of distinct elements are considered. Issues are phrased in terms that allow for support or opposition against the issue. For example, the issue of '*Business Unit Separation'* refers to splitting JP into its respective business units: savings, insurance, and postal operations. Players can support this decision, oppose it, or remain neutral. Fundamentally it is the value of the *Median Voter Location* over issue i (abbreviated to MVL_i) that produces the expected output over an issue, which is the likelihood that the business units will be separated in this example.

MVL is determined by the players in terms of how support or opposition is spread, how important the issue is relative to other issues, and the power of players. Active players will attempt to change the *MVL* to a more favourable location by negotiating with other players using one of three strategies determined by the relationship they share. *MVL* is the key output in each issue of the LOS as it is a measurement of the likelihood of the proposal occurring or not; values greater than zero suggest that action will be taken, less than zero implying no change will occur with greater polarisation implying increasing likelihoods of success or failure.

Figure 7-2 provides a very brief visual overview of the processes that take place within the LOS of an exemplar *Issue 1*.

Figure 7-2 Calculation centres and flow of information in one issue
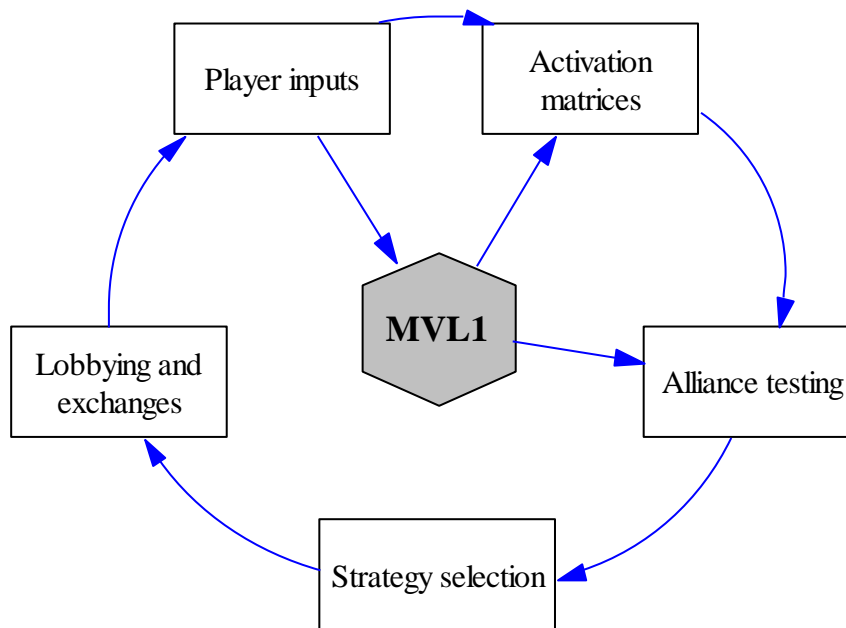
Described briefly, the initial player input values determine MVL_1 at the start of the first round. From this point, players pass through the activation matrices that determine which players will seek to alter the outcome. Alliance testing establishes the type of relationship pairs of players exhibit: strong allies, weak allies, or adversaries. The lobbying and exchanges process is where the actual negotiation occurs, and the results of this stage pass through a series of filters and integrate into the player inputs – causing the *MVL* to move at the end of the round. The process repeats until an equilibrium is reached (where *MVL* remains static). The same process is repeated for every other issue simultaneously; further issues are identified by the addition of an increasing Arabic numeral at the end of each variable.

7.2.1   Calculation of expected outcome: MVL

This preliminary figure is the result of each player applying their stated clout with regard to the position they favour and is conducted in isolation, with each player acting autonomously without bargaining or lobbying any other player. Mobilizing clout for a position is often referred to as casting 'votes' and if we consider position of an issue on a one-dimensional continuum, the location of the outcome is determined by the number of votes cast by each player. Figure 7-3 shows a simplified sketch of this first element of the simulation.

Figure 7-3 MVL calculation element from LOS
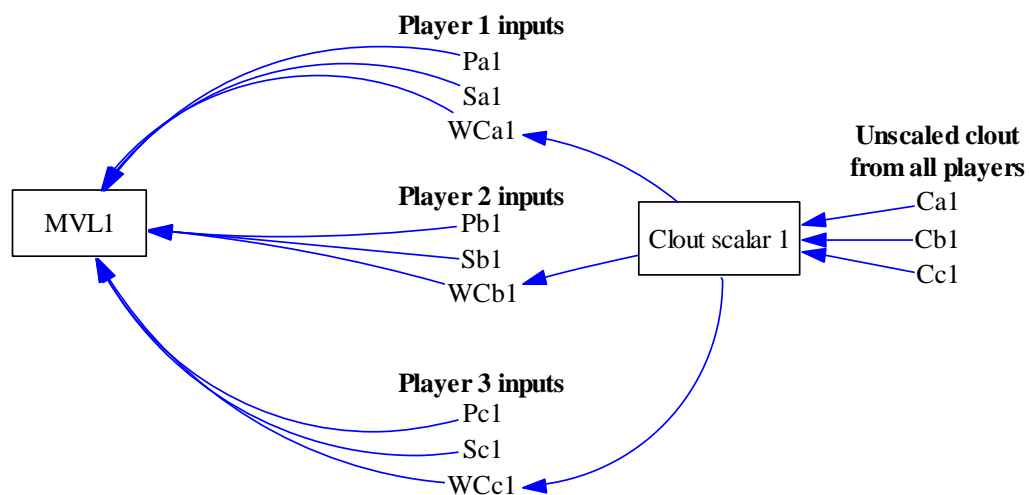
The outcome (MVL_1 in this case) is determined by inputting each player's position, salience and clout figures. Position and salience can be input directly into the MVL_1 calculation. Clout however must first be passed through a scalar: this

mechanism has been installed to assign each player their proportionate fraction of power relative to other relevant players and is given the notation *clout scalar 1*[93]. The sum of all players' weighted clout (*WC*) sums to one. Each player group is then given a weighted clout figure representing their fraction of total power.

Notation as it appears in the diagram:

MVL1 Median voter location of issue 1 (outcome)

Pa1 Position of player *a* over issue 1

Sa1 Salience of player *a* over issue 1

Ca1 Clout of player *a* over issue 1

WCa1 Weighted clout of player *a* over issue 1

Replace '*a*' for '*b*' to represent player two and so on.

Any number of players can be entered into the model providing at least two are present. A unique advantage of this model is that a given player need not be involved in every issue being analysed. For example, the Ministry of Finance may have a strong interest in raising postal savings caps but may have no role in the debate on maintaining at least one post office in every village. Under such circumstances, it is possible to set initial salience and/or clout values at zero for irrelevant issues and non-zero values for relevant issues: the model excludes or includes the player as appropriate.

Position is measured from negative one to positive one: -1 meaning that a player is totally opposed to an issue, +1 meaning that a player displays complete and total support for the issue and zero referring to a neutral player. Salience is measured from zero to one: zero implying no importance at all to the player, one meaning that the issue is of the utmost importance relative to the other issues. Clout is also measured from zero to one with zero meaning no power to influence the outcome and one meaning the most amount of power to influence the outcome.

To determine the expected outcome, as mentioned above it is necessary to transform clout into a weighted figure which returns a value where if all players' weighted clouts are added together they sum to one. For instance, if all three players were to have exactly the same raw clout figures then each player would control

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[93] Some variables have long names and include multiple actors/issues. Variables are italicised for readability.

33.3% of the total authority over the issue. The determination of weighted clout for an individual player *(WC$_{ni}$)* can be completed with two calculations:

$$Clout\ scalar_i = \sum_{a=1}^{n} C_{ai}$$

Where *C$_{ai}$* is the raw clout figure for a given player (*a*) over an issue (*i*) and *n* is the total number of players. The weighted clout for player *a* (*WC$_{ai}$*) is then:

$$WC_{ai} = \frac{C_{ai}}{Clout\ scalar_i}$$

The expected outcome is then determined by the weighted average of player inputs and the calculation of *MVL* is therefore:

$$MVL_i = \sum_{a=1}^{n} P_{ai} \cdot S_{ai} \cdot WC_{ai}$$

The calculation is bounded between -1 and 1 with positive numbers implying the proposition achieves varying degrees of net support and negative numbers implying the proposition is defeated by varying degrees.

7.2.2　Player activation

As mentioned in Chapter Four, when players are dissatisfied with an outcome, they are likely to challenge it. Dissatisfaction is defined as:

$$Dissatisfaction_{ai} = \frac{MVL_i - P_{ai}}{2}$$

The denominator is included to normalise the outputs once again between zero and one (owing to position having a range of two); an output of zero meaning that the player is not dissatisfied at all and outputs of positive or negative one implying maximum dissatisfaction. Whilst the principle of positive or negative dissatisfaction may seem arbitrary, the sign can be used to indicate the direction of a change in the outcome that the player prefers: a positive value would suggest the player would prefer the outcome *decrease* to a value closer to zero, a negative value implying an *increase* in the outcome is preferable.

The degree to which lobbying is successful relies upon changes to dissatisfaction; an ally is likely to mobilise more resources for an issue if their dissatisfaction can be shown to decrease. This is why it becomes necessary to separate salience from the measurement: if an ally were lobbied successfully, they would raise their salience value and this would move the *MVL* closer to both the lobbyer and the lobbied. An outcome closer to one's position value must make the

player better off. However, since clout is indexed to one and divided amongst the players, any given change in salience from one player results in *less* than that given change in the outcome. For example, a 5% increase in salience might result in a 2.5% change in the outcome. Given that the change in salience is greater than the change in outcome, dissatisfaction weighted by salience would rise.

In any case, the model assumes that the inputs used are the actual figures that describe a player, as utility is derived from the actual position, not the revealed position. The term 'actual' refers to the true value of the player's input and the term 'revealed' refers to the value of the player's input exhibited to other players. The model assumes there is enough transparency to expose behaviour such as 'position polarising'. The assumption of transparency is maintained as input values are collected from experts who are disassociated from the players.

Being dissatisfied with an outcome alone does not guarantee the player will take action; the issue must be important enough to warrant more attention and the player must feel that they have a reasonable chance of swaying the outcome. This becomes an application of clout and salience. An active player is assumed to consider strategies of lobbying allies for additional support and offering exchanges to rivals to soften opposition for the current issue.

Determining activation is a logic function; players who are both more dissatisfied than the 'average' player and have higher combined salience and clout are assumed to take action. The absolute value of dissatisfaction is used to facilitate easier visualisation as the sign is not important: *how* the player acts is irrelevant, only *that* they act. Activation factors are given as follows:

$$Activation\ factor_{ai} =\mid Dissatisfaction_{ai}\mid \cdot S_{ai} \cdot WC_{ai}$$

Once this is done an activation threshold can be determined, which is an average measurement of dissatisfaction weighted by both salience and clout of all relevant players.

$$Activation\ threshold_i = \frac{\sum_{a=1}^{n} Activation\ factor_{ai}}{\underset{if\ WCni>0}{n}}$$

Relevant players are assumed to be players who have at least *some* influence over the outcome. The denominator is the total number of players who have a weighted clout value greater than 0.

Once a player crosses the activation threshold, they become active and begin the process of lobbying and exchange. Expressed in logical terms:

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$$Activiation\ factor_{ai} \geq Activation\ threshold_i \Rightarrow Activation_{ai} = 1$$

$$Activiation\ factor_{ai} < Activation\ threshold_i \Rightarrow Activation_{ai} = 0$$

This means that the model assumes player *a* will take action over issue *i* only if their individual activation factor is at least as much as the average player. An active player is coded with the coefficient 1, and an inactive player is coded with 0. The use of 'at least as much' is preferred over 'more than' to include players on the margin: two diametrically opposed players with equal clout and salience would actively try to influence each other. In such a case, their individual activation factors would be equal to the activation threshold.

7.2.2.1 Activation override: The 'panic button'

This model includes a unique feature that grants the researcher increased flexibility during sensitivity analyses by allowing the user to override default activation behaviour.

Using this feature, a number of scenarios can be synthesised. For instance during the middle of a government's term, not all players may be interested in an issue. However, during election campaigns players could have sufficient incentives to involve themselves with a wider range of issues. Use of the override for a certain number of rounds can replicate conditions if an election were to occur in the middle of a year. Similarly, should public concern swell over a particular issue, it is possible to activate all players for a certain number of rounds – or indefinitely. By comparison, some issues may be of such great importance that they warrant action from all players whilst other issues may be less the focus of attention.

By default, the overrides are disengaged but feature prominently in the interface, granting the ability to explore a range of hypothetical conditions. Programming the overrides, known as the '*Panic Button*' and '*System Panic*' is a simple matter of inserting a conditional clause into each player's activation equation such that:

$$\left[Activation\ factor_{ai} \geq Activation\ threshold_i\right] \vee \left[Panic\ Button_i = 1\right] \vee \left[System\ Panic = 1\right]$$
$$\Rightarrow Activation_{ai} = 1$$

Panic buttons are issue specific. The '*System Panic*' is a global override and activates every player over every issue; its function is simply to reduce the number of commands the user needs to make as opposed to engaging each '*Panic Button*' for global testing.

7.2.3   Alliance testing

This section examines the relationships one player has with all others in order to determine the type of strategy to employ. The alliance test measures the type of relationship and is determined via logical conditions. It is a complex variable and therefore is explained here in stages. In simple terms, the full equation calculates relationships based on the following:

1. Are the players on the same side of zero on the position continuum?
2. Are they strong allies?
3. Are they weak allies?
4. If none of the above, they must be adversaries.

Determining if a pair of players are on the same side of zero is a simple matter of multiplying their respective positions. Thus, the first condition is satisfied simply by requiring that cross multiplication needs to be positive. Figure 7-4 provides a visual example of a pair of adversaries:

Figure 7-4 Adversaries over issue 1
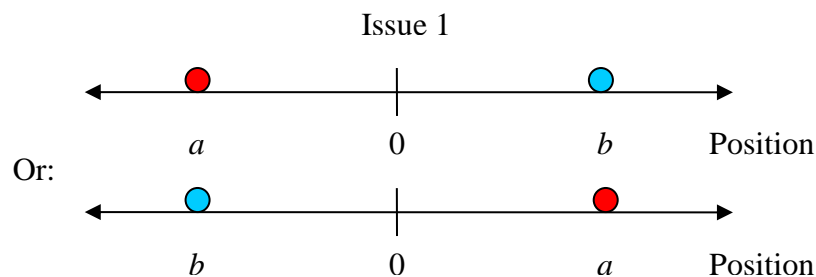
Irrespective of the location of the *MVL*, these two players are on opposite sides of zero and therefore must be adversaries. By comparison, allies could be pictured as either of these two cases pictured in Figure 7-5:

Figure 7-5 Allies over issue 1
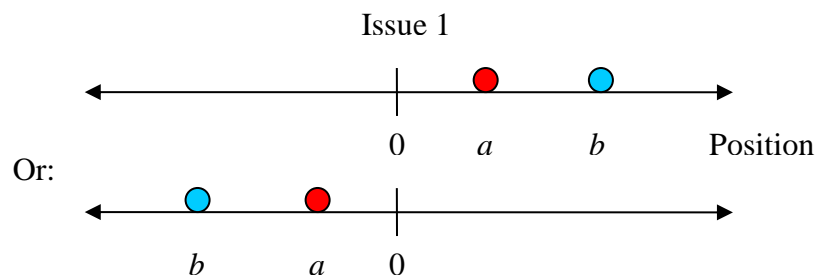
Whether *a* or *b* takes the more extreme position is irrelevant, only that they are on the same side of zero. At this stage, the *type* of alliance has not been identified.

This model assumes that self-serving interests are a more powerful motivating force than selfless concerns. As a result, players will not form alliances with other players who have opposing views even in the event of two fairly central players who are only slightly separated by sign. Figure 7-6 provides an example:

Figure 7-6 Closely separated but ideologically opposed players

Issue 1

a   0 *b*   *c*   Position
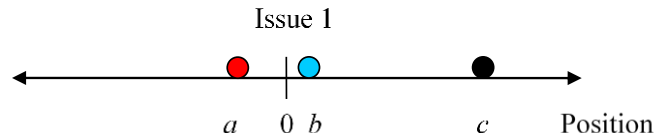
The positions of players *a* and *b* are not very dissimilar, perhaps P_{ai} is -0.05 and P_{bi} is 0.01, yet these two players will not form an alliance with each other as they are on opposite sides of zero. Player *b* would consider an alliance with player *c* however even though the difference in positions is far greater.

The strength of a potential alliance is now examined. Two players who find themselves on the same side of the expected outcome would both be better off if the outcome were to move towards them, up until the point where the outcome is equal to one of the player's positions. This is labelled a 'strong alliance' and coded as '1'. Two players who are both on the same side of zero on the position continuum but have the expected outcome between them could potentially foster a 'weak alliance' and are coded as '0.5'. For convenience, the positive cases are illustrated in Figure 7-7; the negative cases are simply a matter of switching signs.

Figure 7-7 The division between strong and weak allies
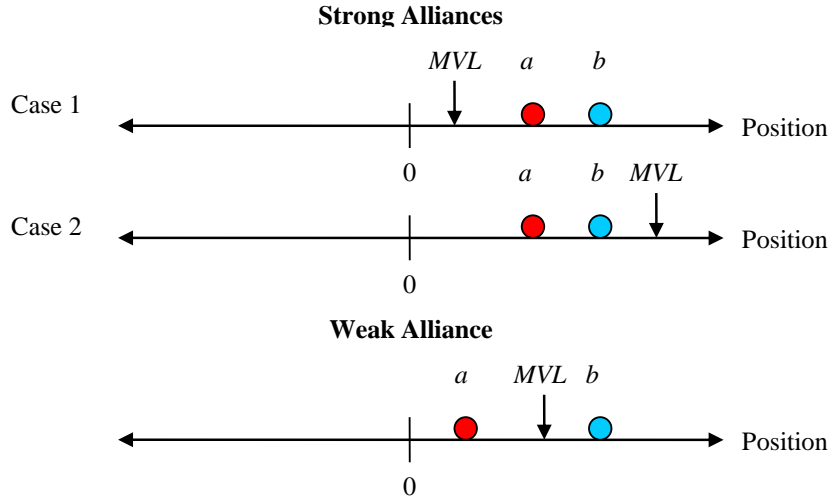
An extended view of the equation specifying all possible outcomes follows. The first two lines represent cases one and two respectively, the next two are their negative mirrors. If a pair of players are on the same side of zero but are not strong allies, they must be weak allies. Finally, if two players are not allies, they must be adversaries.

$$[P_{ai} \cdot P_{bi} \geq 0] \wedge [P_{ai} > 0] \wedge [P_{bi} > 0] \wedge [P_{ai} > MVL_i] \wedge [P_{bi} > MVL_i] \Rightarrow Alliance\,test_{ai,bi} = 1$$
$$[P_{ai} \cdot P_{bi} \geq 0] \wedge [P_{ai} > 0] \wedge [P_{bi} > 0] \wedge [P_{ai} < MVL_i] \wedge [P_{bi} < MVL_i] \Rightarrow Alliance\,test_{ai,bi} = 1$$
$$[P_{ai} \cdot P_{bi} \geq 0] \wedge [P_{ai} < 0] \wedge [P_{bi} < 0] \wedge [P_{ai} < MVL_i] \wedge [P_{bi} < MVL_i] \Rightarrow Alliance\,test_{ai,bi} = 1$$
$$[P_{ai} \cdot P_{bi} \geq 0] \wedge [P_{ai} < 0] \wedge [P_{bi} < 0] \wedge [P_{ai} > MVL_i] \wedge [P_{bi} > MVL_i] \Rightarrow Alliance\,test_{ai,bi} = 1$$
$$[P_{ai} \cdot P_{bi} \geq 0] \wedge [Alliance\,test_{ai,bi} \neq 1] \Rightarrow Alliance\,test_{ai,bi} = 0.5$$
$$[P_{ai} \cdot P_{bi} < 0] \Rightarrow Alliance\,test_{ai,bi} = 0$$

Explaining the first line in words: if the product of P_{ai} and P_{bi} is equal to or greater than zero **and** ($\wedge$) their positions are both greater than zero, **and** their positions are greater than the *MVL*, **then** ($\Rightarrow$) the alliance test equals one.

The actions available to an active player differ depending upon the type of the alliance. In the pictured weak alliance, if player *b* lobbied player *a* and successfully increased *a*'s salience the outcome would move rightwards, making *b* better off and *a* worse off assuming *a*'s position remains unchanged. The action *b* might therefore take would be to try to convince *a* to revise *a*'s position rightwards, making *b* better off. Also, *a*'s shift in position would bring it closer to the outcome, making *a* better off too.

7.2.4 Post activation: Behavioural matrices

Once a player is active, behaviour depends upon the relationship shared with other players. The model accounts for this by specifying a coded output of 1, 2, or 3[94] for a given player with each number representing a different strategy. An example behavioural matrix for player *a* over issue *1* appears from the Vensim sketch here (see Figure 7-8):

Figure 7-8 Behavioural matrix inputs
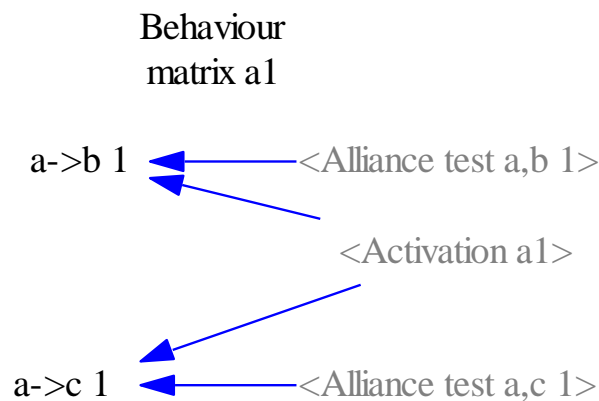
The notation *a->b1*[95] can be read as "*a* lobbies *b* over issue 1" and is subject to this algorithm:

$$[Activation_{ai} = 1] \wedge [Alliance\,test_{ai,bi} = 1] \Rightarrow a \rightarrow bi = 1$$
$$[Activation_{ai} = 1] \wedge [Alliance\,test_{ai,bi} = 0.5] \Rightarrow a \rightarrow bi = 2$$
$$[Activation_{ai} = 1] \wedge [Alliance\,test_{ai,bi} = 0] \Rightarrow a \rightarrow bi = 3$$
$$a \rightarrow bi \neg \{1,2,3\} \Rightarrow a \rightarrow bi = 0$$

Row one states that if *a* is active and the alliance test returns a '1' the two players are strong allies and the active player attempts to lobby the other player's salience over the issue (strategy 1). Row two states that there is a weak alliance and the active player attempts to change the position of the other player (strategy 2). Row three shows that they are adversaries and a position exchange strategy is employed (strategy 3). The last row states that if the output is not 1, 2, or 3, no action is taken; this can only occur if the player is inactive. The algorithm is applied to every pairing of players in the simulation, producing an exhaustive list of strategies for each player every turn. Strategies can change as relationships evolve:

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[94] Vensim cannot output worded phrases.

[95] Vensim does not provide for arrows but is substituted by '->' as text characters.

it is possible for an active player to lobby a weak ally's position in one turn and increase their salience under strong ally lobbying in the next. Engaging the activation override does not alter the strategy employed but ensures the output of the above equation will always be 1, 2, or 3.

7.2.5   Post activation: Lobbying salience (strong allies)

An active player will attempt to change the salience of their strong allies. As strong allies are already located on the same side of MVL_i it is less costly to alter the candidate's salience than their position: if a has a potential candidate b, it is assumed to be simpler to increase b's commitment than it is to influence b's position.

Suppose that two players, the Koizumi cabinet and the Ministry of Finance both support the issue of business unit separation. Suppose also the *MVL* is *less* than both players' positions (pictured below in *case 1*). Finally, assume that the Koizumi cabinet is the active player and the Ministry of Finance has a relatively low salience in this issue. In an effort to increase *MVL*, the Koizumi cabinet simply needs to convince the ministry that this issue is an important one and that more resources should be mobilised to secure a more desirable outcome. Two types of strong alliances can occur and are displayed in Figure 7-9.

Figure 7-9 Two cases of strong alliances
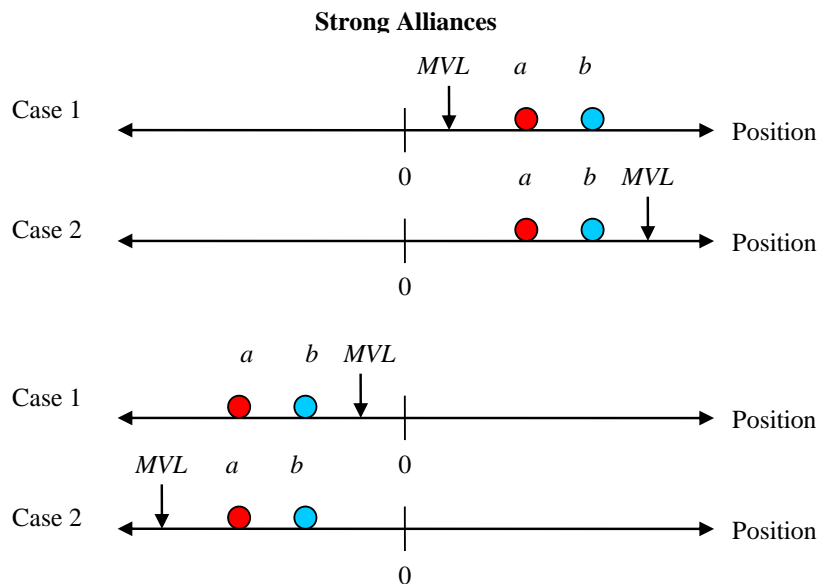
Case one on the positive side demonstrates a typical example where both players are better off with a higher outcome and the active player would seek to increase the salience of the ally. Case one on the negative side shows two players who desire a lower outcome. Since their positions are negative, increasing salience

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will shift *MVL* leftwards. Case two is said to be the special case, representing a scenario where the lobbying player would seek to *decrease* salience, thereby moving the outcome closer to both parties. This is true in both the positive and negative case.

The process of strong ally lobbying is described below using player *a* and player *b* as an example. The same process is also applied to every other pairing of strong allies, replacing player and issue notation as necessary.

7.2.5.1   Lobbying to increase salience: Case one

Fundamentally, strong ally lobbying is an application of utility theory and is governed by the principle of self-interest. The model assumes that an active player cannot influence a candidate to mobilise more resources over an issue than the active player itself. For example, player *a* is active and has a salience value of 0.8. *A* lobbies *b*, who has a salience value of 0.2. At most, player *b*'s maximum salience over issue *i* would be 0.8 – it is assumed that one cannot convince another to work harder for an outcome than oneself.

When a player receives a request to alter salience he/she/it is presented with a trade-off: how much utility is gained from applying more resources to issue *i*, and how much utility would be realised from applying extra resources to the candidate's own primary issue[96]? Thus, the model considers the lobbied player's opportunity costs and a successful lobby attempt only occurs when the net gains (including any concessions received) are at least equal to the next best forgone alternative. Figure 7-10 shows the algorithm that governs case one.

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[96] Noted as *b prime* for player *b*.

Figure 7-10 Strong ally lobbying algorithm
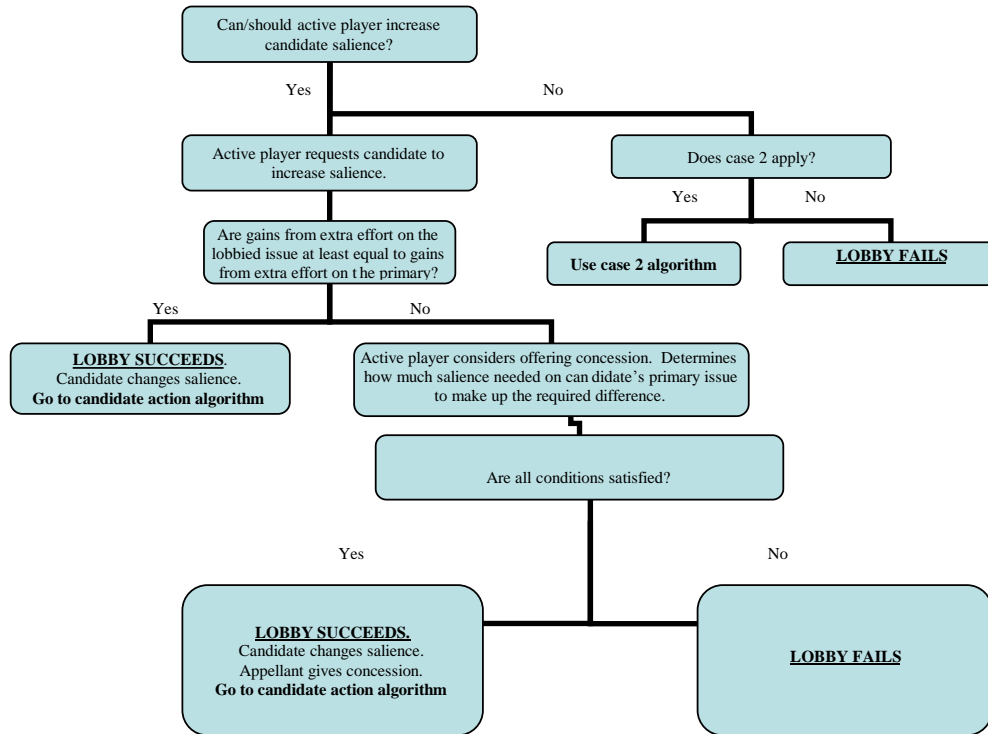
7.2.5.1.1 Checking whether salience can be increased

Increasing the salience of a candidate requires that two separate conditions be satisfied: case one must apply and the candidate's salience must be less than the active player. The equations to determine this are as follows:

$$[a \rightarrow bi = 1] \wedge [S_{ai} > S_{bi}] \wedge [P_{ai} > MVL_i] \wedge [P_{bi} > MVL_i] \wedge [P_{bi} > 0] \Rightarrow a \rightarrow bi \text{ increase salience? } = 1$$

$$[a \rightarrow bi = 1] \wedge [S_{ai} > S_{bi}] \wedge [P_{ai} < MVL_i] \wedge [P_{bi} < MVL_i] \wedge [P_{bi} < 0] \Rightarrow a \rightarrow bi \text{ increase salience? } = 1$$

$$a \rightarrow bi \text{ increase salience? } \neq 1 \Rightarrow a \rightarrow bi \text{ increase salience? } = 0$$

An output of '1' indicates that salience should be increased. Row one confirms that case one applies when satisfying these criteria: a is active, S_{ai} is more than S_{bi}, both players' positions are more than zero and more than the current MVL. Row one is the positive scenario whilst row two is the negative scenario. Row three states that salience cannot or should not be increased. A later equation depicted in case two describes whether salience should be decreased.

7.2.5.1.2 Determining the proposed shift in salience

The equation is as follows:

$$[a \rightarrow bi \text{ increase salience? } = 1] \Rightarrow a \rightarrow bi \text{ salience shift } = (Sa1 - Sb1) \times \left(0.5^{\frac{WCb1}{WCa1}} \right)$$

$$[a \rightarrow bi \text{ increase salience? } = 0] \vee [WCa1 = 0] \Rightarrow a \rightarrow bi \text{ salience shift } = 0$$

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Assuming that *a* should increase *b*'s salience, the shift is assumed to be the difference in their salience values multiplied by 0.5 after being raised to the power of their respective clout figures. If not, or if *WCa1* should happen to be zero[97], the equation is programmed to return a zero. The inclusion of relative clout values is assumed to represent power differentials whereby a powerful player is able to extract more effort from less powerful allies and vice versa.

7.2.5.1.3 Identifying the candidate's primary issue

The process of primary issue identification is based on a simple assumption: a player's primary issue is the one with the highest salience. It is necessary to determine the primary issue as strong ally candidates will be comparing utilities of the lobbied issue and the primary issue to establish whether the first offer is good enough or if a concession is needed. Continuing the example of player *a* lobbying player *b*, the process is conducted over three stages:

1. Identify the primary issue and code by number.
2. Identify the candidate's inputs over the primary issue.
3. Identify the lobbyer's inputs over the candidate's primary issue.

Step one is evaluated by the following:

$$[\max\{S_{b1}, S_{b2}, ..., S_{bn}\} = S_{b1}] \Rightarrow primary\ b = 1,$$
$$[\max\{S_{b1}, S_{b2}, ..., S_{bn}\} = S_{b2}] \Rightarrow primary\ b = 2,$$
$$...$$
$$[\max\{S_{b1}, S_{b2}, ..., S_{bn}\} = S_{bn}] \Rightarrow primary\ b = n$$

Meaning that if issue one has the highest salience, *primary b* is coded as '1' and so on. Should two issues have the same salience then the first in the sequence is chosen.

The next step is to associate the candidate player's primary issue input variables necessary for comparison. In this example these are: position ($P_{b\ prime}$), salience ($S_{b\ prime}$) and weighted clout ($WC_{b\ prime}$). The process is the same for each variable with position given below as an exemplar:

$$\left[primary\ b = 1\right] \Rightarrow P_{b\ prime} = P_{b1},$$
$$\left[primary\ b = 2\right] \Rightarrow P_{b\ prime} = P_{b2},$$
$$...$$
$$\left[primary\ b = n\right] \Rightarrow P_{b\ prime} = P_{bn}$$

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[97] This is a logical stop point in the model: a player with no clout is not part of the negotiation over that issue and thus calculations must halt.

Meaning, if issue one is the primary, use P_{b1}, if issue two is the primary, use P_{b2} and so on.

The final step is to identify the active player's inputs over the candidate's primary issue. These inputs are necessary as if a concession is made to the candidate's primary issue, we must know how strong the appellant is. Assuming player b is being lobbied by player a and noting a's position on b's primary issue as $P_{ab\,prime}$:

$$[primary\ b = 1] \Rightarrow P_{ab\,prime} = P_{a1},$$
$$[primary\ b = 2] \Rightarrow P_{ab\,prime} = P_{a2},$$
$$...$$
$$[primary\ b = n] \Rightarrow P_{ab\,prime} = P_{an}$$

In words: if b's primary issue is issue one, a's position on b's primary is P_{a1}. If b's primary issue is issue two, a's position on b's primary is P_{a2} and so on. The same process is carried out for salience and weighted clout and repeated for all player pairings.

7.2.5.1.4 Considering the first offer and making concessions

To reduce visual clutter in the build window, first offer consideration and concession processing are determined within a single auxiliary variable termed *a→b1 concession to b*. The following explains the mechanics and assumptions piece by piece.

Utility from round outcomes is considered to be a single peaked linear function based on the difference between position and MVL_i. As a result, it is not essential to know the utility functions of individual players; rather utility is indexed between zero and one.

$$U_{ni} = 1 - \left| \frac{MVL_i - P_{ni}}{2} \right|$$

U_{ni} is the utility of player n over issue i. Maximum utility occurs when the player's position is equal to the MVL in which case the utility is one. As MVL moves away, either leftwards or rightwards, utility decreases. Minimum utility (zero) occurs when, for example, the player exhibits a position of +1 and the MVL is -1.

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Figure 7-11 provides a visualisation[98]. Player b's utility curve is labelled as U_{bi} and maximum utility is realised where MVL is 0.5. The current MVL is less than 0.5. As the MVL increases so does utility until maximisation at 0.5. If the MVL were to rise further, the likely outcome becomes more radical than b would prefer and utility begins to decrease. Note that an extreme MVL of '1' is still better for b than an extreme MVL of '-1' as b supports the issue in question.

Figure 7-11 Maximum utility when $P_{b1}=0.5$
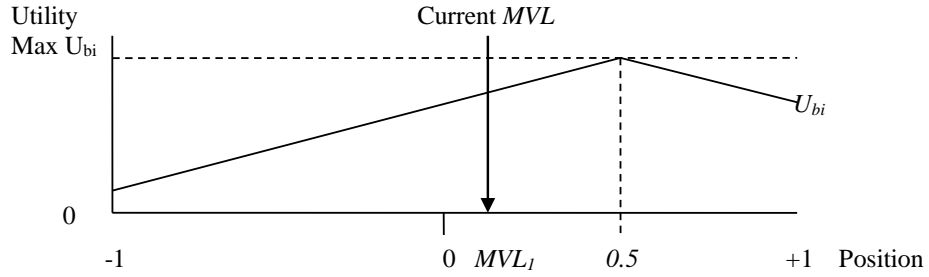
Changes in the issue's outcome therefore directly affect the player's utility and as the lobbied player is considering changing their salience, the change in utility for player b over issue '1' can be presented as follows:

$$U_{b1\,after\,lobby} = 1 - \left[\left| \frac{[MVL_1 + P_{b1} \cdot (Sa1 - Sb1) \times 0.5^{\frac{WCb1}{WCa1}} \cdot WC_{b1}] - P_{b1}}{2} \right| \right]$$

And for the primary issue:

$$U_{b\,prime\,after\,lobby} = 1 - \left[\left| \frac{[MVL_{b\,prime} + P_{b\,prime} \cdot (Sa1 - Sb1) \times 0.5^{\frac{WCb1}{WCa1}} \cdot WC_{b\,prime}] - P_{b\,prime}}{2} \right| \right]$$

$$where: S_{b\,prime} + (Sa1 - Sb1) \times 0.5^{\frac{WCb1}{WCa1}} \leq 1$$

$$or:$$

$$U_{b\,prime\,after\,lobby} = 1 - \left[\left| \frac{[MVL_{b\,prime} + P_{b\,prime} \cdot (1 - S_{b\,prime}) \cdot WC_{b\,prime}] - P_{b\,prime}}{2} \right| \right]$$

$$where: S_{b\,prime} + (Sa1 - Sb1) \times 0.5^{\frac{WCb1}{WCa1}} > 1$$

Salience cannot exceed one. If the change in salience plus the current salience of the primary issue is more than one, the extra effort that can be applied

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[98] The slope of the utility curve is held to 0.5 and -0.5 to ensure the maximum change is equal to one.

is the difference between the current value and one. To provide an illustration, picture a player who already exhibits a salience of one over their primary issue: they are already applying as much effort as they possibly can to this issue. As a result is it not possible to realise any more utility by expending more effort on the issue; other methods such as challenges and exchanges must be considered. Gains through salience may however be realised on other issues, thus the model includes a degree of dynamism by assuming players will prefer to increase salience over their primary *if they can* but if not, they will seek to realise gains elsewhere. Similarly, players who find themselves with very little influence over their primary issue may be able to raise their overall utility by agreeing to increase salience over other issues where they have greater influence.

If the inequality $(U_{b1\,after\,lobby} - U_{b1}) \geq (U_{b\,prime\,after\,lobby} - U_{b\,prime})$ holds then the first offer is accepted and no concession from the appellant need be made. If not, the appellant must change their salience over the candidate's primary issue to make up the difference in utility and this difference can be calculated from changes in output. The change in output for issue i via a change in salience from any player (b in this example) can be shown as:

$$\Delta MVL_i = P_{bi} \cdot \Delta S_{bi} \cdot WC_{bi}$$

Where a needs to match the difference from the change in the candidate's primary issue and the active issue, by simplifying the equations above the concession needed by the appellant can be written as:

$$\Delta S_{a\,b\,prime} = (\Delta MVL_{b\,prime} - \Delta MVL_1) \times \frac{1}{P_{a\,b\,prime}} \times \frac{1}{WC_{a\,b\,prime}}$$

$$where: [WC_{a\,b\,prime} > 0] \wedge [P_{a\,b\,prime} \neq 0]$$

$$or$$

$$[WC_{a\,b\,prime} = 0] \vee [P_{a\,b\,prime} = 0] \Rightarrow \Delta S_{a\,b\,prime} = 0$$

In words, a needs to change their salience enough over b's primary issue to reduce the differential to zero. If a has no position or no clout over b's primary issue they are not able to offer a concession. Phrasing the equation this way also allows the model to include cases where a player may have to *lessen* their salience over the candidate's primary issue if positions are opposed. For instance, player a asks player b to further support industrial deregulation, who then agrees but only if a becomes less vocal in calling for reduced deposit account limits.

7.2.5.1.5 Ensuring all conditions are met

Following the calculations for proposed salience change and any necessary concessions, a conditional test is performed to ensure the following conditions are met:

1. The concession offered by *a* and *a*'s salience over *b*'s primary does not exceed the salience of the lobbied issue.

2. The concession offered by *a* over *b*'s primary does not cause *a*'s salience to become less than zero.

3. The salience shift plus *b*'s salience over the lobbied issue does not exceed *a*'s salience.

4. Both players must have *some* influence over the two issues under negotiation.

5. The '*increase salience*' variable must return a '1'.

The first condition represents an assumption that the player will be willing to make a concession over an ally's primary issue so long as the effort expended on that primary issue does not become greater than effort expended on the issue they are currently lobbying, otherwise it becomes too expensive to lobby allies. The second condition states that it is not possible to have salience less than zero. An ally could potentially ask for a very large concession (particularly if they carry a lot of clout over their primary) and in certain cases may require the appellant to make such a change to their salience it pushes it into negative integers. Such a situation is physically impossible, thus a conditional check has been introduced. The third condition represents an assumption that an ally cannot be made to work harder for an issue than the appellant. The fourth condition exists to remove 'floating point errors' – the model is large enough to encompass many issues and if players have no clout over a particular issue they cannot participate in negotiations over that issue.

Assuming all of these conditions are met, the variable *a→b1 conditions* returns a '1' and will return a '0' if any are not. All that remains now is to account for case two and process all offers before establishing how much salience values change.

7.2.5.2 Lobbying to decrease salience: Case two

Case two represents a situation where two players are strong allies and the *MVL* is on their side of zero but the outcome is more extreme than either of the two

players would wish. In such a case, the players would be better off *reducing* their salience. This principle has been termed *disengagement*. Case two is governed by the following algorithm:

$$[a \rightarrow bi \ increase \ salience? = 0] \wedge [a \rightarrow bi = 1] \wedge [P_{ai} > 0] \wedge$$
$$[P_{bi} > 0] \wedge [MVL_i > P_{ai}] \wedge [MVL_i > P_{bi}] \Rightarrow Disengage = 1$$

$$[a \rightarrow bi \ increase \ salience? = 0] \wedge [a \rightarrow bi = 1] \wedge [P_{ai} < 0] \wedge$$
$$[P_{bi} < 0] \wedge [MVL_i < P_{ai}] \wedge [MVL_i < P_{bi}] \Rightarrow Disengage = 1$$

$$[Disengage = 1] \Rightarrow a \rightarrow bi \ special \ case = S_{bi} \times (-1 \times Disengagement \ factor)$$
$$[Disengage \neq 1] \Rightarrow a \rightarrow bi \ special \ case = 0$$

In order to disengage, a number of conditions have to be satisfied: *a* must not increase *b*'s salience, they must be strong allies, *a* must be active, their positions must be on the same side of zero, and the outcome must be more extreme than both of their positions. So long as these conditions are met, the effect of the special case is to multiply the candidate's salience by a disengagement factor that causes a decrease in the candidate's salience. The value of the disengagement factor is arbitrarily assigned as an input into the simulation and all special cases use the same disengagement factor value. The output from the special case then feeds into the candidate action algorithm where the candidate decides which action is best. Should any of the conditions not be met then case two lobbying returns a '0' and has no further effect.

7.2.5.3 Associating changes with issue inputs

Making a concession to a candidate does not guarantee that the lobby will be successful. In a given iteration of the simulation, a candidate may receive multiple offers to change salience. The mechanics of offer selection will be explained shortly but is based upon accepting the most 'profitable' offer. Assuming for a moment that player *a*'s offer is accepted, the active player must alter their salience value on the candidate's primary issue. This is measured by $a \rightarrow bi \ change S_{a \ bi \ prime}$, meaning 'the change in *a*'s salience over *b*'s primary issue when *a* lobbies *b* over issue *i*':

$$[a \rightarrow b1 \ conditions = 1] \wedge [Accepted \ offer \ b_1 = 1] \Rightarrow$$
$$a \rightarrow bi \ change \ S_{a \ b \ prime} = a \rightarrow b1 \ concession \ to \ b$$

$$[a \rightarrow b1 \ conditions = 0] \vee [Accepted \ offer \ b_1 \neq 1] \Rightarrow a \rightarrow bi \ change \ S_{a \ b \ prime} = 0$$

The first equation states that if the conditions are met and *b* accepts *a*'s offer, the change to *a*'s salience over *b*'s primary is the output of the concession variable.

Finally, the effects upon the candidate player's salience are determined by accepting the first offer, the offer with a concession, or the special case two with an offer of disengagement. If none of these apply, no change in salience is made. Rephrased from the Vensim software:

$$[a \rightarrow b1\ special\ case \neq 0] \Rightarrow a \rightarrow b1\ Influence\ Sb1 = a \rightarrow b1\ special\ case$$
$$[a \rightarrow b1\ special\ case = 0] \wedge [a \rightarrow b1\ conditions = 1] \Rightarrow a \rightarrow b1\ Influence\ Sb1 = a \rightarrow b1\ salience\ shift$$
$$[a \rightarrow b1\ special\ case = 0] \wedge [a \rightarrow b1\ conditions = 0] \Rightarrow a \rightarrow b1\ Influence\ Sb1 = 0$$

meaning that if a special case applies, the influence on *b*'s salience over issue one is the predetermined special case output. If there is no special case and the conditions are met, the change is the predetermined salience shift. If there is no special case and the conditions are not met, there is no change.

7.2.5.4   Candidate action algorithm: Strong ally lobbying

The equations listed above describe the scenario of player *a* lobbying player *b*. However, in any given iteration of the simulation there may be several players vying for player *b*'s attentions over issue *i*. Every instance of strong ally lobbying for every pair of players is calculated each round.

At the end of each round, every lobbied player compiles the offers received and selects one offer per round. The selected offer will have the largest influence on the candidate[99]. This is because the greater the influence, the greater the change in utility for the candidate. The model processes the value of the offers tendered and returns a number equivalent to the player's letter (*a* being 1, *b* being 2, etc.) to indicate which offer has been accepted. If a player receives no offers then a zero is returned. Offer selection is calculated by:

---

[99] The squared value is used because special cases *decrease* salience and thus need to be made positive for purposes of comparison using a MAX equation. The effect is the same as using the absolute value but reduces the length of the equation.

$$\max\left\{a \to bi \; Influence \; S_{bi}{}^2, c \to bi \; Influence \; S_{bi}{}^2, ...n \to bi \; Influence \; S_{bi}{}^2\right\} = a \to bi \; Influence \; S_{bi}{}^2$$
$$\Rightarrow Accepted \; offer \; b_i = 1,$$

$$\max\left\{a \to bi \; Influence \; S_{bi}{}^2, c \to bi \; Influence \; S_{bi}{}^2, ...n \to bi \; Influence \; S_{bi}{}^2\right\} \Rightarrow c \to bi \; Influence \; S_{bi}{}^2$$
$$\Rightarrow Accepted \; offer \; b_i = 3,$$

...

$$\max\left\{a \to bi \; Influence \; S_{bi}{}^2, c \to bi \; Influence \; S_{bi}{}^2, ...n \to bi \; Influence \; S_{bi}{}^2\right\} \Rightarrow j \to bi \; Influence \; S_{bi}{}^2$$
$$Accepted \; offer \; b_i = 10$$

$$\left[a \to bi \; Influence \; S_{bi}{}^2 = 0\right] \wedge \left[c \to bi \; Influence \; S_{bi}{}^2 = 0\right] \wedge ... \left[n \to bi \; Influence \; S_{bi}{}^2 = 0\right] \Rightarrow$$
$$Accepted \; offer \; b_i = 0$$

meaning that if the greatest influence to S_{bi} comes from the offer made by player a, the accepted offer is coded as 1. If the greatest influence comes from player c, the accepted offer is coded as 3. Player j's offer being accepted would be coded as 10 and so on. Finally, if no offers sway the candidate, no offer is accepted.

Having selected an offer, the last stage of strong ally lobbying is to add the results of the round's action into the candidate player's salience. This is done in two stages: associating the selected offer with the influence it will have on the candidate's salience and incorporating the change in salience to the candidate's input value. Also at this point it is expedient to include any concessions that a player has had to make on other players' primary issues and include a two-stage limiter to ensure global effects on salience cannot cause breaches of the range.

The first part of the process is to determine the '*Strong ally effect*' for a given player over a particular issue, which measures the total change in salience from a round of negotiations:

$$Strong \; ally \; effect \to b_i = \underset{if \; Limtier \; bi = 1}{n \to bi \; Influence \to S_{bi}} + \underset{if \; Concession \; limter \; bi = 1}{Concessions_{bi}}$$

This means the strong ally effect upon player b over issue i is the sum of any offer b accepts in the case it has received offers and any concessions b has had to make over issue i in the case b has lobbied another player whose primary issue happens to be issue i.

The *Concessions$_{bi}$* variable applies the primary issue identification algorithm to associate concessions to individual issues, written as for issue i as:

$$Concessions_{bi} = \sum_{if \; primary \; n=i} b \to n_i \; change \; S_{b \; n \; prime}$$

This means the concession b has to make over issue i is the sum of all concessions required where b lobbies other players whose primary issue is issue i. Since the

variable $b \to n_i\ change\ S_{bn\ prime}$ only returns a non-zero result if candidate *n* accepts the offer, no other logical conditions need apply.

The two-stage limiter is a check to ensure salience cannot be more than one. In a sufficiently large model, a player may have to offer concessions to a number of players in a given round. If the combined effects cause salience to rise too much, a temporary stop is triggered. The first stage of the limiter is used to establish whether changes in salience proposed to the player *and* the concessions the player has to make themselves are within the bounds of zero and one.

$$0 < [S_{bi} + n \to bi\ Influence \to S_{bi} + Concessions_{bi}] \le 1 \Rightarrow$$
$$Limiter_{bi} = 1$$
$$[S_{bi} + n \to bi\ Influence \to S_{bi} + Concessions_{bi} > 1] \vee [0 > S_{bi} + n \to bi\ Influence \to S_{bi} + Concessions_{bi}] \Rightarrow$$
$$Limiter_{bi} = 0$$

If the limiter returns a '0' it implies that the proposed changes are too great and the player will not accept any offers this round. After the current round's changes have been accounted for the player is free to continue the offer process if it is in their interests. Providing the limiter yields a '1' in the next round they can select offers.

The second stage of the limiter determines whether concessions alone will cause a breach in salience range. It is assumed that if the total effect on salience from making and receiving offers causes a breach but concessions themselves do not, the player will give preference to the offers they have made to other players and corresponding concessions rather than offers received.

$$0 < [S_{bi} + Concessions_{bi}] \le 1 \Rightarrow Concession\ limiter_{bi} = 1$$
$$[0 \ge S_{bi} + Concessions_{bi}] \vee [1 < S_{bi} + Concessions_{bi}] \Rightarrow Concession\ limiter_{bi} = 0$$

If this limiter is triggered it cancels the effect of concessions on the player for the current round. The total effect to a player's salience over issue *i* at the end of each round can then be applied:

$$S_{bi,t+1} = S_{bi} + Strong\ ally\ effect \to b_i$$

The notation of $S_{bi,t+1}$ indicates the salience of player *b* over issue *i* at time plus one, which is the beginning of the next round. The process then begins anew.

7.2.6   Post activation: Lobbying position (weak allies)

Challenging the position of a weak ally has the potential to shift their position closer to the active player's position, causing the *MVL* to move closer to the active player thus making them better off. How important the issue is to each

player and the levels of support they can draw on are key determinants in the challenge process.

Weak alliances occur when both players are on the same side of the position continuum and the *MVL* is located between them. The four potential cases in this model are shown in Figure 7-12.

Figure 7-12 Four cases of weak alliances
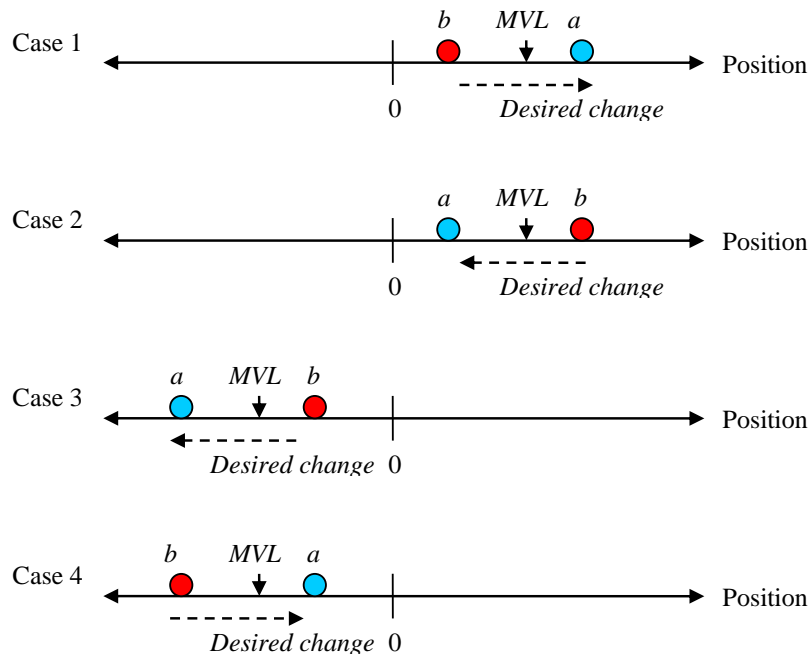
The diagram depicts player *a* as the active player who is attempting to influence player *b* to adopt a position closer to player *a*'s. The term 'challenge' is used synonymously with 'lobbying' in the case of weak allies and represents the active player (*a*) asking the candidate player (*b*) to change position to match that of the active player. Determining the change in position is then achieved via an application of probability theory and utility theory.

For the purposes of explaining the challenge process, an illustrated example of case one appears below where player *a* is the active player and player *b* is the candidate challenged to change position. This necessitates three criteria: *Activation$_{ai}$*=1, *Alliance test$_{ai,bi}$*=0.5 and therefore from the behavioural matrix: $a \rightarrow bi = 2$.

The essential considerations of a given player are pictured in Figure 7-13:

Figure 7-13 Flowchart of weak ally lobbying algorithm


```
┌─────────────────────────┐                    ┌─────────────────────────┐
│ Player a challenges      │                    │ Player a does not        │
│ player b                 │                    │ challenge player b       │
└─────────────────────────┘                    └─────────────────────────┘
        Sbi          1-Sbi

┌──────────────┐   ┌──────────────┐   ┌──────────────┐
│ Player b     │   │ Player b     │   │ Status quo   │
│ resists      │   │ complies     │   │              │
└──────────────┘   └──────────────┘   └──────────────┘

Probabilitya win   1-Probabilitya win

┌──────────┐ ┌──────────┐  ┌──────────┐
│ Player a │ │ Player a │  │ Player b │
│ challenge│ │ challenge│  │ changes  │
│ accepted │ │ rejected │  │ position │
└──────────┘ └──────────┘  └──────────┘

┌──────────┐ ┌──────────┐  ┌──────────┐  ┌──────────┐
│ Player b │ │ Player a │  │ Player a │  │ Player a │
│ changes  │ │ changes  │  │ gains    │  │ receives │
│ position │ │ position │  │ extra    │  │ 'base'   │
└──────────┘ └──────────┘  │ utility  │  │ utility  │
                            └──────────┘  └──────────┘
┌──────────┐ ┌──────────┐
│ Player a │ │ Player a │
│ gains    │ │ loses    │
│ extra    │ │ utility  │
│ utility  │ │          │
└──────────┘ └──────────┘

        ┌─────────────────────┐
        │ Player a determines │
        │ value of challenging│
        └─────────────────────┘
```

Source: Scholz et al. (2011)

The decision to issue a challenge or not is governed by determining if it makes the player better off. The expected utility from the challenge process is deducted from the utility derived from the status quo. A positive value implies that it is worth pursuing, whilst values of zero or less result in no action. Zero is included under the assumption that transaction costs are not free. Both players calculate their own expected utilities and the outcome of the bilateral contest is determined by which party has more to gain.

7.2.6.1 Adapting the BDM model for Vensim

Changes to player positions are conducted by processing each pair of players actively involved in weak ally lobbying. The process can be reduced to the following stages:

1. Determine applicable case.
2. Calculate probability of winning challenge.
3. Calculate player utilities.
4. Determine output type: conflict, compromise, capitulate.
5. Process offers received from all active players, select applicable offer.

7.2.6.1.1 Case determination

Case determination is the process of identifying which side of zero the parties are on and which has the more extreme position. The variable *Case evaluator a->b1* describes the process as:

$$[a \rightarrow bi = 2] \wedge [P_{ai} > 0] \wedge [P_{bi} > 0] \wedge [MVL_i > 0] \wedge [P_{ai} > MVL_i] \wedge [P_{bi} < MVL_i] \Rightarrow Case\ evaluator\ a \rightarrow bi = 1$$
$$[a \rightarrow bi = 2] \wedge [P_{ai} > 0] \wedge [P_{bi} > 0] \wedge [MVL_i > 0] \wedge [P_{ai} < MVL_i] \wedge [P_{bi} > MVL_i] \Rightarrow Case\ evaluator\ a \rightarrow bi = 2$$
$$[a \rightarrow bi = 2] \wedge [P_{ai} < 0] \wedge [P_{bi} < 0] \wedge [MVL_i < 0] \wedge [P_{ai} < MVL_i] \wedge [P_{bi} > MVL_i] \Rightarrow Case\ evaluator\ a \rightarrow bi = 3$$
$$[a \rightarrow bi = 2] \wedge [P_{ai} < 0] \wedge [P_{bi} < 0] \wedge [MVL_i < 0] \wedge [P_{ai} > MVL_i] \wedge [P_{bi} < MVL_i] \Rightarrow Case\ evaluator\ a \rightarrow bi = 4$$
$$Case\ evaluator\ a \rightarrow bi \neq \{1,2,3,4\} \Rightarrow Case\ evaluator\ a \rightarrow bi = 0$$

Explaining the first line in words: if *a* uses strategy number two and both positions of *a* and *b* are more than zero and the *MVL* is more than zero and the position of *a* is more than *MVL* and the position of *b* is less than *MVL* then case one applies. The last line states that if cases one through four do not apply the output is zero, thus stopping the algorithm.

7.2.6.1.2 The probability of winning a challenge

When negotiating between weak allies, part of the process depends upon who is with you and who is against you, how power is distributed, and how interested each player is. For instance if a player with very little clout receives a challenge from a very powerful player, it is more likely the challenge will succeed. In terms of power distribution, only players on the two involved players' side of the position continuum are considered (see Figure 7-14).

Figure 7-14 Weak ally challenge division
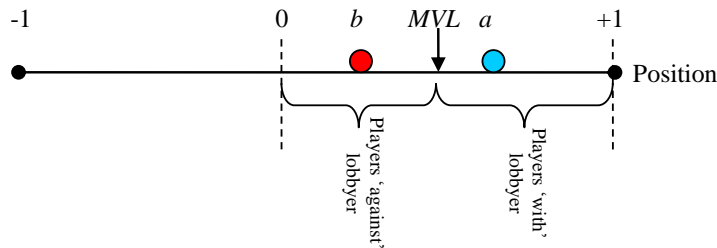
As Figure 7-14 shows, any player with a position greater than the current *MVL* would prefer *b* to increase their position and any player with a position less than the current *MVL* would prefer *a* to decrease their position. Neither *a* nor *b* consider any player with a negative position as part of this negotiation. The model assumes as a matter of principle that players will not collaborate with fundamentally opposed players; this prevents *b* from counting a hypothetical player *z* with a position of -1 as an 'ally' in terms of resisting *a*'s challenge.

To determine the relevant distribution of power in case one, the players must be divided into two groups: those whose positions are higher than the *MVL* and

therefore support player *a*, and those whose positions are lower than the *MVL* and therefore support player *b*. Establishing which side has greater influence requires a measurement of weighted clout on the positive side of the position continuum. Principally, this is the same as the *clout scalar$_i$* calculation.

$Clout\ Scalar_i^+$ is noted as the total amount of clout deployed in support (superscript +) of issue *i*.

$$Clout\ Scalar_i^+ = \sum_{if\ P_{ni}>0} C_{ni}$$

The total amount of effective power in support of issue *i* can now be measured[100]. *Effective power+$_i$* is the amount of effective power on the positive side of issue *i*'s position continuum.

$$Effective\ power +_i = \sum_{if\ P_{ni}>0} \frac{C_{ni}}{Clout\ Scalar_i^+} \times S_{ni}$$

It is important to weight effective power by salience as it limits the influence players have based upon their level of involvement in the issue. Not including the salience expression would imply that all players are equally – and fully – involved in the issue.

The probability of winning a challenge can now be expressed by dividing the amount of power on the lobbyer's side of the challenge by the total amount of supporting power. Thus the probability of player *a* winning a challenge against *b* over issue *i* in case one is

$$P\ active\ player\ wins\ case\ 1\ issue\ i = \frac{\displaystyle\sum_{if\ P_{ni}>MVL_i \bullet MVL_i>0} \frac{C_{ni}}{Clout\ Scalar_i^+} \times S_{ni}}{Effective\ power +_i}$$

meaning that the model assumes the probability of a winning *a* challenge over *b* is determined by how much power, weighted by salience, is above the *MVL* expressed as a fraction of the total effective power deployed in support for issue *i*. This is a reasonable assumption as it suggests that having many players on one's side does not guarantee victory: those supporters must have considerable clout too. Case two is the other half of the players on the positive side of the position continuum; the

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[100] In the case there are no players on either side of zero then the *effective power* variable is programmed to return a 0. Weak ally lobbying in this case is impossible and this stage of the simulation stops.

probability of the active player winning case two is simply one minus the probability of winning case one.

Case three is given below:

$$P \text{ active player wins case 3 issue } i = \frac{\displaystyle\sum_{\text{if } P_{ni} < MVL_i \bullet MVL_i < 0} \frac{C_{ni}}{Clout \ Scalar_i^-} \times S_{ni}}{Effective \ power_{-i}}$$

Following the principle of case two, case four is the other half of the negatively positioned players and thus is one minus the probability of winning case three. These probabilities then feed into the active player's probability determination variable *Prob a->b1* in the case of *a* challenging *b* [101]. The appropriate case's probability of winning is then associated with the active player:

$$[Case \ evaluator \ a \rightarrow b1 = 1] \Rightarrow Prob \ a \rightarrow b1 = P \ active \ player \ wins \ case \ 1 \ issue \ 1$$
$$[Case \ evaluator \ a \rightarrow b1 = 2] \Rightarrow Prob \ a \rightarrow b1 = P \ active \ player \ wins \ case \ 2 \ issue \ 1$$
$$[Case \ evaluator \ a \rightarrow b1 = 3] \Rightarrow Prob \ a \rightarrow b1 = P \ active \ player \ wins \ case \ 3 \ issue \ 1$$
$$[Case \ evaluator \ a \rightarrow b1 = 4] \Rightarrow Prob \ a \rightarrow b1 = P \ active \ player \ wins \ case \ 4 \ issue \ 1$$

7.2.6.1.3 Utility calculations

The precise resolution of a challenge depends on the expected utility derived from both the active player and the candidate. For the challenger, the utility gained from winning a challenge is the probability of winning multiplied by the effect the candidate's newly adopted position has over the *MVL* outcome. $U_{a \ win}$ is the utility *a* receives from winning a challenge:

$$U_{a \ win} = S_{bi} \times \left[Prob \ a \rightarrow b1 \times \left(1 - \left| \frac{[MVL_i + (P_{ai} - P_{bi}) \cdot S_{bi} \cdot WC_{bi}] - P_{ai}}{2} \right| \right) \right]$$

By comparison, should *a* lose the challenge then they must adopt *b*'s position, in which case utility is defined below. $U_{a \ lose}$ is the utility *a* receives from losing a challenge:

$$U_{a \ lose} = S_{bi} \times \left[(1 - Prob \ a \rightarrow b1) \times \left(1 - \left| \frac{[MVL_i + (P_{bi} - P_{ai}) \cdot S_{ai} \cdot WC_{ai}] - P_{ai}}{2} \right| \right) \right]$$

There is a chance *b* will simply concede the issue, which depends upon *b*'s salience. $U_{a \ comply}$ is the utility *a* receives in the event *b* concedes:

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[101] The term *Prob* has been used for probability instead of the more commonly cited *P* to remove confusion with *position*.

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$$U_{a\,comply} = (1 - S_{bi}) \times \left(1 - \left|\frac{[MVL_i + (P_{ai} - P_{bi}) \cdot S_{bi} \cdot WC_{bi}] - P_{ai}}{2}\right|\right)$$

The final element of the expected utility is the utility derived from the status quo: the outcome before challenging. This was defined earlier but is repeated here with notation indicating player *a*.

$$U_{ai} = 1 - \left[\left|\frac{MVL_i - P_{ai}}{2}\right|\right]$$

Thus, the full equation describing the expected utility from the challenge can now be written as

$$EU_{a\,a\to bi} = U_{a\,win} + U_{a\,lose} + U_{a\,comply} - U_{ai}$$

Where $EU_{a\,a\to bi}$ is the expected change in utility *a* receives from lobbying player *b* over issue *i*. The equation is phrased this way as *a*'s decision regarding whether or not to challenge *b* depends on whether it makes *a* better off. If *a* does not challenge, *a* receives U_{ai}. If *a* issues a challenge there is a chance that *a* might win, a chance *a* might lose, and a chance *b* may simply give up; if the sum of these three alternatives is greater than U_{ai}, then *a* will consider challenging *b*. With respect to what weights the challenge alternatives, probability weights winning and losing (the probabilities sum to one), and the utility from complying is weighted by salience. Please refer to Figure 7-13 for a visualisation.

The same equation is also run from player *b*'s perspective, representing a counter-challenge. Reversing the notations between the two parties leaves *b*'s expected utility gain equation as:

$$EU_{b\,a\to bi} = U_{b\,win} + U_{b\,lose} + U_{b\,comply} - U_{bi}$$

As the process is conducted bilaterally, the probability of *b* winning is interchangeable with the probability of *a* losing, and the probability of *b* losing is interchangeable with probability of *a* winning. Likewise, when receiving a counter-challenge the likelihood of *a* conceding is determined by S_{ai}.

7.2.6.1.4 Output type determination

This is the final stage in the bilateral process before offers from other players are considered. Four different output types exist: conflict, compromise, capitulation, and stalemates. Conflict occurs when both players have positive utility differences. If the challenger's utility is greater than the candidate's, the challenger wins and the output is coded as one. Compromise occurs if the challenger has positive utility and the candidate has negative utility. In this case, if the absolute value of the

challenger's utility is greater than the absolute value of the candidate's, then the challenger has more to gain than the candidate has to lose and therefore a compromise is offered, resulting in a coded output of two. Capitulation occurs when the challenger's utility is positive, the candidate's is negative, and the candidate's absolute value is greater than the challenger's absolute value. This is coded as three. Stalemates occur if expected utility gains are negative for both players, in which case there is no reason for either player to act and the output is coded as zero. The zero output also covers players who are inactive and therefore will not consider issuing challenges. Phrasing this in logical terms, the algorithm appears as:

$$\left[EU_{a\,a\rightarrow bi} > 0\right] \wedge \left[EU_{b\,a\rightarrow bi} > 0\right] \wedge \left[EU_{a\,a\rightarrow bi} > EU_{b\,a\rightarrow bi}\right] \Rightarrow Output\ type\ a \rightarrow bi = 1$$

$$\left[EU_{a\,a\rightarrow bi} > 0\right] \wedge \left[EU_{b\,a\rightarrow bi} < 0\right] \wedge \left[\left|EU_{a\,a\rightarrow bi}\right| > \left|EU_{b\,a\rightarrow bi}\right|\right] \Rightarrow Output\ type\ a \rightarrow bi = 2$$

$$\left[EU_{a\,a\rightarrow bi} > 0\right] \wedge \left[EU_{b\,a\rightarrow bi} < 0\right] \wedge \left[\left|EU_{a\,a\rightarrow bi}\right| < \left|EU_{b\,a\rightarrow bi}\right|\right] \Rightarrow Output\ type\ a \rightarrow bi = 3$$

$$Output\ type\ a \rightarrow bi \neq \{1,2,3\} \Rightarrow Output\ type\ a \rightarrow bi = 0$$

As this model uses an activation process it is possible to suggest that a could consider issuing a challenge and upon realising that b has more positive utility, take no action. The model therefore assumes that players will only engage in challenges they are likely to win. In the event that b is in a stronger position and would win a challenge but is inactive, no change to either player's positions would occur. An extra degree of dynamism is therefore provided by implying that a player will not necessarily try to capture every victory they possibly can over every issue, rather just those ones that matter most to the player.

Once the type of output has been determined, the change to the candidate's position is returned by the $a \rightarrow bi\ change\ P_{bi}$ variable. Conflict and capitulation both result in the candidate adopting the challenger's position. A compromise is calculated as a ratio of the candidate's utility in respect to the challenger's utility. The change to the candidate's position is expressed as:

$$\left[Output\ type\ a \rightarrow bi = 1\right] \vee \left[Output\ type\ a \rightarrow bi = 3\right] \Rightarrow a \rightarrow bi\ change\ P_{bi} = P_{ai} - P_{bi}$$

$$\left[Output\ type\ a \rightarrow bi = 2\right] \Rightarrow a \rightarrow bi\ change\ P_{bi} = \left(P_{ai} - P_{bi}\right) \times \left(\left|\frac{EU_{b\,a\rightarrow bi}}{EU_{a\,a\rightarrow bi}}\right|\right)$$

$$Output\ type\ a \rightarrow bi \neq \{1,2,3\} \Rightarrow a \rightarrow bi\ change\ P_{bi} = 0$$

Note that since each player is calculated individually and challenges occur in pairs, there is no need to include the 'losing' terms in these equations as a win for a would necessitate a loss for b and vice versa. Thus, assuming for a moment that a and b are both active and that b would win the challenge, a will not issue a challenge to b as a knows he/she will lose. However b will challenge a – and win.

7.2.6.1.5 Offer processing and decision making

As with the other models, players are assumed to select one offer per iteration and the selection process is based upon self-interest. The process of offer selection in weak ally lobbying is opting first for the smallest change in position if all challenges derive from players with equal clout. If this is not possible, the candidate must accept the challenge from the most powerful player. Applying BDM to Vensim requires the creation of an algorithm that summarizes the offers from all active players and compares their respective clout values to return the candidate's selected offer in a given iteration (see Figure 7-15).

Figure 7-15 Weak ally offer processing algorithm
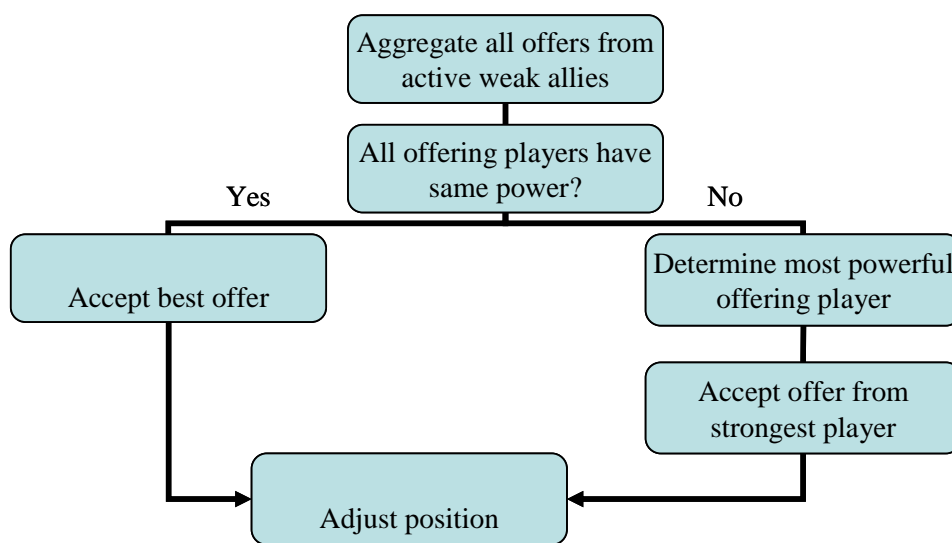
Determining equal distribution of power among challengers

The first stage of the process is to identify all the players who have made offers to the candidate, exclude the rest, and establish if the involved players have the same clout. Exclusion is the result of being strong allies, adversaries, or being inactive. The variables *Average Clout→b1* and *Clout comparison→b1* are used in this stage.

Finding the average clout amongst players who made an offer (to *b* in this example) is a matter of summing the clout[102] of all involved players and dividing by the number of involved players.

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[102] It makes no difference whether weighted or un-weighted clout is used in this calculation so the un-weighted figure appears in the model sketch to allow more expedient sensitivity testing as shadow variables of inputs can have sliders in the Sythesim mode, whereas weighted values cannot.

$$Average\ clout \rightarrow bi = \frac{\sum_{if\ n \rightarrow b1\ change\ Pbi \neq 0} C_{ni}}{n_{if\ n \rightarrow b1\ change\ Pbi \neq 0}}$$

The *Clout comparison→b1* variable then establishes whether all involved players have the same clout. When the number of players who have clout equal to the average clout is divided by the total number of involved players, an output of '1' implies they all have the same clout. Thus:

$$\left[\frac{n_{if\ n \rightarrow bi\ change\ Pbi \neq 0 \wedge Cni=Average\ clout \rightarrow bi}}{n_{if\ n \rightarrow bi\ change\ Pbi \neq 0}} = 1 \right] \Rightarrow Clout\ Comparison \rightarrow bi = 1$$

$$\left[\frac{n_{if\ n \rightarrow bi\ change\ Pbi \neq 0 \wedge Cni=Average\ clout \rightarrow bi}}{n_{if\ n \rightarrow bi\ change\ Pbi \neq 0}} \neq 1 \right] \Rightarrow Clout\ Comparison \rightarrow bi = 0$$

Evenly distributed power and best offer selection

In the event that clout is evenly distributed among the challengers, the candidate is free to choose the 'best' offer; that which requires the smallest change. Firstly, each offer made is processed to give its absolute value to account for the fact that some challenges raise position whilst others decrease it. Using the example of player *a*'s offer to *b*:

$$[a \rightarrow bi\ change\ Pbi \neq 0] \Rightarrow offer\ processor\ a \rightarrow bi = |a \rightarrow bi\ change\ P_{bi}|$$
$$[a \rightarrow bi\ change\ Pbi = 0] \Rightarrow offer\ processor\ a \rightarrow bi = 2$$

The second row states: if player *a* makes no offer, use '2' as the offer. This ensures that the candidate chooses between real offers as opposed to saying, "player *x* is not asking me to change, so I will accept that offer".

Choosing the best offer then becomes a matter of identifying the offer processor with the smallest value. Affixing the condition that the *clout comparison→b1* must first equal one, best offers are coded to the player's numerical equivalent. The process can be expressed as:

$if \left[Clout\ Comparison \rightarrow bi = 1 \right]:$

$\left[\min\{ offer\ processor\ a \rightarrow bi,...,offer\ processor\ n \rightarrow bi \} = offer\ processor\ a \rightarrow bi \right] \Rightarrow$
$Best\ offer \rightarrow bi = 1$
$\left[\min\{ offer\ processor\ a \rightarrow bi,...,offer\ processor\ n \rightarrow bi \} = offer\ processor\ c \rightarrow bi \right] \Rightarrow$
$Best\ offer \rightarrow bi = 3$
...
$\left[\min\{ offer\ processor\ a \rightarrow bi,...,offer\ processor\ n \rightarrow bi \} = offer\ processor\ n \rightarrow bi \right] \Rightarrow$
$Best\ offer \rightarrow bi = n$

$\left[Clout\ comparison \rightarrow bi \neq 1 \right] \Rightarrow Best\ offer \rightarrow bi = 0$

Unevenly distributed power and strongest offer selection

Uneven clout distribution forces the player to accept the offer from the most powerful player. As with best offers, outputs are coded to the player's numerical equivalent. This can be shown as:

$\alpha = \{ a \rightarrow bi\ change\ Pbi \neq 0,...,n \rightarrow bi\ change\ Pbi \neq 0 \}$
$\beta = \{ Cai,...,Cni \}$
$\left[Max_{Cni}\alpha \cap \beta = Cai \right] \Rightarrow Strongest\ offer \rightarrow bi = 1,$
$\left[Max_{Cni}\alpha \cap \beta = Cci \right] \Rightarrow Strongest\ offer \rightarrow bi = 3,$
...
$\left[Max_{Cni}\alpha \cap \beta = Cki \right] \Rightarrow Strongest\ offer \rightarrow bi = 10$
...

Set alpha is the group of all players whose proposed change to *b* is not zero (i.e., they have made an offer) and set beta contains the clout figures of all players. If player *a* happens to find himself/herself in the union of both sets and has the highest clout, the strongest offer is coded as '1'. If it happens to be player *c* then the output is coded as '3' and so on. This process is repeated over all player pairings.

Adjusting position

The final stage in the offer selection algorithm is to associate the chosen offer with its required change in position. The variable *"→b1 weak ally effect b1"* means 'the effect lobbying *b* over issue one has on *b*' and is quantified as follows:

$$[Strongest\ offer \to bi = 1] \lor [Best\ offer \to bi = 1] \Rightarrow$$
$$"\to bi\ weak\ ally\ effect\ bi" = "a \to bi\ change\ P_{bi}"$$

...

$$[Strongest\ offer \to bi = n] \lor [Best\ offer \to bi = n] \Rightarrow$$
$$"\to bi\ weak\ ally\ effect\ bi" = "n \to bi\ change\ P_{bi}"$$

$$[Strongest\ offer \to bi = 0] \land [Best\ offer \to bi = 0] \Rightarrow "\to bi\ weak\ ally\ effect\ bi" = 0$$

meaning that if either the strongest or best offer returns a '1' then take *a*'s proposed change, if a '3' is returned, take *c*'s change and so on. These effects are then incorporated into the candidate's position value at the end of the round.

7.2.7 Post activation: Exchanges (adversaries)

An exchange consists of a player who offers to assume a more favourable position for an exchange partner over an issue with low salience. In return, the other player changes position to one more favourable for the first player over a more important issue (from the first player's perspective). Figure 7-16 depicts an example of this process in the case where player *a* happens to be on the positive side of the position continuum.

Figure 7-16 Possible exchange over issues 1 and 2
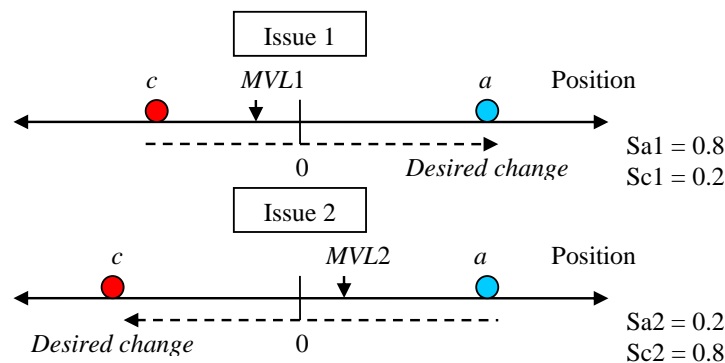
Issue one is important for player *a* but not *c*. Similarly *a* supports the issue whereas *c* does not. The opposite conditions apply for issue two. The exact location of the *MVL* is unimportant except that it must fall between the two players. If, for example, *MVL1* lay to the right of *Pa1* then conducting an exchange and increasing *Pc1* would make player *a worse* off.

7.2.7.1 Assumptions

Exchanges in this model are bound by the following assumptions:

1. Gains realised from exchanges are equally shared.

2. Players must have fundamentally different views on the issues: exchanges are only initiated if the players are adversaries over the active issue.

3. Exchanges occur as gains realised from more salient issues are preferable to less salient issues.

4. Changes to position and outcome are limited to the position of the other player: if an exchange pushes the *MVL* to the position of a player then maximum utility has been achieved and any more will cause utility to decrease. Additionally a player, through the process of exchange, cannot cause adversaries to take a position more radical than their own.

5. It is impossible for the active player's issue to also be the active player's exchange issue[103].

6. The issue a player is willing to trade upon is their least salient issue.

7.2.7.2 The exchange algorithm

The process has been programmed into Vensim to generate a distinct outcome each round. The stages are visually depicted in Figure 7-17.

Figure 7-17 Adversary exchange algorithm

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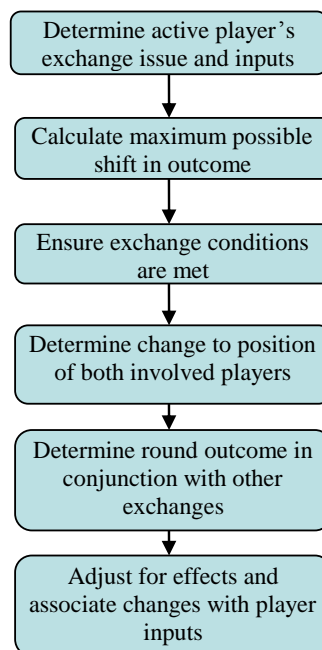
[103] This is more of an axiom than an assumption but must be coded into Vensim nevertheless.

7.2.7.2.1 Determining exchange issue and inputs

Noted as *Exchange n* (read: exchange issue of player 'n'), the model automatically identifies a player's least salient and codes it by number:

$$\left[\min(S_{n1}, S_{n2},...,S_{ni}) = S_{n1}\right] \Rightarrow Exchange_n = 1$$
$$\left[\min(S_{n1}, S_{n2},...,S_{ni}) = S_{n2}\right] \Rightarrow Exchange_n = 2$$

...

$$\left[\min(S_{n1}, S_{n2},...,S_{ni}) = S_{ni}\right] \Rightarrow Exchange_n = i$$
$$Domain: 0 < S_{ni} \leq 1$$

Issues that have a salience value of zero are exogenous to the negotiation and therefore cannot be traded upon.[104]

Automatically identifying the issue is a preferable solution to manual determination as lobbying from allies can alter salience hence the exchange issue can change. It also permits advanced sensitivity testing as pulses can be applied to salience inputs, causing the exchange issue to change.

What influence the player has over their exchange issue then needs to be established. Using player *a*'s position as an example these are phrased as exchange issue inputs: *Pax, Sax, WCax,* and *MVLax*, the notation *ax* meaning "***a***'s e***x***change issue":

$$\left[Exchange_a = 1\right] \Rightarrow P_{ax} = P_{a1}$$
$$\left[Exchange_a = 2\right] \Rightarrow P_{ax} = P_{a2}$$

...

$$\left[Exchange_a = i\right] \Rightarrow P_{ax} = P_{ai}$$

The same procedure is applied to salience and weighted clout and the outcome of the exchange issue.

The candidate's inputs over the appellant's exchange issue also need to be identified. Only position and salience are necessary as it is the appellant that will be shifting over the exchange issue, not the candidate. Using player *c* as an example candidate where *Pc ax* reads "The ***p***osition of ***c*** over ***a***'s e***x***change issue":

$$\left[Exchange_a = 1\right] \Rightarrow P_{c\,ax} = P_{c1}$$
$$\left[Exchange_a = 2\right] \Rightarrow P_{c\,ax} = P_{c2}$$

...

$$\left[Exchange_a = i\right] \Rightarrow P_{c\,ax} = P_{ci}$$

---

[104]Issues with salience of zero are actually coded as '2' for exchange issue determination. As the issue with least salience is the exchange issue, a zero would cause an exogenous issue to be exchanged.

The same pattern is then applied to salience. Identification of all other players' individual exchange issues, their inputs and the other players' inputs over the exchange issue is done on a pair-by-pair basis. This process only need be performed once per round irrespective of how many issues or players are included in the model.

7.2.7.2.2 Calculating the maximum possible shift in outcomes

Referring to assumption four, there are four individual thresholds that limit how much influence over the two issues an exchange can have. Figure 7-18 depicts player *a* offering a decrease in position over issue two (*a*'s exchange issue) in exchange for player *c* increasing position over issue one (*a*'s active issue).

Figure 7-18 Maximum changes in position or outcome for exchange
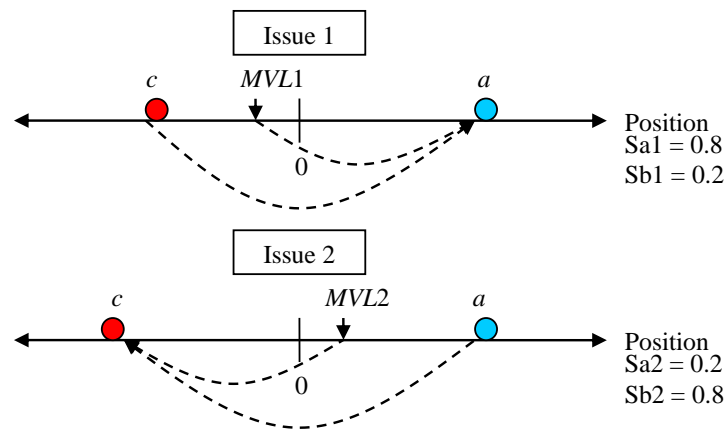
In this example, the four maxima are:

1. *MVL1* cannot shift further to the right than *Pa1*,
2. *Pc1* cannot shift further to the right than *Pa1*,
3. *MVL2* cannot shift further to the left than *Pc2*, and
4. *Pa2* cannot shift further to the left than *Pc2*.

As a result, the greatest influence this exchange can produce is the *minimum* of the four conditions, which yields:

$$\max \Delta MVL\, a \rightarrow c1 = \min \left\{ \left|(P_{cax} - P_{ax}) \cdot S_{ax} \cdot WC_{ax}\right|, \left|(P_{a1} - P_{c1}) \cdot S_{c1} \cdot WC_{c1}\right|, \left|P_{a1} - MVL_1\right|, \left|P_{cax} - MVL_{ax}\right| \right\}$$

At this stage in the calculation, it is the magnitude of change that is critical, not its sign. Once the magnitude of the change for the two issues has been established, a further test of exchange conditions is performed and assuming this test is passed, the change in position required from each player can be determined.

7.2.7.2.3 Ensuring exchange conditions are met

This part of the algorithm incorporates assumptions two, three, five, and six. Continuing the example of player a offering an exchange to c over issue one in return for a reciprocal shift over issue two, the equation deployed in Vensim can be rewritten as:

$$[a \to c1 = 3] \wedge [S_{c1} < S_{c\,ax}] \wedge [Exchange_a \neq 1] \wedge [WC_{c1} > 0] \wedge [WC_{ax} > 0] \wedge [P_{ax} > MVL_{ax} \wedge P_{c\,ax} < MVL_{ax}] \vee [P_{ax} < MVL_{ax} \wedge P_{c\,ax} > MVL_{ax}] \Rightarrow$$
$$ExCond\ a \to c1 = 1$$

$$[a \to c1 \neq 3] \vee [S_{c1} \geq S_{c\,ax}] \vee [Exchange_a = 1] \vee [WC_{c1} = 0] \vee [WC_{ax} = 0] \vee [P_{ax} \geq MVL_{ax} \wedge P_{c\,ax} \geq MVL_{ax}] \vee [P_{ax} \leq MVL_{ax} \wedge P_{c\,ax} \leq MVL_{ax}] \Rightarrow$$
$$ExCond\ a \to c1 = 0$$

In words, if a's strategy is number three, and c's salience over a's exchange issue is more than issue one, and a's exchange issue is not issue one, and the weighted clout of the players is more than zero[105], and the outcome of the exchange issue is between the two players then the exchange conditions are met and a '1' is returned. If any of these conditions are not met, a zero is returned[106].

The condition $S_{c1} < S_{c\,ax}$ is particularly important as the utility from expected outcomes are not weighted by salience. For purposes of internal consistency, utility from exchanges uses the same base equation but inserting this condition effectively reintroduces the effects of salience: a candidate will be willing to exchange on an issue only if the proposed exchange issue is more important to the candidate than the active issue.

7.2.7.2.4 Determining mutual changes in position

Assuming the exchange conditions are met the next phase is to determine how much each player needs to change their position to produce the predefined shift in *MVL*. The active player shifts on the exchange issue and the candidate shifts on the active issue. Also included in these equations is a requirement that the given round's negotiation has verified that this particular exchange is the chosen offer and is explained shortly. In the example of players a and c the equations for a are:

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[105] This condition is imposed to prevent floating point errors. There is no point lobbying a player with no clout.

[106] The salience of the active player over the active issue by definition is more than the salience of the exchange issue – circumventing the need to include this as a distinct condition.

$$\left[ExCond\ a \to c1 = 1\right] \wedge \left[ExOffer\ a \to c1 = 1\right] \wedge \left[P_{c\,ax} > P_{ax}\right] \Rightarrow$$

$$\Delta P_{ax}\ a \to c1 = \frac{\max \Delta MVL\ a \to c1}{S_{ax} \cdot WC_{ax}}$$

$$\left[ExCond\_a \to c1 = 1\right] \wedge \left[ExOffer\ a \to c1 = 1\right] \wedge \left[P_{c\,ax} < P_{ax}\right] \Rightarrow$$

$$\Delta P_{ax}\ a \to c1 = \frac{\max \Delta MVL\ a \to c1}{S_{ax} \cdot WC_{ax}} \times -1$$

$$\left[ExCond\ a \to c1 = 0\right] \vee \left[ExOffer\ a \to c1 \neq 1\right] \Rightarrow \Delta P_{ax}\ a \to c1 = 0$$

meaning if the conditions are met and the round outcome determination returns a '1' then the ΔP_{ax} is positive if the candidate's position is greater than the appellant's position, and negative in the other case. If the exchange conditions are not met or the round outcome determination returns a '0' there is no change. The same equations apply to the appellant, adjusting for notation:

$$\left[ExCond\ a \to c1 = 1\right] \wedge \left[ExOffer\ a \to c1 = 1\right] \wedge \left[P_{a1} > P_{c1}\right] \Rightarrow$$

$$\Delta P_{c1}\ a \to c1 = \frac{\max \Delta MVL\ a \to c1}{S_{c1} \cdot WC_{c1}}$$

$$\left[ExCond\ a \to c1 = 1\right] \wedge \left[ExOffer\ a \to c1 = 1\right] \wedge \left[P_{a1} < P_{c1}\right] \Rightarrow$$

$$\Delta P_{c1}\ a \to c1 = \frac{\max \Delta MVL\ a \to c1}{S_{c1} \cdot WC_{c1}} \times -1$$

$$\left[ExCond\ a \to c1 = 0\right] \vee \left[ExOffer\ a \to c1 \neq 1\right] \Rightarrow \Delta P_{c1}\ a \to c1 = 0$$

7.2.7.2.5 Round outcome determination

Each round produces one exchange throughout the entire model. Whilst this may appear to be an oversimplification in an effort to converse computational resources[107], very little accuracy is lost. As the model assigns the exchange of greatest magnitude as the round's outcome it effectively creates a rank-order 'conveyor belt' of exchanges. Offers from other players do not necessarily evaporate at the end of a round but are recycled into the next until all have been processed.

The process of determining which issue is the focus of attention in a given round is a matter of finding the maximum change produced in each issue from player action, finding the issue number with the highest maximum, and then inserting the issue number as a criterion into each exchange processor.

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[107] A single issue requires the computer to run approximately 120,000 equations with a population of eight players, with an additional 20,000 equations for supra-issue calculations such as exchange issue determination.

For each issue, each player could potentially offer exchanges to any other player. The first stage in finding a global maximum is to determine the maximum change over each issue. Citing player *a* over issue one as an example:

$$Ex\ offer\ a_1 = \max \begin{cases} ExCond\ a \rightarrow b1 \times Max\Delta MVL\ a \rightarrow b1, \\ ExCond\ a \rightarrow c1 \times Max\Delta MVL\ a \rightarrow c1, \\ ... \\ ExCond\ a \rightarrow n1 \times Max\Delta MVL\ a \rightarrow n1, \end{cases}$$

The changes are multiplied by the *ExCond* variable to ensure that only valid offers are included in the calculation. This process is repeated for every player over every issue. Then finding the maximum shift amongst the players for issue one:

$$Max\ offer\ issue\ 1 = \max\{Ex\ offer\ a_1, Ex\ offer\ b_1, ..., Ex\ offer\ n_1\}$$

Now all issues can be directly compared with one another to find the greatest global change. The output of '*Round max offer issue number*' is coded by issue number:

$$[\max\{Max\ offer\ issue\ 1, Max\ offer\ issue\ 2, ..., Max\ offer\ issue\ i\}] = Max\ offer\ issue\ 1 \Rightarrow$$
Round max offer issue number $= 1$
$$[\max\{Max\ offer\ issue\ 1, Max\ offer\ issue\ 2, ..., Max\ offer\ issue\ i\}] = Max\ offer\ issue\ 2 \Rightarrow$$
Round max offer issue number $= 2$
$$[\max\{Max\ offer\ issue\ 1, Max\ offer\ issue\ 2, ..., Max\ offer\ issue\ i\}] = Max\ offer\ issue\ i \Rightarrow$$
Round max offer issue number $= i$

Returning to the issue level, the *Exchange Offer Processor 1* returns the number of the player with the biggest offer over issue one. It requires firstly that *Round max offer issue number*=1, meaning that the greatest change came from this issue. If the *Round max offer issue number* is not '1' then the *Exchange offer processor 1* is programmed to return a '0', meaning no exchanges occur over this issue this round.

if Round max offer issue number $= 1$
$$\max\{Ex\ offer\ a_1, Ex\ offer\ b_1, ...Ex\ offer\ n_1\} = Ex\ offer\ a_1 \Rightarrow$$
Exchange offer processor $1 = 1$
$$\max\{Ex\ offer\ a_1, Ex\ offer\ b_1, ...Ex\ offer\ n_1\} = Ex\ offer\ b_1 \Rightarrow$$
Exchange offer processor $1 = 2$
...
$$\max\{Ex\ offer\ a_1, Ex\ offer\ b_1, ...Ex\ offer\ n_1\} = Ex\ offer\ h_1 \Rightarrow$$
Exchange offer processor $1 = 8$

if Round max offer issue number $\neq 1, Exchange\ offer\ processor$ $1 = 0$

The result of this equation is then input into each player pairing to establish which offer is accepted. Continuing the example of *a* offering an exchange to *c*:

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$[Exchange\ offer\ processor1 = 1] \wedge [ExCond\ a \rightarrow c1 \times Max\Delta MVL\ a \rightarrow c1 = Ex\ offer\ a1] \wedge [ExCond\ a \rightarrow c1 = 1] \Rightarrow$
$ExOffer\ a \rightarrow c1 = 1$
$[Exchange\ offer\ processor1 \neq 1] \vee [ExCond\ a \rightarrow c1 \times Max\Delta MVL\ a \rightarrow c1 \neq Ex\ offer\ a1] \vee [ExCond\ a \rightarrow c1 = 0] \Rightarrow$
$ExOffer\ a \rightarrow c1 = 0$

meaning that if the exchange offer processor returns a '1' (indicating *a* had the best offer, it would have to be 2 if *b* were the active player, 4 in the case of *d* and so on) and the exchange conditions multiplied by the offer *a* made is the maximum of *a*'s offers, and the exchange conditions return a '1' then *c* accepts *a*'s offer. Any other result returns a zero. In summary, it is a matter of finding the issue with the biggest change in the whole model and then which player made that offer.

7.2.7.2.6 Adjusting for effects

By limiting each round to a single exchange and holding all other values at zero, each player's total change is simply the sum of all their interactions. Reading *Ex effect Pax* as 'the **ex**change **effect** on the **p**osition of player ***a***'s e**x**change issue' (what the active player has to give away from *making* exchanges), and *Ex effect Pa1* (what the candidate player is persuaded to give away from *receiving* exchanges) the change to player *a*'s issues are:

$$Ex\ effect\ P_{ax} = \sum_{r=i}^{n} \Delta P_{ax}\ a \rightarrow r1$$

and

$$Ex\ effect\ P_{a1} = \sum_{r=i}^{n} \Delta P_{a1}\ r \rightarrow a1$$

This is done for each player, adjusting for player notation as needed.

7.2.7.2.7 Associating exchange effects with inputs

The exchange process is now complete and the round's effects need only be integrated into the players' inputs. The active issue simply requires addition but the exchange issue needs to be associated with the correct issue. Since position can also be influenced by weak ally lobbying, the full equation for player *n*'s position over issue *i* at time t+1 is:

$$P_{ni\,t+1} = \left(P_{ni\,t=0}\right) + \left(\underset{if\ x=i}{Ex\ effect\ P_{nx}}\right) + \left(\underset{if\ Ex\ effect\ P_{nx} \neq Ex\ effect\ P_{ni}}{Ex\ effect\ P_{ni}}\right) + \left(\underset{if\ \left(\underset{if\ exchangen=i}{Ex\ effect\ P_{nx}}\right) + \left(\underset{if\ Ex\ effect\ P_{nx} \neq Ex\ effect\ P_{ni}}{Ex\ effect\ P_{ni}}\right) = 0}{Weak\ ally\ effect\ P_{ni}}\right)$$

As there are a number of conditions attached, each set of brackets is explained below.

The first set of brackets refers to the position of the player over the issue at the start of the round.

The second bracket adds the change to position from the player actively making exchanges with other players if this issue is the player's exchange issue.

The third set of brackets adds the changes from other players having offered exchanges to the current player, but only if the exchange effect over P_{nx} is not the same as the exchange effect over P_{ni}. As an illustration, imagine players a and c are both active and offer an exchange to one another: this would imply there is an exchange conducted on the part of a and another exchange on the part of c. Player a would count what they had to give away from their active offer, and what they were asked to give away from their received offer. Thus, the two effects must be equal and if so, there is no need to count the change in the P_{ni} variable as it would have already been counted by P_{nx}.

The fourth set of brackets adds the effects of weak ally lobbying. As position is influenced by both exchanges and weak ally lobbying there is potential for both to occur at the same time. Picture once again if a had made an exchange offer to c but also had been challenged by its weak ally, b. The two possible alternatives are that these effects either reinforce or cancel each other. In order to avoid these interference patterns, weak ally lobbying only affects the current player's position if that player is not part of an exchange bargain in that round. As only one exchange is processed per round across all players, the delaying effects of this simplification are relatively small.

7.3   LOS Summary

The lower order simulation described here has been developed by synthesising facets of existing models and original material to produce a flexible and automated process by which the outcome of negotiations over a range of issues can be expressed in numerical and graphical terms.

Individual player inputs including the position of the player, their salience, and their clout are combined at the start of the run to establish an initial outcome. From this point, players pass through an activation calculation that determines which players are likely to challenge the outcome and which will remain inactive. By default, those players who are more dissatisfied with the outcome and have the ability to influence it are the ones who act, although the facility to override this assumption exists and offers an extra avenue of sensitivity and scenario testing.

Following the activation process, the relationships each player shares with all others are established. This is because the type of action an active player takes is assumed to depend upon the relationship itself: strong allies are already in agreement and thus only need to be persuaded to mobilise more (or less) resources. Weak allies must first be convinced to take a more favourable position to the lobbyer, and adversaries must be offered something in exchange for a softening of their stance.

Each active player will then proceed to lobby, challenge, and exchange with other players in the model according to the type of relationship. Fundamentally, all of these strategies are grounded in the theory of utility: players respond to offers only if it is in their interests to do so. In each case, a number of conditions must be fulfilled for the active player to incite a change in the inputs of other players.

Offers are processed and the results cause shifts in the position and salience values of the relevant players, which in turn cause the outcome of an issue to fluctuate. This process is repeated until the outcome of all issues stabilises and no further actions can be taken. This point is said to be the equilibrium of the LOS.

The LOS represents a significant advance in multi-player multi-issue modelling as it allows for three possible actions whereas other models limit themselves to a single strategy, or perhaps two. In terms of automation, it is greatly superior to the Allas model and incrementally more so to the MACTOR and MASAM models (as exchange issues must be manually entered). It offers greater dynamics: special cases of disengagement from issues is a feature that has not been explored in the surveyed literature. Each player also need not be involved in every issue, which permits a greater range of issues to be modelled. Coding the model in Vensim allows flexibility as alternative scenarios and assumptions can be modelled 'on the fly' and the activation override provides an opportunity to examine the effects of the entire population of players being activated.

7.4   Higher Order Simulation

This is the final stage and computes the nominal probability of effective reform. It also allows us to see at a glance the individual issues and how changes in outputs might affect the overall outcome. An example of an HOS with three issued populated by eight players is pictured in Figure 7-19.

Figure 7-19 HOS for three issues with eight players
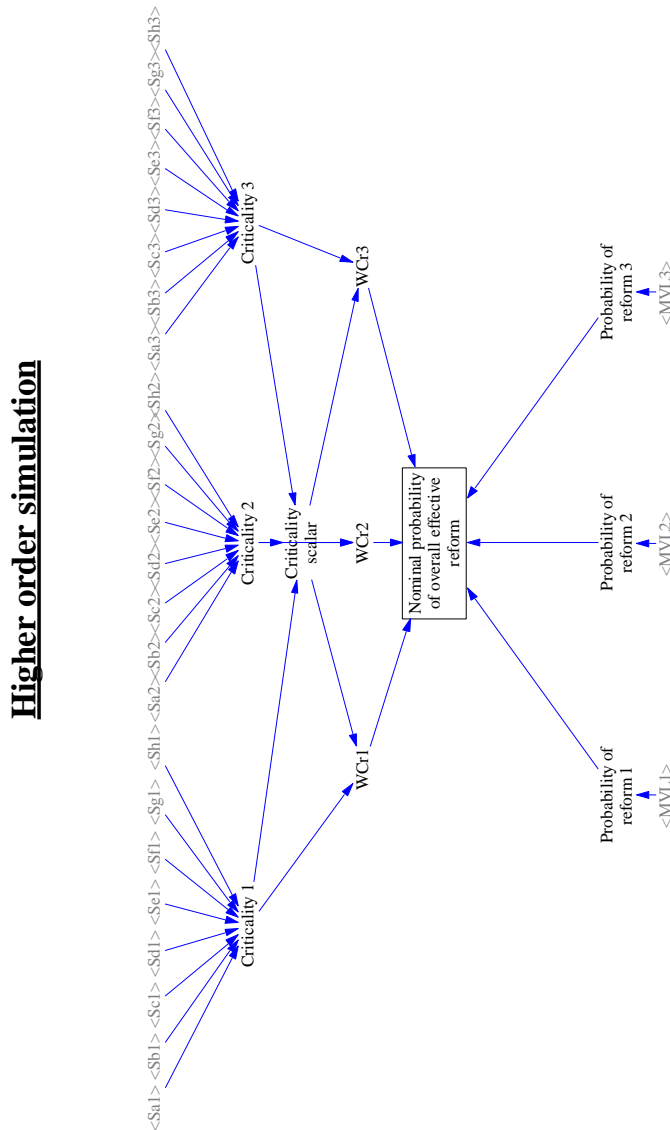
Each of the variables listed along the bottom of the diagram represents an issue. Their values at any given time are determined by each issue's individual *MVL* output and are expressed as the likelihood of reform. The transformation is as follows:

$$Probability\ of\ reform\ i = \frac{MVL_i}{2} + 0.5$$

This centres the value around 0.5: if the *MVL* returns a zero, reform success or failure are both equally likely. In terms of how a probability can be derived from an *MVL* value, consider a simple negotiation with two players: equally powerful, equally motivated, and equally opposed in opinions. Under such circumstances, one might argue that the two are equally matched and therefore the chance of the issue passing is 50/50. Should one of the two have more clout, the probability of passing increases or decreases accordingly.

Criticality refers to how important each issue is overall. A higher criticality figure implies that the issue is perceived as more important within the model. An advantage is that as negotiations progress and player salience fluctuates, criticality can change; some issues may gain importance and some may fall until an equilibrium is established. Criticality is determined by taking the average of all salience values from the set of players (where *n* refers to the number of players) over the particular issue.

$$Criticality_i = \frac{\sum_{a=1}^{n} S_{ai}}{n}$$

The next step is to determine a scalar metric so that each issue makes up a certain proportion of the total package with all elements summing to one, the Vensim diagram shows this as a two-stage process. The *criticality scalar* is the sum of all criticality values and acts as the denominator for individual weighted figures.

$$Criticality\ scalar = \sum_{i=1}^{n} Criticality_i$$

Weighted criticality (WCr) is then calculated by taking the individual issue's criticality value and dividing that by the criticality scalar. This allows more important issues to be easily identified.

$$WC\ r_i = \frac{Criticality_i}{Criticality\ scalar}$$

The final stage in the calculation is to determine the *nominal probability of effective overall reform*. The mechanism is an application of weighted probability theory, in which pillar outputs are multiplied by their weighted criticality such that:

$$PER = \sum_{i=1}^{n} WCr_i \cdot Probability\ of\ reform_i$$

Where *PER* is the probability of effective reform, *WCr$_i$* is the weighted criticality of issue *i* and *Probability of reform$_i$* is the transformed *MVL* value from issue *i*.

Changes that occur at lower levels are passed through to the HOS, once the LOS reaches equilibrium, the HOS also stabilises.

7.5   *Chapter Conclusion*

The model presented in this chapter advances the complexity of negotiations that can be simulated. It is comprised of two distinct modules; the LOS models behaviour on individual issues and the HOS combines them, providing an overview of outputs.

Following the common method of describing players using three metrics the model produces an initial outcome for each issue in the negotiation landscape. Players consider this outcome and if sufficiently motivated they begin the process of negotiating with other players in an effort to secure a more favourable outcome. Three strategies are available and selection is governed by the relationship between pairs of players; strong allies seek to engender greater commitment, weak allies propose challenges to take up the position of the initiator, and exchanges of less important issues are offered to adversaries. In all cases, offers are processed, filtered, and integrated into the input metrics, which causes changes in an issue's MVL value. The process continues until all issues stabilise and the final MVL value is converted into a probability of the issue's embedded proposal passing.

As discussed earlier, the model also offers a unique contribution though the activation override. This tool allows the researcher to alter the assumptions about issue activation and provides avenues for scenario testing that do not appear to be available in other publications.

Having described the mechanics, the analysis now turns to the results and discussion of the control run and attendant sensitivity testing. The outcomes of the simulation offer an indication as to how effective postal reform is expected to be, which areas are likely to change, and which are likely to remain in place.

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8 Simulation Results and Discussion

8.1   Introduction

This chapter presents the results of the simulation where the current state of reforms, as identified in Chapter Six, forms its initial conditions. Populated with issues and player groups, the model is run and changes to JP and its regulatory environment are returned.

The chapter is structured as follows:

Section 8.2 describes the group today, depicting ownership structure, key regulations, and major issues surrounding privatisation. The links between issues and their influence are also discussed. Major issues are distilled into what have been called 'MVL-issues', which are negotiated within the simulation. Isolating these components provides a starting point; the model's synthesized negotiations between players then produce changes, to which the initial setting can be compared.

Section 8.3 describes the player groups that populate the model and presents an image of the current political landscape in respect to the MVL-issues. Between sections 8.2 and 8.3, a complete image of the initial settings is formed, comprising the object of debate (JP), the players involved, and issues over which negotiations are conducted.

In addition to changes to the current state, it is also important to compare the simulated outputs to the 'ideal' reform case championed by Koizumi. Section 8.4 therefore presents an image of postal reform detailing the 'ideal' ownership structure and regulatory environment. Establishing this arrangement as a so-called 'optimum' allows not only a measurement of the fluctuations from the current status quo, but also gauges how close Japanese postal reform comes to Koizumi's dream.

In terms of delivering effective reform, the issues that are most important from a political perspective may not necessarily be as important from an economic perspective and vice versa. Section 8.5 therefore presents the MVL-issues ranked by importance for effective reform from an economic viewpoint, which is independent of salience inputs. Based upon these rankings, section 8.6 introduces a metric for measuring overall effectiveness. This metric allows the comparison of simulated outputs against the 'ideal' case and provides a control benchmark for sensitivity runs.

The results of the control run are presented in section 8.7, beginning with a description of the raw outputs, final location of MVL-issues and comparative image of the political landscape. As the variables are only displayed at initial and final stages, Appendix E shows how changes can be traced through the model using two examples of player interactions. As a result of the control run, changes in MVL-issues are observed and the effects upon ownership and issue-linkage structures are shown in addition to a comparison with Koizumi's 'ideal' scenario. Finally, the section provides a summary and intuitive discussion of the results of the control run in terms of effectiveness and reform consistency.

Following the control run, the model's sensitivities are examined in section 8.8. Tests are performed that measure the influence individual players have over the issues by altering their initial inputs. Doing so identifies the more influential players and more sensitive issues. It also establishes whether a player's clout is positively related to influence or if smaller players can have a large impact. The results are summarised by providing a rank order of player influence and identifying which issues cause the greatest number of ripples elsewhere in the simulation.

Section 8.9 is an application of the sensitivity testing. It examines the effects of external shocks to player inputs and measures the changes in reform effectiveness. This section is useful as it shows how the outcomes may change from external pressure placed upon players and identifies the ten greatest 'shocks' in terms of changes to efficacy for both the pro- and anti-reform minded. The effects of combining these shocks are also explored to establish if combinations result in cascade effects.

Section 8.10 presents the results of changing the model's internal mechanics through alternative permutations of overriding default activation behaviour. Three alternative tests are performed on the control run to examine the effects of forcing all players to become active over individual and all issues.

Finally, the chapter draws conclusions and offers possible strategies exogenous to the three alternatives within the model.

8.2   Initial Conditions: The State of Reforms Today

Figure 8-1 presents the major ownership, governance, and regulatory links between the government and JP Group, as well as the major issues surrounding privatisation. Government sections are depicted in green, JP in orange, Fiscal

Investment and Loan Programme in grey, and issues[108] in blue. Ownership links are denoted in black, official regulatory authority or supervisory links in red and more informal influence links in blue. Details including critical regulations appear alongside the issue to which they correspond. Governmental and bureaucratic influence and authority over issues is elaborated upon in Figure 8-2.

Figure 8-1 shows that the Ministry of Finance owns all shares in JPH, who in turn hold all shares in individual units. Regulatory authority is held by the Ministry of Internal Affairs and Communications but overlaps with the FSA special office insofar that JP Group offers financial products and JPH is in part a financial holding company.

Figure 8-2 presents a more detailed image of formal linkages and issues. Influential links between issues are also shown. Descriptions of the links to issues are provided in broad-stroke terms.

The influence links pictured in Figure 8-2 amount to problems that can be addressed via postal reform. In general terms, the greater the number of links that can be eliminated, the more effective reform will be, although overall effectiveness also depends upon *which* links are broken and in what combinations. The postal reform package itself contains a number of elements (MVL-issues) over which players[109] have the ability to negotiate.

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[108] These issues are not the MVL-issues, but are affected by them.

[109] Player groups were identified using the general inductive approach, sourcing information from literature and media reports, and were vetted by expert interview. See Chapter Four for details.

Figure 8-1 Ownership, influence links, and issues relating to JP privatisation

Figure 8-2 Extended influence links

Legend:
- Influence
- Supervision/regulation
- Ownership
- Government organ/ministry
- Company
- Fiscal Investment and Loan Programme

JPI and JPB still invest heavily in FILP owing to operational restrictions. FILP bonds give 20 point premium over JGBs.

- Broad network increases USO obligations, and
- USO obligations give rise to entry barriers.

- *Amakudari* to special corporations promotes continued entry barriers.

Boards regularly changed with governments,
- temporary worker scheme increases payroll costs,
- inconsistent pricing regulations for mail classes,
- significant interference with banking and insurance,
- entry barriers reduce efficiency incentives (social contribution fund as well), and
- *amakudari* to special corporation limits ability to effectively outsource operations.

- MOF influences cross-sub. through ownership of JPH,
- JPH controls internal transfer prices,
- Universal financial service increases JPC revenue to cost of JPB and JPI,
- broad network maintenance requires greater subsidies.

- Entry barriers protect JP revenue, mail delivery approx. 85% of all consigned deliveries.

- USO obligations increase costs to all units.

- Banking and insurance commissions approx. 48% of JPC revenue.

- Portion of parcel delivery under USO tilts playing field in favour of JP,
- entry barriers severely tilt playing field in general correspondence,
- *amakudari* to special corporations promotes continued tilted playing field.

- Gov. and MIAC interfere with asset sales and network width. Limits JP opportunities and imposes greater costs,
- maintenance of non-core assets reduces profitability – hotels run deficits, and
- non-core assets are holdovers from paternalist state.

Nodes: Universal service, Entry barriers, Ops and personnel management, FILP, FSA special office, Government, MOF, MIAC, Japan Post Holdings, Japan Post Insurance., Japan Post Co., Japan Post Bank., Cross subsidisation, Playing field, Network asset management, Amakudari

8.2.1 MVL-issue definition

Seven MVL-issues are processed. Their numerical order corresponds to the order in which they were identified.

Table 8-1 MVL-issue definition

MVL#	Title	Definition
1	**Separation of business units**	Severing links between JPH, JPC, JPI, and JPB; removing the companies from JPH umbrella ownership and creating distinct corporate entities.
2	**Creating a level playing field**	Removing the special privileges afforded to JPC by removing the correspondence distinction, allowing JP units to enter into new businesses and regulating them consistently with their private-sector counterparts.
3	**Not providing universal financial services**	Removing the requirement for JPI and JPB to supply their services through the entire postal network. Universal service for postal services was never challenged and does not form part of this issue.
4	**Open sale of shares**	Offering shares under 'open' conditions, that is, listing shares from the banking and insurance units individually as opposed to listing just the holding company. It also includes allowing shares to be purchased by foreign investors.
5	**Autonomy – operations and personnel**	Allowing JP to conduct operations and personnel decisions independently without government intervention.
6	**Autonomy – network asset management**	Allowing JP to manage its network assets independently without government intervention.
7	**Not requiring a minimum network**	Removing the requirement to operate at least one post office in every village.

The phrasing of these MVL-issues is such that positive positions reflect support for the proposal and negative positions indicate the player is opposed.

Figure 8-3 displays the information provided by Figure 8-2 with MVL-issue numbers superimposed over the links they address. Some links can be addressed via a single MVL-issue, others involve several. The outcomes of the simulation indicate how many links are likely to be broken. Positive MVL values indicate the link is more likely to be broken, and vice-versa.

Elaborating upon Figure 8-3, Table 8.11 offers a brief description of each connection and its role in the reform package. Owing to its length, it can be found in Appendix D on page 367.

Figure 8-2, Figure 8-3, and Figure 8-4 depict JP Group as having a number of major issues which reform should ideally address. These issues interconnect with each other on many levels, ranging from labour management policies to entry barriers. These issues have been distilled into seven MVL-issues to be included in the LOS. This section has therefore identified the confines of what is to be negotiated.

Figure 8-3 Extended influence links with MVL-issue superimposition
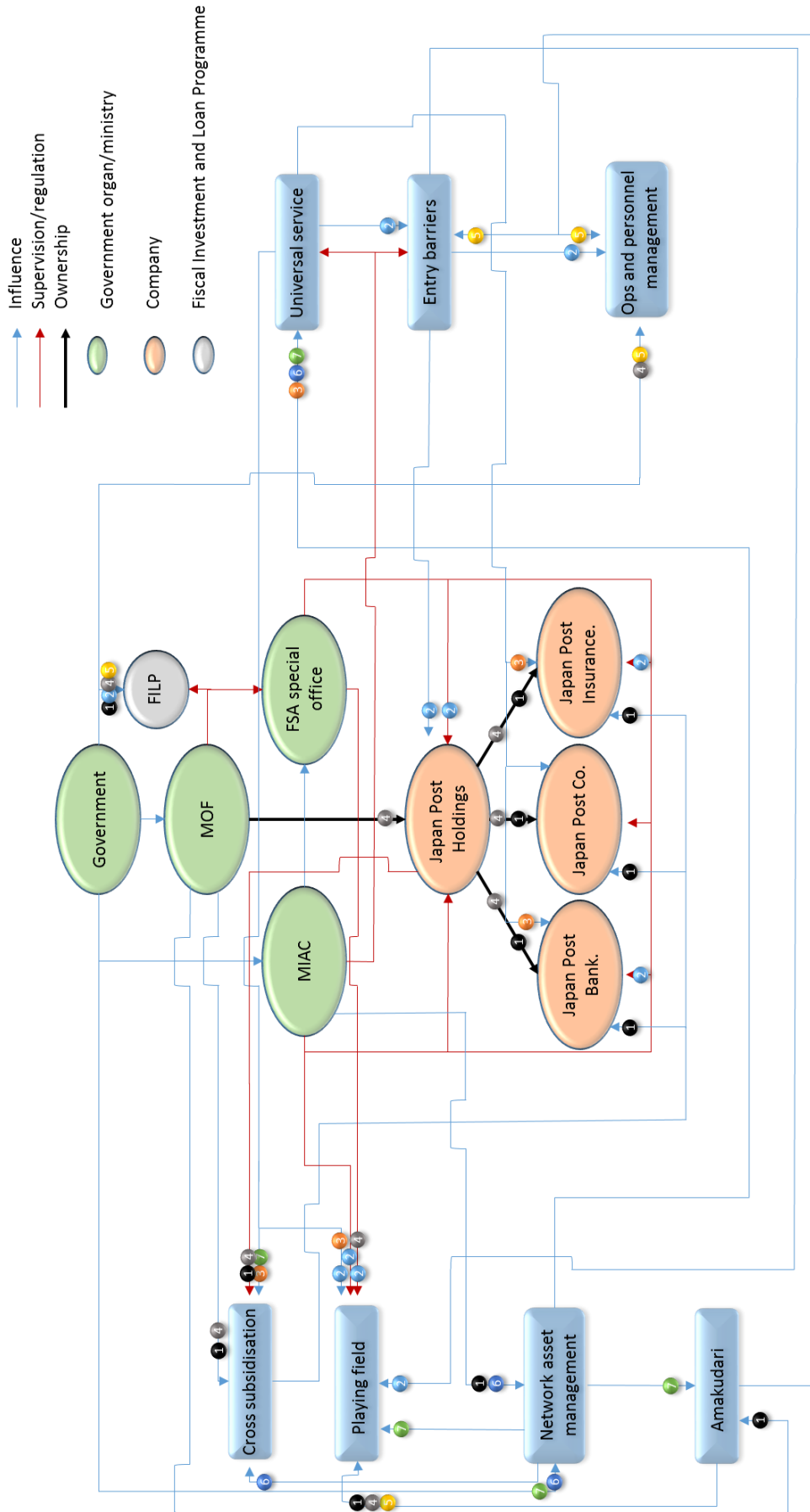
Table 8-2 'Player group' names and description

Player group #	**Group name**	**Brief description**
1	LDP coalition reform elements	This covers the sections of the LDP and New Komeito that support privatisation, including Mr Koizumi, Mr Takenaka and the committees they worked with. Also included is "Your Party" and other supporting members such as Tetsuzo Fuyushiba.
2	DPJ coalition reform elements	Sections of the DPJ that support the privatisation in principle even though they may not agree on the details. This includes individuals such as Kazuhiro Haraguchi and Seiji Maehara.
3	Business community	Organisations such as *keidanren*, the Regional Bankers' Association, the Bankers' Association of Japan and other institutions. Note that this does not include special corporations connected to the Fiscal Investment and Loan Programme.
4	Ministry of Internal Affairs and Communications	Refers to the ministry's overall stance towards each MVL-issue.
5	Ministry of Finance	Refers to the ministry's overall stance towards each MVL-issue.
6	LDP coalition opposition elements	The sections of the LDP who oppose privatisation. Examples include Taro Aso, Seiko Noda, Kohei Tamura, Kenji Furuya etc.
7	The 'Kamei' group	This includes groups who are fiercely opposed to privatisation – as was Shizuka Kamei. It includes the Association of Commissioned Postmasters (*Zentoku*), Association of Retired Postmasters (*Taiju*), the postal workers' union, and special corporations attached to the post office or through Fiscal Investment and Loan Programme. The Japanese Communist Party and The Social Democratic Party are included here too.
8	DPJ coalition opposition elements	The elements of the DPJ and Japan Restoration Party that oppose privatisation but not as strongly as the 'Kamei' group.

8.3   Initial Political Landscape

The political landscape is populated by eight player groups. A 'player group' represents a collection of individuals who share the same position and salience values for each of the MVL-issues. The clout value represents the clout of the player group as a whole. Table 8-2 provides details of who is included in each group.

Initial values for position, salience and clout were determined by collating and averaging the inputs from four expert survey responses. Models of this type typically use between one and five respondents. Clout measurements were transformed into weighted clout figures using the clout scalar presented in Chapter Seven.

Figure 8-4 presents the political landscape for each issue prior to commencement of simulated negotiations. Position is measured on the x-axis with more extreme positions at both ends. Salience is measured on the y-axis and weighted clout is depicted by bubble size.

Figure 8-4 Initial political landscape
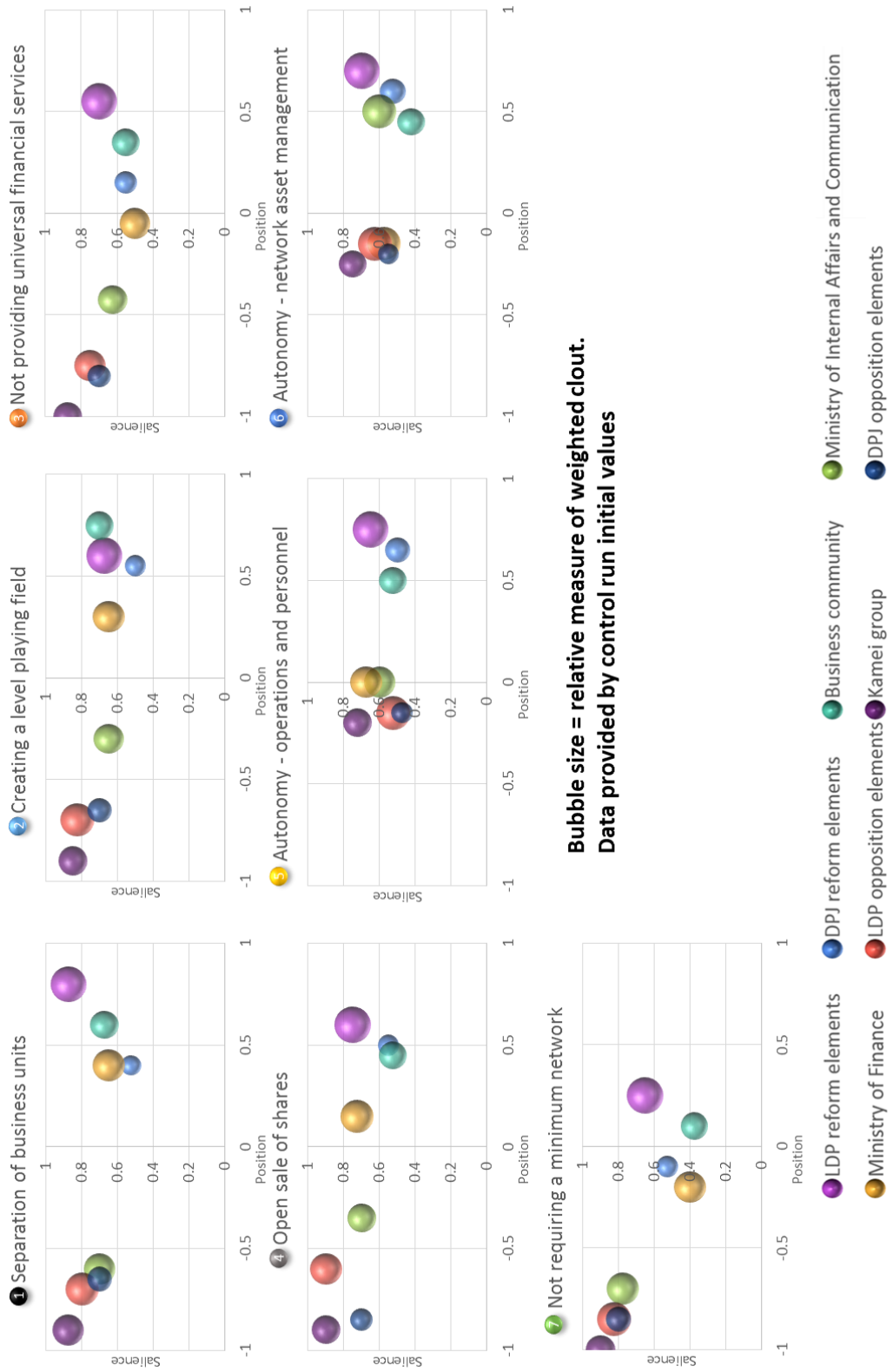
The LDP reform elements have the highest weighted clout and the highest position and salience values for all supporting players except for the business community regarding the *playing field* (MVL2); the business community's position is understandable as MVL2 probably has the single greatest effect on their interests.

A noteworthy point is that many of the opposing players feel less strongly about JP management than other issues, suggesting they may be willing to grant the group more internal independence but are much more hesitant about changes to the regulatory environment. Amongst the detractors, the 'Kamei' group appears universally as the most vocal and polarised.

The Ministry of Internal Affairs and Communications for the most part finds itself on the negative side of the position continuum but in regards to network asset management is moderately supportive of more independence. This might suggest that whilst the ministry wishes to see JP Group become more productive, they are unwilling to relinquish their control over the Group or alter the regulatory environment.

Another interesting observation is that it appears that *separation* (MVL1) and *playing field* (MVL2) are the most polarised issues.

Having now identified the eight player groups and seven MVL-issues, the simulation can commence. Changes in the political landscape as a result of interactions can be plotted and observations made as to how outcomes may evolve.

8.4   Koizumi's 'Ideal'

Defining an 'ideal' case permits comparison between the 'ideal' and observed results. Comparative analysis to an 'optimal' in addition to the current setting is useful as it shows how far postal reform has come, and how far it has yet to go.

Key changes in the package Koizumi envisioned appear below in Table 8-3. The MVL-issues that facilitate these changes are displayed in the right hand column.

Table 8-3 Elements required for Koizumi's ideal reform package

Element	MVL(s)
Separate service, banking and insurance business units.	1
Financial units on equal footing as private firms:	2
• regulated by FSA only – not special office,	2
• ability to separate banking unit into regional units after privatisation.	1, 4
Sale of shares to public over 10 years. Financial units to be completely sold.	1, 4
Universal service obligations on delivery and prices remain.	N/A
Postal network should be maintained.	6, 7
No universal financial services.	3
Separate accounting systems between units.	1
Expansion of services to even playing field for financial units (mortgages, loans, medical insurance, international delivery etc.).	2
Establishment of holding company to pursue privatisation after Koizumi's term expired. State would maintain 33% share.	1, 4
Autonomous personnel management – decreases mostly from retirements.	5
Sale of non-core network assets: inns in particular.	6
Removal of government guarantees, taxed as private company.	2
Complete liberalisation of special and general correspondence.	2

Ideally, entry barriers would be removed and cross-subsidisation would be significantly reduced if not eliminated. Koizumi also wanted to dispose of the Fiscal Investment and Loan Programme and *amakudari*. Postal reform by itself would not eradicate them but would be a step towards such an aim. If reform produced financial units that operated identically to private firms, one would assume funds to be divested from Fiscal Investment and Loan Programme bonds in favour of higher-yielding investments. Losing its single largest buyer of bonds, a privatised postal service would leave the Fiscal Investment and Loan Programme with little alternative *but* to reform. An illustration of the ideal case appears as Figure 8-5 with MVL-issues placed to reflect which part they affect.

Figure 8-5 Koizumi's ideal realisation of postal reform
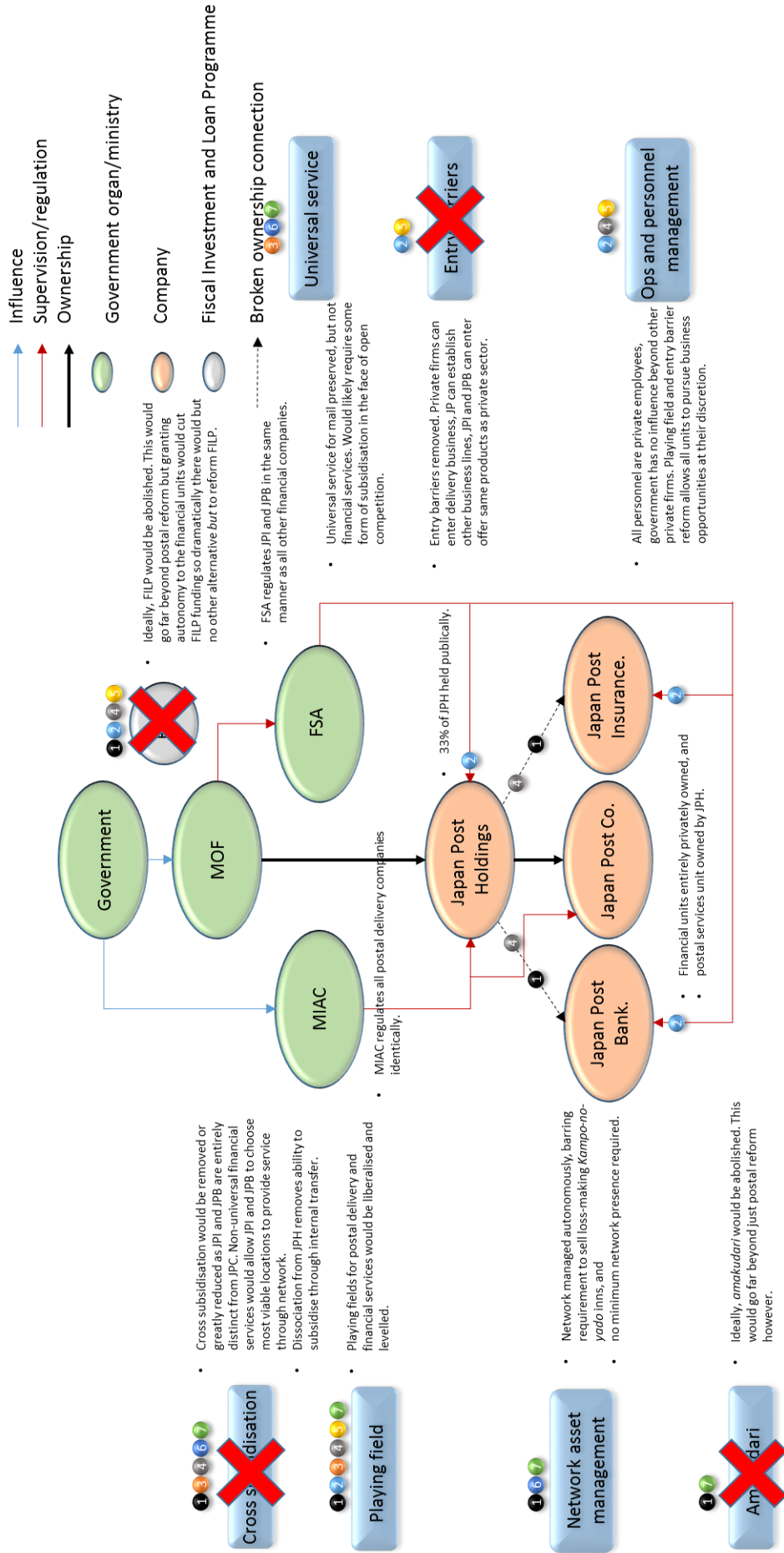
The 'ideal' case envisioned by Koizumi requires that every other player-group's position and salience values match the Koizumi group at the end of negotiations and that no concessions are made by the Koizumi group. Such an outcome is clearly fanciful given Japan's current political climate.

Nevertheless, it must be remembered that the concept of MVL-issues are grounded in the BDM model which in turn is based on Black's (1958, as cited in Wu & Bueno de Mesquita, 1994) median voter theorem. MVL-issues are phrased as proposals and assuming that the median voter exists on the positive side of the position continuum, there is more than an even chance the proposal will succeed. Assuming that matching other players' position and salience values to Koizumi's is practically implausible, it raises the question of how much change to initial values is needed to push all MVLs into positive equilibria. The resultant outcome, while not optimal, would be a reasonably close approximation. This will also illustrate how much adjustment in the political landscape is necessary; if it requires relatively small changes, passing all MVL-issues is potentially feasible.

Table 8-4 presents three alternatives with positive MVL values. This was done by altering the control values of selected players over selected issues. Alternative 1 changes position only, alternative 2 salience, and alterative 3 clout. The table lists the changes made by displaying the initial control value and the new value required to produce positive MVLs. The notation *Pa3* for example meaning the "*P*osition of player *a* over MVL-issue *3*".

Table 8-4 Alternative initial values to produce positive MVLs

Alternative 1: Position			Alternative 2: Salience			Alternative 3: Clout		
Input	Control	New value	Input	Control	New value	Input	Control	New value
Pa3	0.55	0.7	Sb7	0.525	0	Cb7	0.225	0
Pd1	-0.6	0.01	Sd1	0.7	0	Cd1	0.5	0
Pd2	-0.3	-0.05	Sd2	0.65	0	Cd2	0.45	0.14
Pd3	-0.425	0.5	Sd3	0.625	0	Cd7	0.525	0
Pd4	-0.35	0.35	Sd4	0.7	0	Cf3	0.475	0
Pd7	-0.7	0.2	Sd7	0.775	0	Cf4	0.5	0
Pe3	-0.05	0.2	Se7	0.4	0	Cf7	0.575	0
Pf2	-0.7	0.05	Sf1	0.8	0	Cg3	0.4	0
Pf3	-0.75	0.6	Sf2	0.825	0	Cg4	0.4	0
Pf4	-0.6	-0.15	Sf3	0.75	0	Cg7	0.425	0
Pf7	-0.85	0.25	Sf4	0.9	0.59	Ch7	0.3	0
Pg3	-1	-0.7	Sf7	0.825	0			
Pg4	-0.9	-0.3	Sg1	0.875	0			
Pg7	-1	-0.25	Sg2	0.85	0			
Ph7	-0.85	-0.6	Sg3	0.875	0			
			Sg4	0.9	0			
			Sg7	0.7	0			
			Sh1	0.7	0			
			Sh2	0.7	0			
			Sh3	0.7	0			
			Sh4	0.7	0			
			Sh7	0.8	0			

Within these variants, changes to initial position do not appear to be as stark as changes to salience and clout but recall that changes to *initial* values are tantamount to a unilateral reversal of fundamental viewpoints. The simulation allows for fluctuations in sign but only resulting from exchanges.

Initial salience values must be reduced to zero in many cases as any non-zero value includes the player within the MVL-issue, whereupon they can be lobbied by other active players. Changes to clout reduce the power of the player group over a particular issue to a point where, irrespective of their political leaning, they are unable to affect the outcome.

Whilst the number of permutations for position, salience and clout is vast, the three alternatives presented here represent a sea-change in the political landscape. They require either fundamental shifts in positions from strong adversaries, disassociating them from issues, or reducing their power considerably; none of which seem particularly likely. Realising Koizumi's vision therefore appears to be out of reach given the current setting. Securing gains on selected MVLs will likely require a number of concessions elsewhere.

This does not imply that other applications of the model cannot produce largely positive outputs, but given the array of opposition forces and the power they collectively wield, in this case it is most unlikely. Figure 8-6, Figure 8-7, and Figure 8-8, present a visualisation of the three options described in Table 8-4. The semi-transparent bubbles represent initial control values; solid bubbles depict the new values.

Figure 8-6 Changing initial positions yielding positive MVLs 1-7
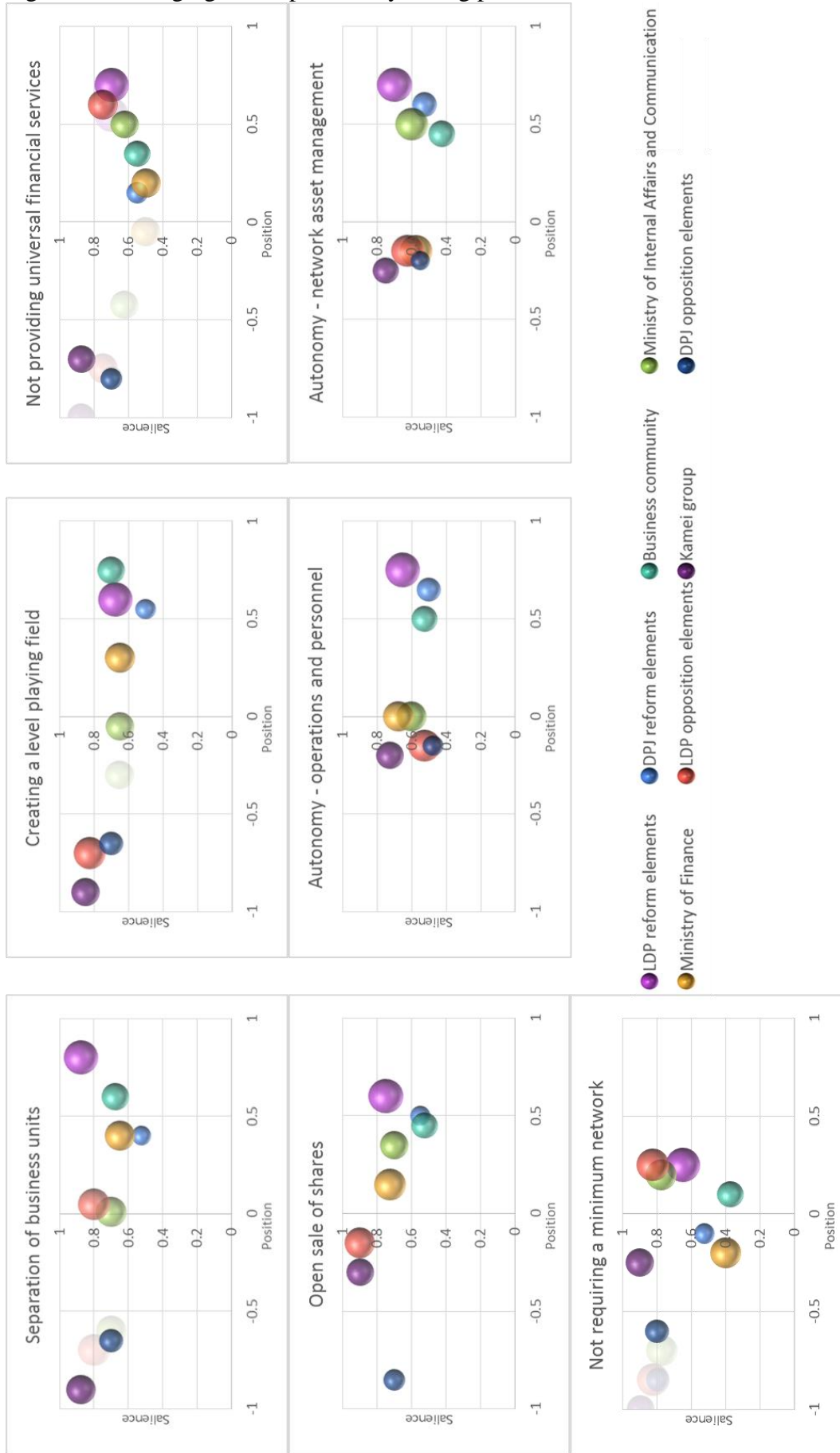
Figure 8-7 Changing initial salience yielding positive MVLs 1-7
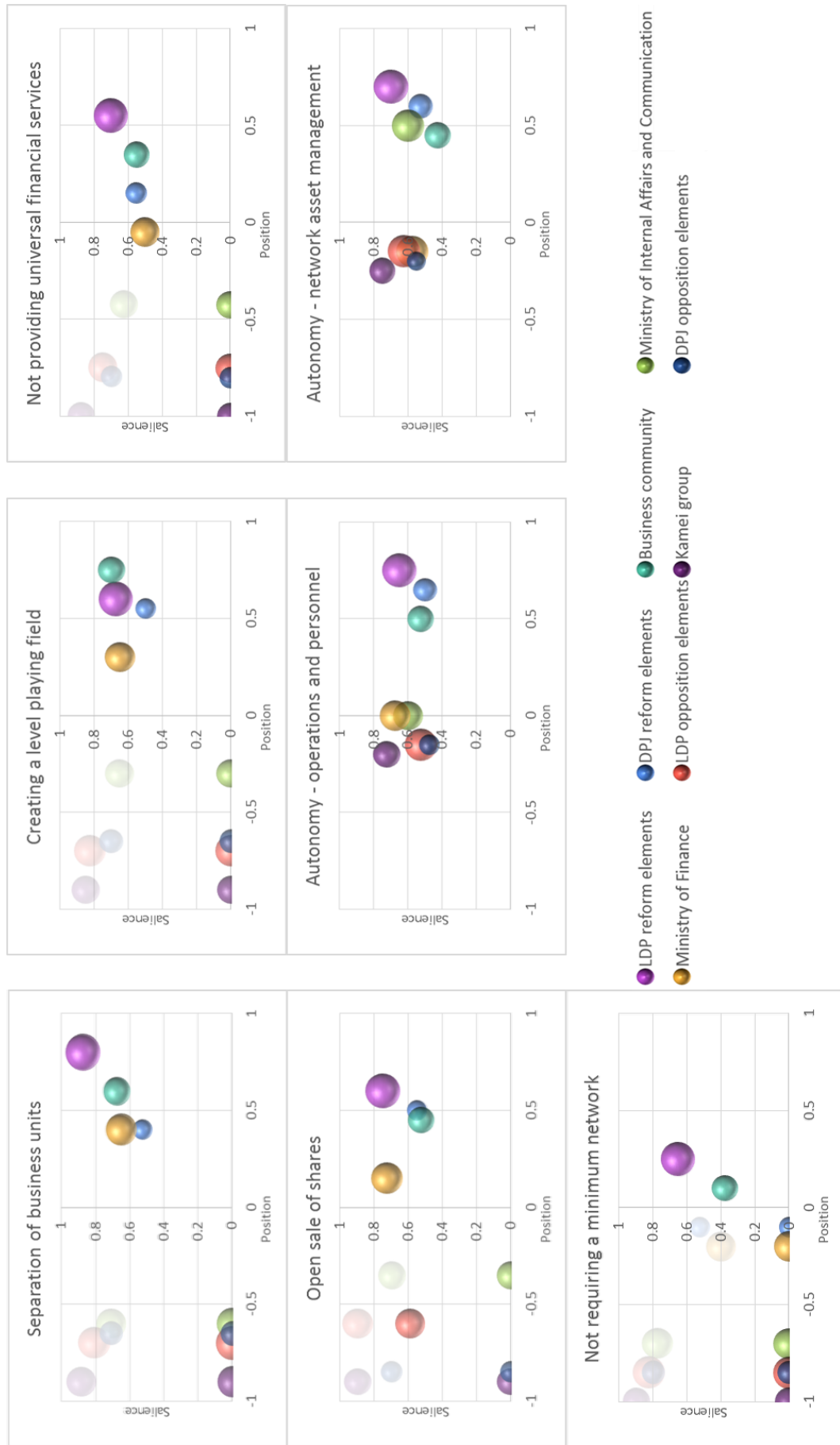
Figure 8-8 Changing clout yielding positive MVLs 1-7

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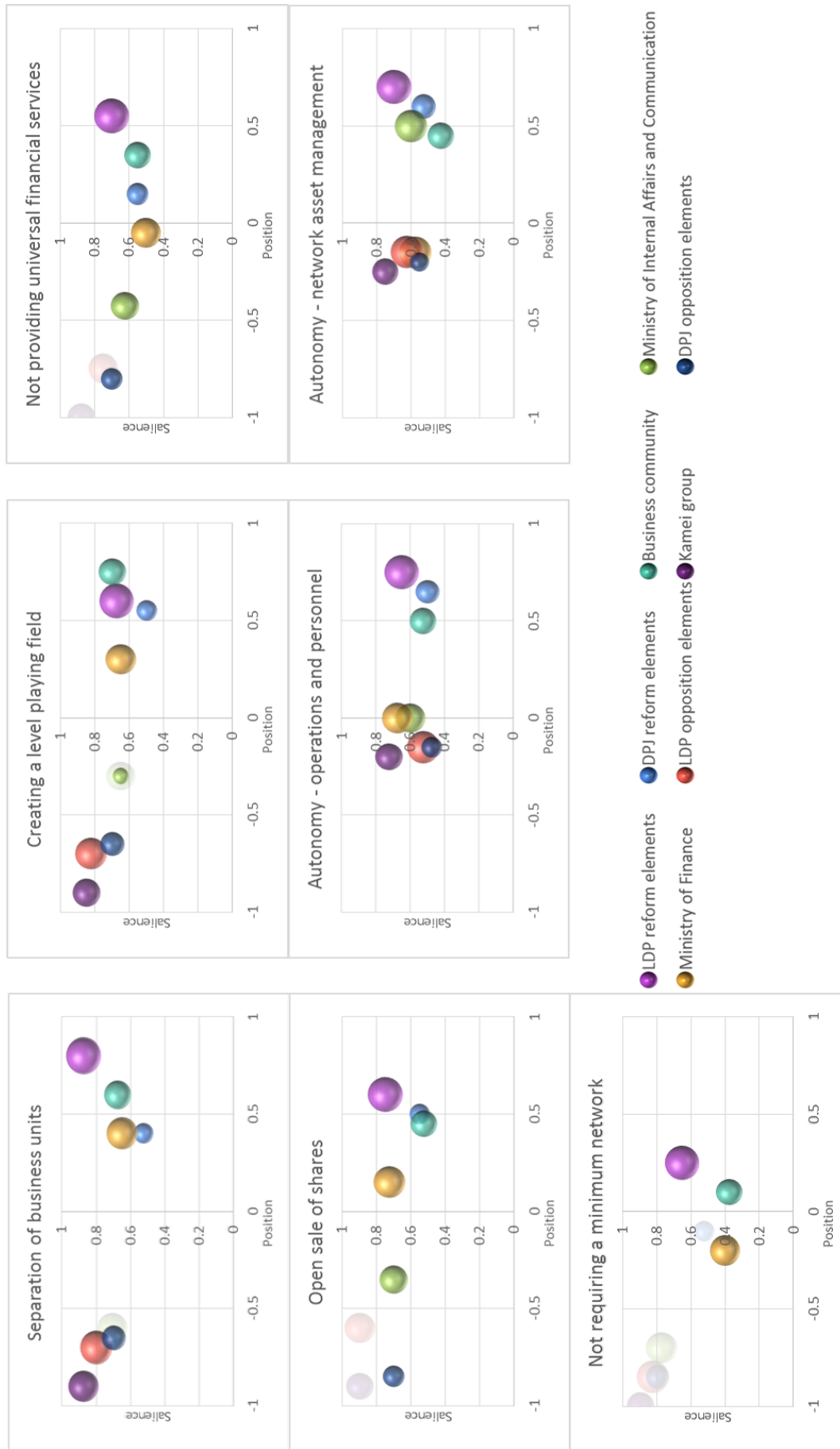
Koizumi's ideal shows a privatised entity operating in a competitive market with predominantly even-handed treatment (excepting universal service). It represents a situation with minimal government interference with respect to operations and gives all units the freedom to engage in business practices as they see fit. The ideal also sees the connections to Fiscal Investment and Loan Programme broken under the assumption that doing so will reduce opportunistic lending and revitalise capital markets. Clearly, this is a lofty vision and probably beyond the ability of the current administration to realise; the three alternatives presented above show that nothing short of a sea change can induce such a state. Nevertheless it provides an optimal target. Including this 'ideal' state in the analysis shows what changes may occur and how close to the 'optimal' outcome postal reform may approach.

8.5   Most Important MVL-Issues for Effective Reform

The issues depicted in the political landscape diagrams do not share equal importance in terms of delivering an effective reform package. In consultation with my chief supervisor, a rank order was established.

1st equal issue: Business unit separation (MVL1)

Without business separation, cross-subsidisation would likely continue through use of internal transfers. Government and the bureaucracy would also have formal ownership authority extending through all units, allowing interference with asset, personnel, and operations management. *Amakudari* landings are also more likely if units are not separated. No separation implies a large postal presence, requiring extended support from financial units and reduces the likelihood that favouritism towards the post office will be undone. Failure of MVL1 also suggests that the JP financial units are less likely to downsize, which could limit the planned revitalisation of capital markets.

1st equal issue: Creating a level playing field (MVL2)

A tilted playing field includes the preservation of the distinction between special and general correspondence. This situation effectively prevents entry into general correspondence by private firms and reduces competitive pressure on JPC. Consequently, the condition of the playing field affects the incentive structure of JPC in terms of productivity and efficiency. In terms of the financial units, favouritism is likely to result in continued diversion of household savings away from private financial institutions. There is a strong possibility that these funds will

continue to be invested in low-yielding JGBs and Fiscal Investment and Loan Programme bonds which is a primary factor driving postal reform. *Amakudari* landings will likely be more prevalent with an uneven playing field as JP Group continues to make use of special corporations that provide logistical and auxiliary services to the group.

2nd equal issue: Autonomous operations and personnel management (MVL5)

Continued interference with postal operations will preserve inefficiencies. The temporary worker conversion scheme is one such example of this. Opportunities for growth are likely to be stifled; Kamei's reluctance to allow JPB to invest in foreign capital markets is a good example of past interference. Failure to reform this issue will contribute to preserving the strength of the postal lobby as greater independence would allow outsourcing services in selected rural communities (as was done in conjunction with Lawson convenience stores) and thus reduce the number of commissioned postmasters needed.

2nd equal issue: Autonomous network asset management (MVL 6)

Interference with network asset management increases the need for cross-subsidisation as growth opportunities are lost and deficit-producing assets are forced to be maintained. Note that Hatoyama delayed post office renovation plans at considerable cost and prevented the bundled sale of JPI's inns. By extension, the greater need for cross-subsidisation also places pressure to keep entry barriers high. As with operations management, greater reform here could weaken the postal lobby if JP is permitted to restructure its network presence.

3rd equal issue: Not providing universal financial services (MVL3)

Universal financial services impose high costs upon JPB and JPI. JPC is the direct recipient of these agency fees and thus this issue directly influences the level of cross subsidisation observed. This regulation also artificially increases JPB and JPI market presence and therefore increases pressure on the private sector.

3rd equal issue: Not requiring a minimum network (MVL7)

Maintaining a minimum network presence preserves, to a degree, the strength of the postal lobby. As every population centre is guaranteed to have a post office it follows that many of these will likely be staffed by commissioned postmasters. This issue also increases costs on JPC who must provide facilities and upon JPB and JPI who are obligated to offer products universally.

4th issue: *Open sale of shares (MVL4)*

Listing only JPH and restricting foreign investment limits opportunities to incorporate greater outsider governance practices and structures. It also removes a layer of separation between the government and the financial units: if JPB and JPI were to be individually listed, their executive staff would likely be appointed by the new shareholders, not JPH shareholders[110]. A continued umbrella structure also allows JPH to influence transfer prices between the units, an action that can ostensibly be used to maintain cross-subsidies.

Ranking the MVL-issues in this order provides a basis for measuring effective reform from an economic perspective. It is useful to develop a metric independent of the model's salience inputs as issues that are important politically may not necessarily have the greatest impact economically.

8.6   Efficacy Index: A Measurement of Overall Effectiveness

The efficacy index offers a numerical comparison of the simulation's outputs against the 'ideal' as the Koizumi administration envisioned, and is defined:

$$Efficacy\ index = \sum_{MVL_i=1}^{7} \left[\frac{MVL_1}{2} + 0.5 \right] \times Rank\ fraction_{MVL_1}$$

where the rank fractions for MVL1 and MVL2 are 4/19, MVL5 and MVL6 are 3/19, MVL3 and MVL7 are 2/19, and MVL4 is 1/19. An efficacy index of '1' implies every issue's MVL value stabilises at '1' and is the ideal case from a reform perspective. Conversely, an efficacy index of '0' infers that every issue settles at an MVL value of -1. Intermediate values are affected by the rank fraction; *separation* (MVL1) and *playing field* (MVL2) have a much greater impact on efficacy than *shares* (MVL4).

The efficacy index is useful as it provides a stable comparison between simulation runs and Koizumi's ideal. The HOS provides a nominal measure of overall effectiveness but is based on salience and therefore influenced by political decisions. It is also more dynamic than the efficacy index as weighted criticality affects the calculation. Consequently, the development of a metric independent of player inputs provides a secondary analysis tool.

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[110] The Ministry of Finance is a considerable holder of JPH shares.

8.7   Simulation Results: Control Run

This section details the findings of the control run. The simulation's outputs are presented first, noting the changes in MVL values along with the results of the HOS and ensuing political landscape. The new ownership and regulatory structure is presented in section 8.7.1 along with expected changes to specific issue links resulting from positive MVLs. Comparisons to the initial setting and Koizumi's ideal are also qualified here. Section 8.7.2 summarises the findings of the predicted outcomes and offers observations on the expected changes including consistency with Koizumi's reform ideology. As the new political landscape is the product of all player interactions over the measured issues, Appendix E elaborates on two example interactions, showing how they occur and how their effects can be traced.

Using the inputs from the expert survey, the control run represents prognosticated MVL outcomes through the process of lobbying salience of strong allies, challenging weak allies over position, and exchanging least favoured issues for gains over more important ones. This particular array of inputs required 10 iterations before most outputs settled. Between rounds 11 and 19 only *minimum network* (MVL7) changed and even then only by a few tens of thousandths, settling at round 20. Figure 8-9 shows the evolving MVL values.

Figure 8-9 Control run MVL outputs
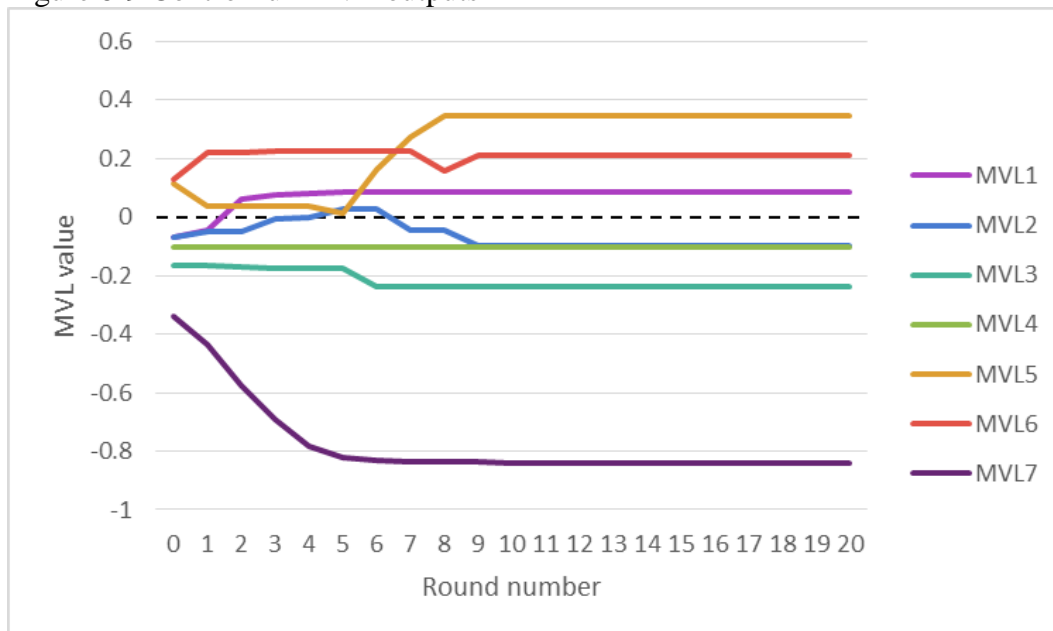
Separation (MVL1) shows gains in the early iterations that are maintained throughout. *Playing field* (MVL2) increases through salience lobbying at first but both the Ministry of Internal Affairs and Communications and Ministry of Finance accept exchanges from other players and take negative stances. *Universal financial*

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service (MVL3) is relatively stagnant. The DPJ reform elements are lobbied to increase salience, which marginally changes the output in the early iterations but the Ministry of Finance is successively challenged and this causes a decrease – particularly in round five.

Shares (MVL4) appears to be caught between the two opposing sides and no exchanges or position challenging take place[111]. Salience lobbying is common but ultimately the anti-reform players have greater combined clout and this issue remains negative.

Operations (MVL5) sees action from reform-minded players. Exchanges to the LDP opposition elements and the 'Kamei' group are made to strengthen independent operations and personnel management. Weak ally lobbying also sees the DPJ reform group and the Ministry of Finance pressed for increases in position.

An interesting occurrence in *asset management* (MVL6) involves the Ministry of Finance first increasing position through an exchange and then decreasing through a later exchange that they initiate. This explains the elongated 'speed bump' shape in Figure 8-9. The LDP opposition elements are later brought into positive position through another exchange.

Minimum network (MVL7) exhibits a concerted effort by the extreme opposition elements to reduce the positions of other players through weak ally lobbying and exchanges. The LDP reform elements and the business community show willingness to concede this issue in exchange for gains elsewhere but once brought on side are lobbied to increase salience.

Figure 8-10 displays the final results of the seven issues. Semi-transparent bubbles represent initial locations and solid bubbles the locations at equilibrium. Figure 8-11 draws from the HOS and displays the probability of each MVL-issue's proposal passing.

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[111] All alliances in MVL4 are strong alliances – meaning that position challenging does not occur.

Figure 8-10 Initial and final MVL locations
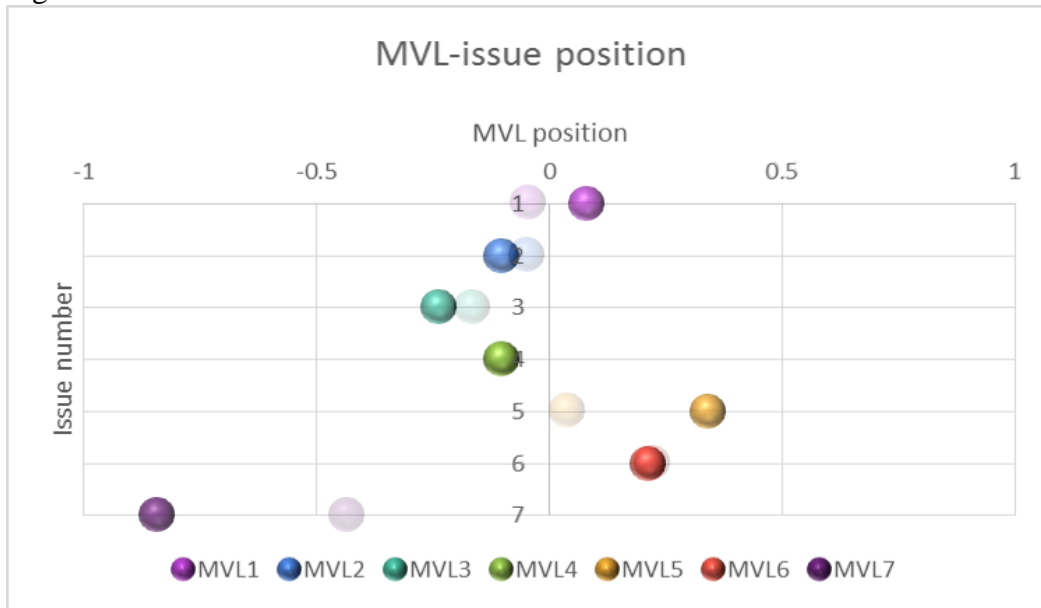
Control run efficacy index: 0.4828, PER from HOS = 0.4341

Figure 8-11 Probability of MVL-issue reform from HOS
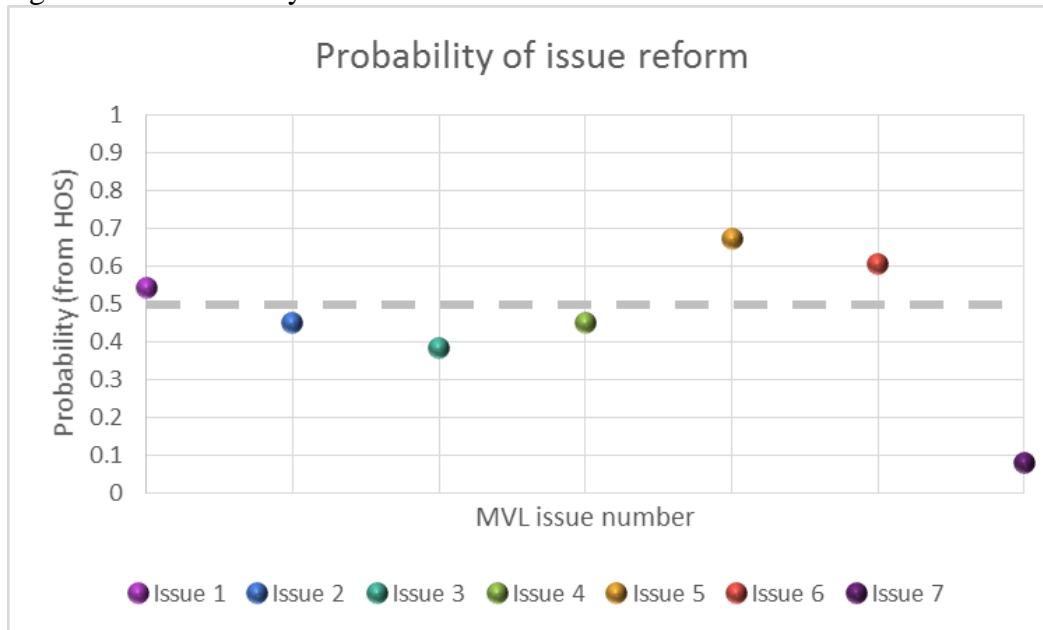
The greatest gains for reform-minded players are over *separation* (MVL1), and *operations* (MVL5). Gains to MVL1 however were exchanged for *minimum network* (MVL7), its final position indicating that the proposal to lift the restriction will almost certainly fail; MVL7's probability of reform is 0.08. There does not appear to be enough support to positively resolve *playing field* (MVL2), *universal financial services* (MVL3), and *shares* (MVL4), whose probabilities are 0.45, 0.38, and 0.45 respectively. The efficacy index of 0.4828 suggests that the new setting is significantly lower than Koizumi's ideal and the HOS indicates that the overall probability of effective reform is 0.4341.

The political landscape at the end of the simulation appears in Figure 8-12. Once again, the starting locations are denoted by semi-transparent bubbles and final locations are solid. The greatest changes appear in operations (MVL5) and *minimum* network (MVL7); once significantly divided players are now clustered more tightly together, particularly so over MVL7 (bottom left). The stalemate over *shares* (MVL4) described previously can also be seen. Players exhibit increases in salience but no other changes are observable owing to the issue's particular relationship dynamics.

Figure 8-12 Final political landscape
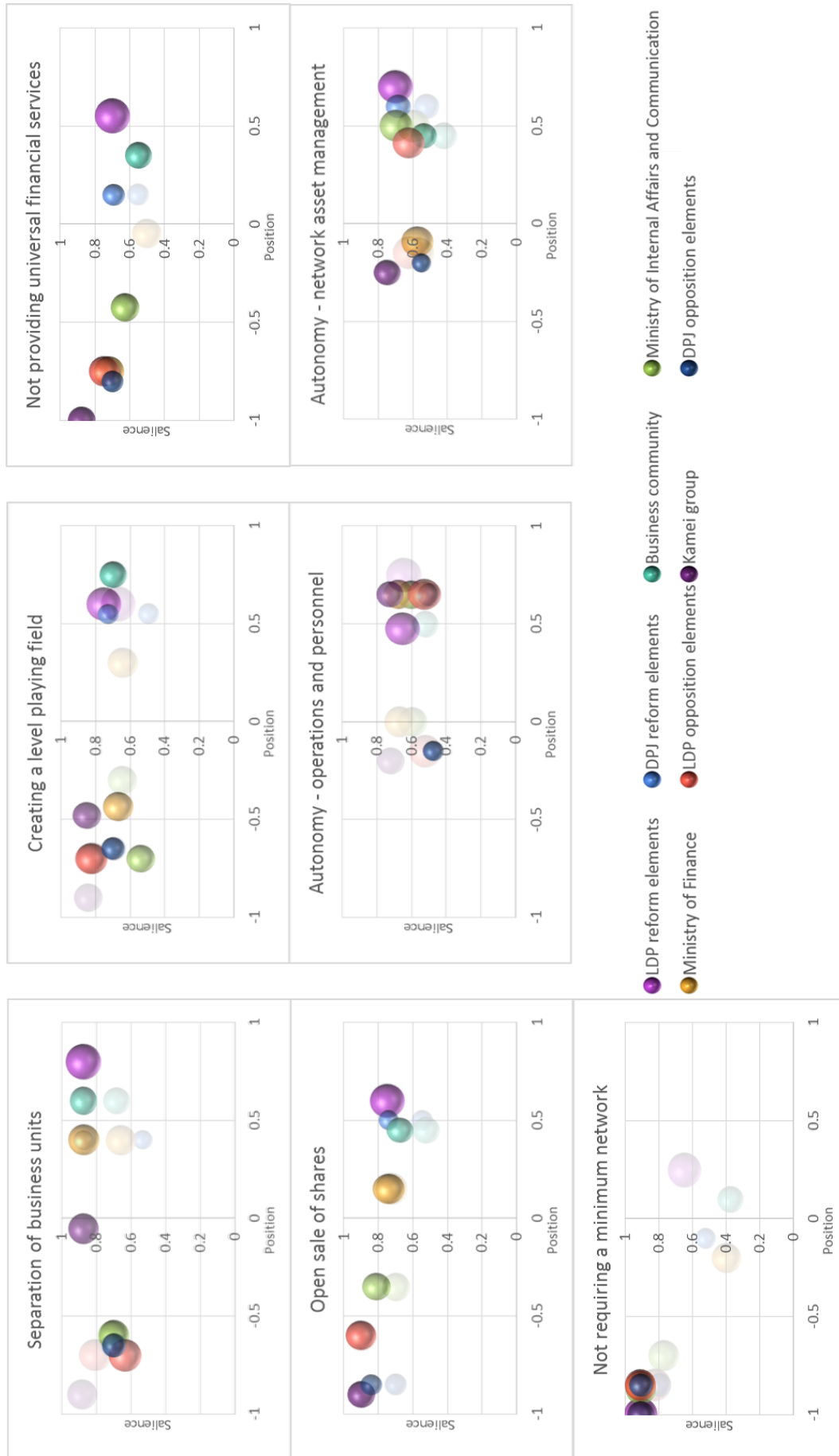
8.7.1 Simulation results: Issue linkages

Positive MVLs indicate there is a good possibility the proposal they represent will be implemented. Implementing changes therefore implies that linkages proposed in Figure 8-3 showing positive MVLs are expected to be broken. Linkages with corresponding negative MVLs will likely remain in place. Figure 8-13 presents a revised image of Figure 8-3 according to the results of the control run. Once again, the linkage arrows indicate one part of the diagram affecting another and the superimposed MVL numbers refer to which MVL-issue the blue box issue is affected by.

Observe that whilst some linkages have been removed, many remain. Cross-subsidisation and the playing field are still considerably constrained by *playing field* (MVL2), *universal financial services* (MVL3), *shares* (MVL4), and *minimum network* (MVL7). This falls significantly short of the 'ideal' number of linkages as defined in Figure 8-5. The efficacy index corroborates this observation given its relatively low value of 0.4828. Table 8-12 provides a list of linkage changes from the initial setting to the final setting. Owing to its length, it can be found in the Appendix D on page 374.

Figure 8-14 provides a qualitative description of what changes are estimated to occur and qualitatively rates changes in terms of favourability from the reformists' perspective. Figure 8-15 then offers a comparison of the simulated output against the 'ideal'.

Figure 8-13 Extended influence links with MVL-issue superimposition at t=10

Figure 8-14 Qualitative description key issue changes

Legend:
- Influence
- Supervision/regulation
- Ownership
- Partial ownership
- Government organ/ministry
- Company
- Fiscal Investment and Loan Programme

Nodes: Government, MOF, MIAC, FILP, FSA special office, Japan Post Holdings, Japan Post Bank., Japan Post Co., Japan Post Insurance.

Universal service

Marginally favourable change:
- Greater network freedom provides opportunity to reduce some post office numbers, but must maintain minimum presence.

Entry barriers

Very marginally favourable change:
- Feedback from MVL5-*amakudari* connection potentially reduces number of *amakudari* landings, reducing these rents provides less bureaucratic incentive to maintain entry barriers.
- Entry barriers otherwise unaffected.

Ops and personnel management

Favourable change:
- MVL5 shows ops and personnel management more independent of government/bureaucratic influence. This should aid efficiency drives and productivity measures.

FILP

Marginally favourable change:
- Separating financial units and granting more freedom over operations and portfolio management should help reduce the number of FILP bonds purchased as a result of seeking higher yielding investments.

Japan Post Holdings

Marginally favourable change:
- Diluting MOF holdings in JPH reduces strength of direct influence bureaucracy/government has over JPH.

Cross subsidisation

Marginally favourable change:
- Government and bureaucracy influence is less intense through diluted ownership.
- Greater freedom to reduce loss-making assets will relieve some pressure for subsidisation.
- Other factors remain unchanged.

Playing field

Unfavourable change:
- JPC granted more freedom to expand product portfolio whilst correspondence monopoly remains.
- Universal financial services artificially preserves market presence of JPB and JPI.
- 'Umbrella' ownership structure preserves implicit government guarantee.
- Extended freedoms over operations and product portfolio threatens private sector.

Mixed change:
- JPC expected to have greater freedom over network asset management, allows divestiture and/or restructuring of non-performing network assets.
- Minimum network requirement remains.

Network asset management

Amakudari

Marginally favourable change:
- Separation of business units and greater independence over operations and personnel reduces likelihood of *amakudari* landings – if only to a degree.

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Figure 8-15 Comparison of simulated outcome against 'ideal'

Influence
Supervision/regulation
Ownership
Partial ownership

Government organ/ministry

Company

Fiscal Investment and Loan Programme

Cross subsidisation

Ideal: Complete removal.
Simulated output: Continuation but potentially less subsidies needed.

Playing field

Considerably less than ideal
Ideal: Equality between JP and private sector.
Simulated output: No change in postal monopoly. Financial units granted more freedom even whilst under government ownership.

Network asset management

Marginally less than ideal
Ideal: Independently managed barring requirement to sell *Kampo* inns. No minimum network presence required.
Simulated output: MVL6 more than 0 but less than 'ideal' value. Greater independence expected but minimum network presence issue forfeited.

Amakudari

Less than ideal
Ideal: *Amakudari* eliminated, postal reform
Simulated output: is only a small portion of this however. *Amakudari* landings less likely through greater independence but network presence maintains need for supporting companies.

Ideal: FILP abolished, postal reform
Less than ideal
Simulated output: is only a small portion of this however. Fewer funds transferred to FILP but JPH ownership of financial units and MOF link will continue to exert pressure to invest in FILP.

Universal service

Considerably less than ideal
Ideal: No universal financial services. Postal deliveries universally provided.
Simulated output: Universal financial services to cover network, postal deliveries too.

Entry barriers

Ideal: Entry barriers entirely removed.
Considerably less than ideal
Simulated output: Entry barriers supporting JP maintained, JP units can encroach on private businesses more easily.

Ops and personnel management

Marginally less than ideal
Ideal: Government interference removed from JP units, level playing field allows decision-making to be based on competitive pressure.
Simulated output: MVL5 shows improvement. Personnel and operations management should suffer less government interference but tilted playing field threatens private sector.

Government

MOF

FILP

FSA special office

MIAC

Japan Post Holdings

Considerably less than ideal
Ideal: Entirely separate banking and insurance, two thirds of JPC sold.
Simulated output: Banking and insurance still owned by JPH. Foreign ownership limited or prohibited.

Japan Post Bank.

Japan Post Co.

Japan Post Insurance.

Overall comparison:

Simulation shows improved management at JP but regulatory environment burdens JP and threatens private sector from expanding JP activities.

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8.7.2 Simulation results: Control run summary and observations

Business unit separation is more likely than not to occur and this is a positive step towards reform as it affords a degree of independence from governmental and bureaucratic influence whilst also highlighting the amount of inter-unit cross subsidisation. Two significant factors, however, undermine technical separation. The provision of universal financial services imposes a legal requirement on JPB and JPI to offer their products through the postal network and therefore realises a continual revenue stream for JPC. Secondly, JPH is expected to retain majority ownership of the other units (from MVL4) and in turn, the government will still hold a significant share of JPH. This umbrella structure preserves a degree of authority for the state and bureaucracy to influence JPH and subsequently JPC, JPB and JPI. As a result, whilst technically separated, there are still elements linking the groups together and the government to the group.

Although Koizumi intended the financial units to be completely dissociated, there is a case to be made for offering financial services through a postal network. As evidenced in Chapter Five, declining postal volumes led NZP to pursue alternative revenue generating activities and executive management saw potential synergies arising from postal networks and banking services. The resulting 'Kiwibank' increased returns significantly. Initial observations therefore might suggest that the continued integration between JPC, JPB, and JPI is not necessarily problematic. However, before using the New Zealand experience as justification for such a stance, several provisos must be noted. Firstly, NZ postal operations themselves were surplus generating and therefore not in need of subsidisation; Kiwibank's incorporation merely *adds* to net income[112]. Secondly, Kiwibank is not *required* to service all locations as JPB and JPI are; that decision rests with management. Thirdly, and most importantly, the playing field had been levelled before Kiwibank's entry. The combination of banking, insurance, and posts is therefore not problematic *per se* but the manner in which the simulation suggests it may be done in Japan creates inconsistencies if the government's objectives are commercially oriented.

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[112] Recall, however that 2010 would have resulted in a net loss if not for Kiwibank, although this was due to a number of non-recurring events that were predominantly non-cash based.

Greater freedom from political interference is inferred from *operations* (MVL5) and *asset management* (MVL6). The ability to manage operations and personnel more independently provides opportunities to reduce labour costs, expand product lines, and improve efficiency. Similarly, network asset management freedom allows the company to dispose of loss-making investments and pursue other avenues of income generation such as commercial real estate development. However, considering the increased liberties within the context of a tilted playing field (MVL2) it could produce negative externalities for the private sector. Pricing changes by report rather than approval, for example, could potentially allow JPC to encroach upon parcel delivery whilst the general correspondence restrictions effectively bar private entry. As mentioned previously, both Yamato and Sagawa Kyubin considered carrying general correspondence but were defeated by the requirement to establish 100,000 mailboxes. The market could therefore be argued to be contestable but is isolated by regulation. Preserving this market as the sole territory of JP whilst allowing greater freedom into other forms of business therefore presents a credible threat to private interests.

Private financial institutions also face potential threats. The government's stake in JPH is accompanied by an implicit guarantee, favouring JPB and JPI. Providing universal services does indeed place costs upon these units but it also ensures an unmatched market presence, placing them at an advantage. The ability to offer a broader range of products whilst the playing field remains tilted is also cause for concern.

Koizumi's ideal would have seen the financial units sold to private interests and thus reduced their respective size. Given the outcomes of MVL3 and MVL5, which suggest that there is a greater possibility of continued universal financial services but otherwise greater operational autonomy, it is likely that they will maintain their present size and perhaps expand as they encroach into areas traditionally serviced by the private sector. The probability of separately listing JPI and JPB is marginally less than 0.5 (from MVL4) and reduces the likelihood that full privatisation will be achieved. Additionally, the umbrella structure of ownership also places JPH in a position to influence portfolio management that may result in continued linkages between JPB/JPI and the Fiscal Investment and Loan Programme. By contrast, privately held financial units would likely redirect funds towards higher-yielding investments and induce a reduction of funds flowing into Fiscal Investment and Loan Programme.

Overall, there appears to be a relatively high degree of inconsistency with initial intentions for the postal system and the simulation outcomes. The playing field is the issue of greatest concern, followed by the universal provision of financial services. These two issues in conjunction suggest JP will remain protected from competition and cross-subsidised through agency fees. Such a structure reduces incentives to increase productivity and efficiency, which is regrettable as the market it occupies could be argued to be contestable save for the protective entry barriers. Ultimately, the control run outcome falls significantly short of Koizumi's vision of postal reform and may even result in further distortions to the industry.

8.8   Simulation Results: Sensitivity

Sensitivity testing provides a number of insights with respect to the outputs of the simulation and the placement of players within it. This section of the chapter examines the effects of sensitivity testing first by individual issue and then at a global level.

At the individual issue level, changes to initial player parameters and the resultant fluctuations in MVL outputs are cross-referenced against clout. This illustrates the relationship between a player's clout and their observed influence in the model. It also highlights whether more powerful players have a greater impact, or if small players can affect large changes.

Secondly, altering a player's initial inputs over one issue creates ripple effects across other issues. A natural question that arises from this assertion is whether those ripples affect the other issues equally. The results of sensitivity testing therefore also show the degree of change witnessed elsewhere as a consequence of adjusting the initial parameters of a particular issue.

At the global level, issues are ranked in order of sensitivity to establish which ones are potentially subject to the greatest change. By combining the effects of individual issue testing, an image of the players' overall influence emerges. Additionally, a comparison of the global impact from changing position and salience will demonstrate which input type is most sensitive.

To generate the data 1,232 runs were performed, incrementally changing position and salience of each player over each issue. Clout was held constant. Position was tested in increments of 0.1, ranging from initial values of 0.0 to 1.0 for players whose control values were positive and 0.0 to -1.0 for negative players. This applies an assumption that whilst a player's view may range from neutral to

extreme, fundamental shifts in *initial* ideologies are not possible. For example, whilst it is plausible that the 'Kamei' group may take initial positions over *minimum network* (MVL7) ranging from extreme opposition to a neutral one, it is extraordinarily unlikely their *initial* value could be positive given the interests they represent. In the two cases where the control values for the Ministry of Internal Affairs and Communications and Ministry of Finance were exactly zero over MVL5, a range of 0.5 to -0.5 was applied. Salience was also tested in increments of 0.1, ranging from initial values of 0 to 1.0 and equally applied to all players.

8.8.1 MVL-issue level testing

Figure 8-16 Sensitivity to changes in initial position and salience, MVL1
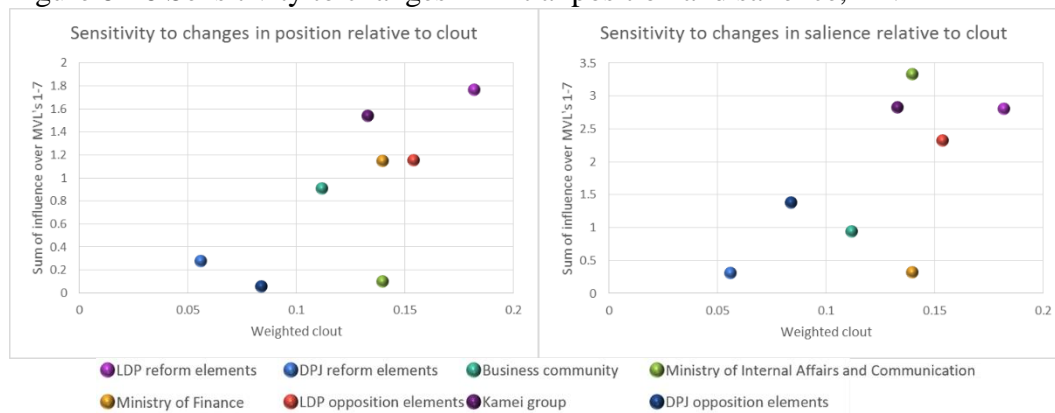
To produce an image of total influence changing a single player's inputs has, the y-axis pictured in Figure 8-16 represents sum of ranges from each MVL. For example, the LDP reform elements group was tested with positions from 0.0 to 1.0. The maximum values of each MVL were subtracted from their respective minima and summed together. The y-axis therefore provides a representation of the total influence the player has. The x-axis is weighted clout, representing the player group's power. Sensitivity to position from changing input values over *separation* (MVL1) appears to be relatively positive; more powerful players have a greater impact. The Ministry of Internal Affairs and Communications, however, has a small effect relative to its size.

Changes to salience show more fluctuations. Interestingly the Ministry of Internal Affairs and Communications has a much greater effect through salience due to the mechanics of primary and exchange issue selection. MVL1 remains the Ministry of Internal Affairs and Communications' primary issue for four rounds in the control run.

Figure 8-17 Global effects: changes to position and salience, MVL1

Figure 8-17 presents relative sensitivity of each issue as a result of changing individual player inputs over *separation* (MVL1), offering an indication of the forces at work. Altering initial position of the LDP reform elements can produce changes in *operations* (MVL5) of a similar magnitude. The business community's position has a significant impact on *separation* (MVL1) and *playing field* (MVL2) but very little elsewhere. Interestingly, altering the 'Kamei' group's position produces only a small change to MVL1, but significant changes to *operations* (MVL5) and *asset management* (MVL6). The data show that salience produces a greater range of changes, particularly so for the Ministry of Internal Affairs and Communications and the LDP reform elements.

8.8.2   Summary: MVL1

Overall sensitivity through changes to position shares a positive relationship with weighted clout. Salience appears to also be positive but displays more variance. In terms of ripple effects, changes to position create fluctuations in other issues although *shares* (MVL4) and *minimum network* (MVL7) are largely unaffected. Salience shows higher peaks but *shares* (MVL4) remains the least affected.

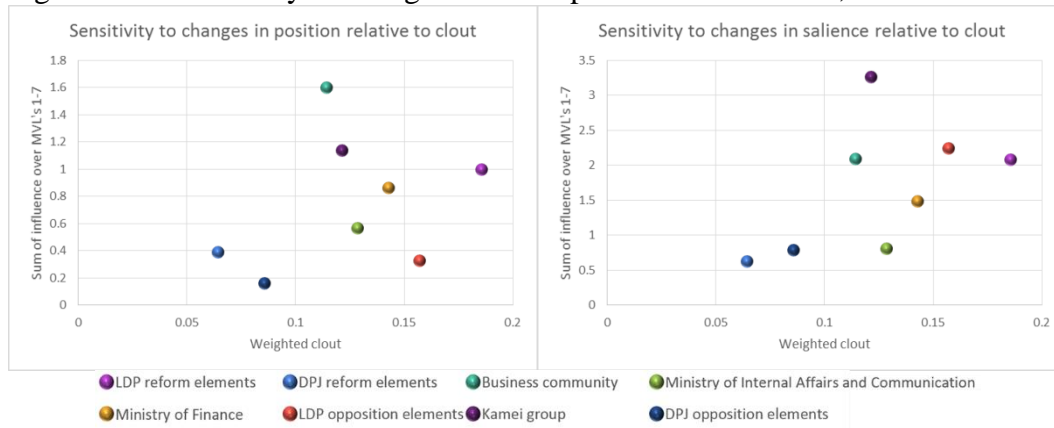Figure 8-18 Sensitivity to changes in initial position and salience, MVL2

Figure 8-18 shows the business community returning a particularly high sensitivity to *playing field* (MVL2) even though they are a relatively minor player. The 'Kamei' group also displays a strong effect in terms of position and salience. Sensitivity to salience appears generally positive.

Figure 8-19 Global effects: changes to position and salience, MVL2
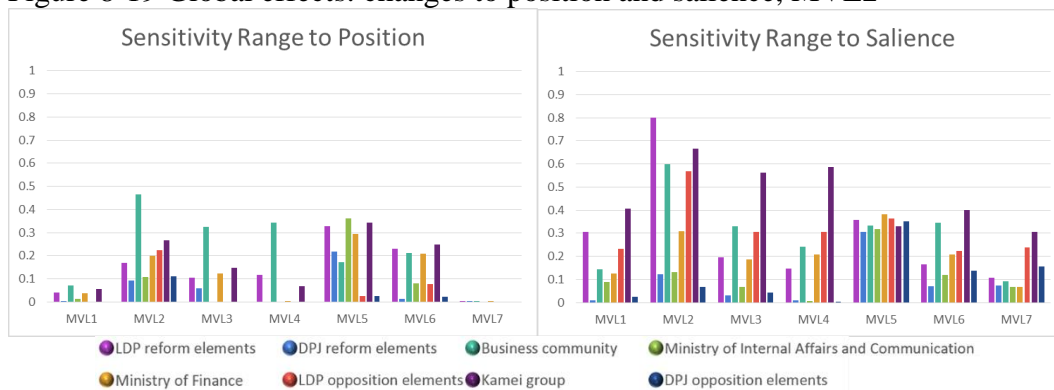
Figure 8-19 shows overall sensitivity to inputs over *playing field* (MVL2). It is interesting to note that altering position creates changes in *operations* (MVL5) for many players. This is because MVL5 is the exchange issue for many of the opposing player groups. Salience also produces similar results but amplifies the effects. Overall, MVL2 is more sensitive to changes in salience but more so for the players who are already active over it in the control run.

8.8.3   Summary: MVL2

Consequences of changing player inputs appear relatively chaotic. In this instance two of the smaller players have influence disproportionate to their clout. Sensitivity to position shows clustered effects for *playing field* (MVL2), *operations* (MVL5), and *asset management* (MVL6). Salience however shows some cascading effects, particularly for opposition players.

Figure 8-20 Sensitivity to changes in initial position and salience, MVL3
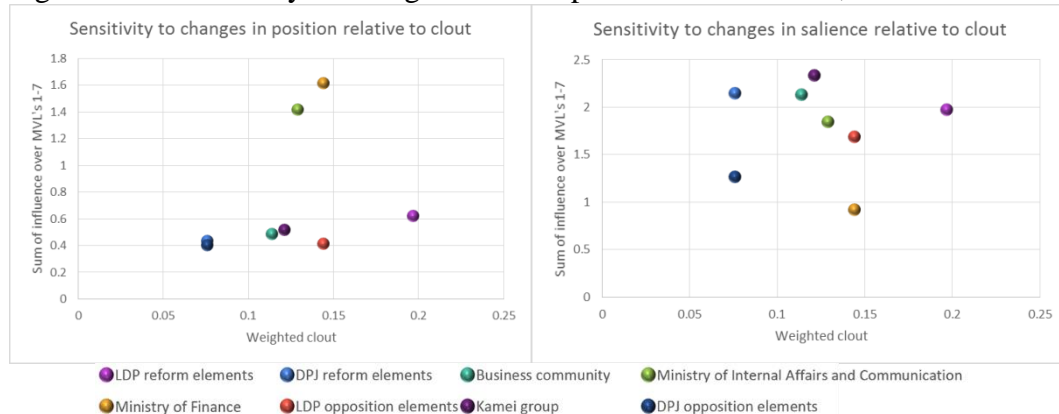
The left hand side of Figure 8-20 appears to show a positive relationship between weighted clout and sensitivity with respect to position. Salience, pictured on the right, is more chaotic. The two ministries' activation factors are particularly low in this issue and the sensitivity test procedure therefore quickly triggers activation, leading to significant changes through their actions. The control values for position are -0.425 and -0.05 respectively and the initial value of *universal financial services* (MVL3) is -0.1633 which places the two ministries in a position to be the agents of multiple lobbying types.

Salience shows that the DPJ reform elements, business community, and 'Kamei' group have significant influence when salience is altered. This appears to be consistent with reported precedents as the 'Kamei' group argued strongly for universal financial services.

Figure 8-21 shows issue sensitivity with respect to changing inputs over *universal financial services* (MVL3).

Figure 8-21 Global effects: changes to position and salience, MVL3
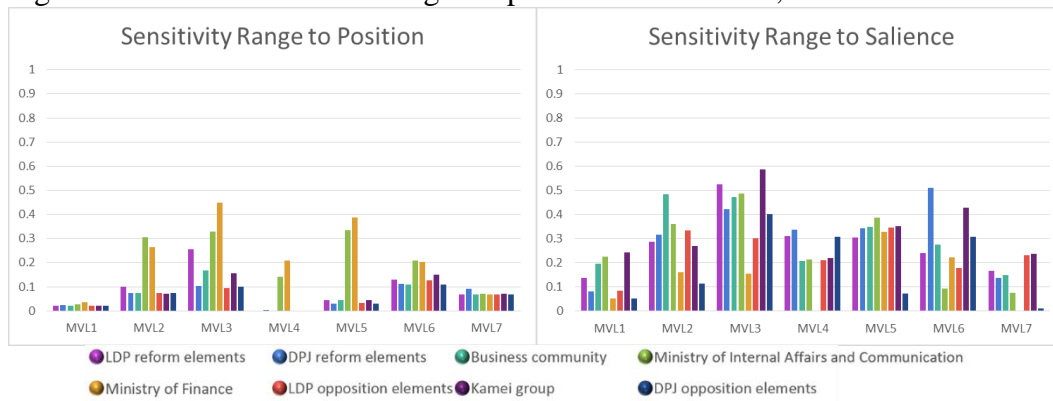
Adjusting position creates small changes elsewhere but changes to initial salience clearly causes ripple effects over many other issues.

8.8.4 Summary: MVL3

Position testing shows the bureaucracy having a much stronger impact than other players. Altering salience produces more chaotic results, indicating that the smaller players have greater influence than larger players. Ripple effects from salience are much greater than position and also appear to be more diffuse.

Figure 8-22 displays the relationship between clout and the overall effect on outputs from altering position and salience over *shares* (MVL4).

Figure 8-22 Sensitivity to changes in initial position and salience, MVL4
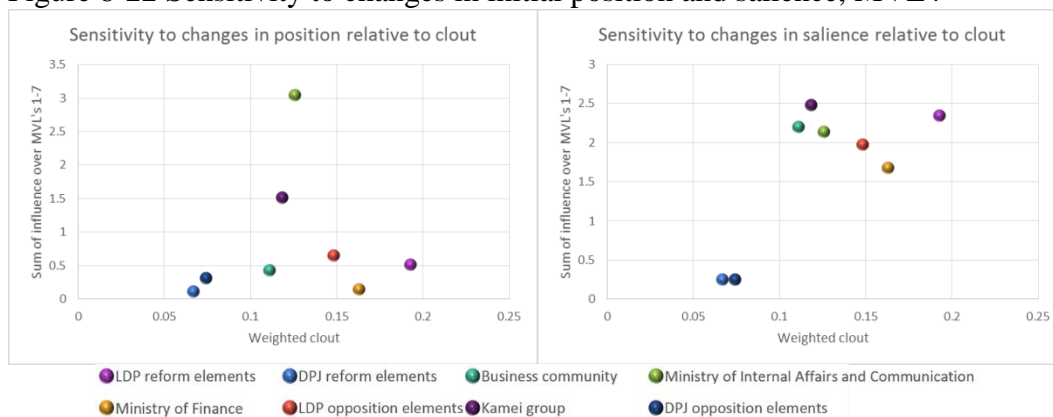
Excluding the 'Kamei' group and the Ministry of Internal Affairs and Communications, position shows a relatively positive relationship. Similar to *universal financial services* (MVL3), the DPJ reform elements, business community, and 'Kamei' group create large changes relative to their clout when altering salience.

Figure 8-23 Expanded view of Ministry of Internal Affairs and Communications sensitivity to MVL4
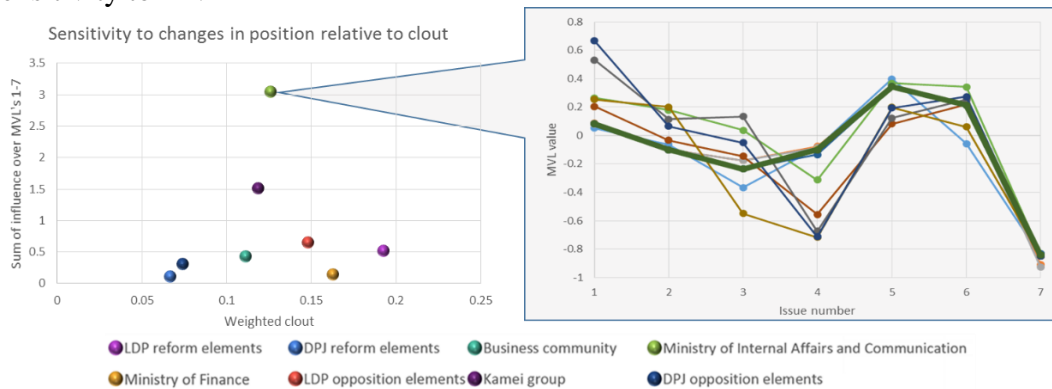
Figure 8-23 expands the results of the Ministry of Internal Affairs and Communications' sensitivity value. Pictured on the right are the 11 sensitivity runs in addition to the control run, denoted by the thick green line. The Ministry of Internal Affairs and Communications' control position is -0.35. Values from -0.4 to -1 produce interesting results: as initial position decreases *shares* (MVL4) falls but owing to exchanges, lobbying, and challenges, a more extreme view to open share sales is counterbalanced by concessions to *separation* (MVL1) and *playing field* (MVL2). More extreme positions generally also coincide with decreased *operations* (MVL5). *Minimum network* (MVL7) however remains almost static. *Universal financial services* (MVL3) varies considerably as two instances of firmer resistance in *shares* (MVL4) produce a positive value for MVL3, implying that greater resistance over share sales can alter the landscape enough to remove the requirement to provide universal financial services. This observation appears to exhibit similarities with escalating commitment, concentrating on *shares* (MVL4) at the expense of issues one, two, and three. This is important for the reform-minded as *separation* (MVL1) and *playing field* (MVL2) are the most important issues for effective reform.

Figure 8-24 shows issue sensitivity with respect to changing inputs over MVL4.

Figure 8-24 Global effects: changes to position and salience, MVL4
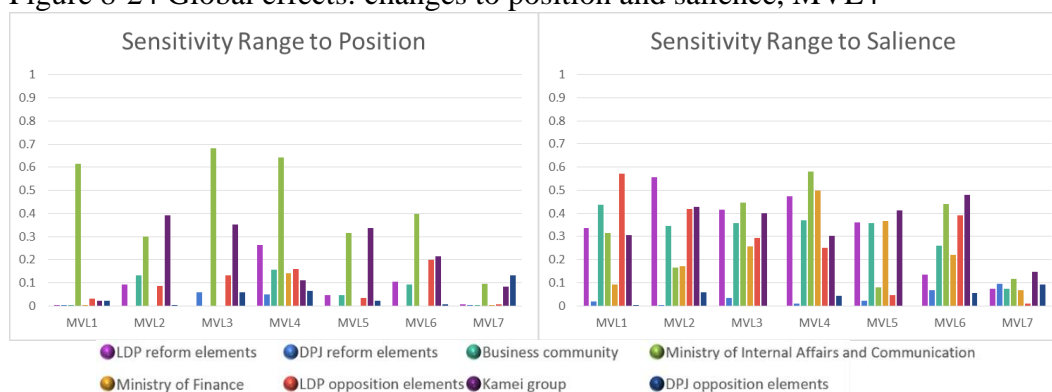
The sensitivity range to position for the Ministry of Internal Affairs and Communications is markedly higher than other players and much of the variance is contained within *separation* (MVL1), *universal financial services* (MVL3) and *shares* (MVL4). The 'Kamei' group is also interesting: the model suggests that changes to initial position have a relatively small effect on MVL4, but create large ripple effects over *playing field* (MVL2), *universal financial services* (MVL3), and *operations* (MVL5). The sensitivity of other players appears to be largely localised around *shares* (MVL4). Whilst the issue remains negative for all the Ministry of Internal Affairs and Communications runs, greater resistance can result in strong gains elsewhere, suggesting that as the Ministry of Internal Affairs and Communications grows increasingly negative towards the open sale of shares, they become more flexible in regards to separate businesses, a level playing field, and universal financial services.

Salience shows a consistent pattern with the results of MVL-issues 1-3: changing values here produces many ripple effects. This however is not surprising as the control run features *shares* (MVL4) rarely in primary and exchange issue calculations. Table 8-5 elaborates: the left hand side of the table displays the primary issue (by number) for each player as the simulation progresses. The right hand side of the table shows each player's exchange issue. For example, the most important issue for player *a* is *separation* (MVL1) until round six where it changes to *minimum network* (MVL7). By comparison, player *a* is willing to exchange over *operations* (MVL5) at first but from round one to round three this changes to *minimum network* (MVL7) and then back to MVL5. Note that *shares* (MVL4) appears in the initial stages but quickly recedes in favour of other issues in the control run. Altering the inputs for *shares* (MVL4) quickly changes these set of circumstances.

Table 8-5 Primary and exchange issues

Round	0	1	2	3	4	5	6	7	8	9	10	Round	0	1	2	3	4	5	6	7	8	9	10
Selected variable runs:	Control											Selected variable runs:	Control										
Primary a	1	1	1	1	1	1	7	7	7	7	7	Exchange a	5	7	7	7	5	5	5	5	5	5	5
Primary b	3	1	1	7	7	7	7	7	7	7	7	Exchange b	2	5	5	5	5	5	5	5	5	5	5
Primary c	2	1	1	1	1	1	1	7	7	7	7	Exchange c	7	7	7	7	5	5	5	5	5	5	5
Primary d	7	7	7	7	7	7	7	7	7	7	7	Exchange d	5	2	2	2	2	2	2	2	2	2	2
Primary e	4	1	1	1	1	7	7	7	7	7	7	Exchange e	7	7	3	6	6	6	6	6	6	6	6
Primary f	4	7	7	7	1	7	7	7	7	7	7	Exchange f	5	5	5	5	5	5	5	5	5	5	5
Primary g	4	4	7	7	7	7	7	7	7	7	7	Exchange g	5	5	5	5	5	5	5	5	5	5	5
Primary h	4	7	7	7	7	7	7	7	7	7	7	Exchange h	5	5	5	5	5	5	5	5	5	5	5

8.8.5 Summary: MVL4

Changes to position show little overall sensitivity with the exception of the Ministry of Internal Affairs and Communications. Salience produces a larger range of effects and some of the middling players affect outcomes to a similar degree as large players. Ripple effects from position are localised for most players but the Ministry of Internal Affairs and Communications' position creates significant changes. Salience produces larger changes elsewhere as a result of shifting primary and exchange issues.

Figure 8-25 displays the relationship between clout and the overall effect on outputs from altering position and salience over *operations* (MVL5).

Figure 8-25 Sensitivity to changes in initial position and salience, MVL5
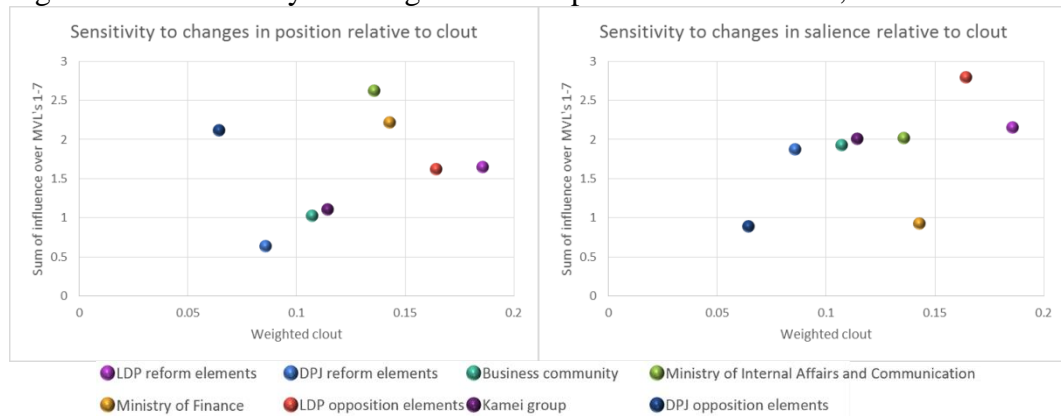
Changes to the position of the DPJ opposition elements group shows a particularly large effect relative to their weighted clout. The two ministries exhibit a strong impact through position, which is expected as their initial values are both zero and hence changes into positive or negative positions create alternate scenarios. Changes to salience cause similar degrees of variance to other issues with the magnitude of change roughly following weighted clout.

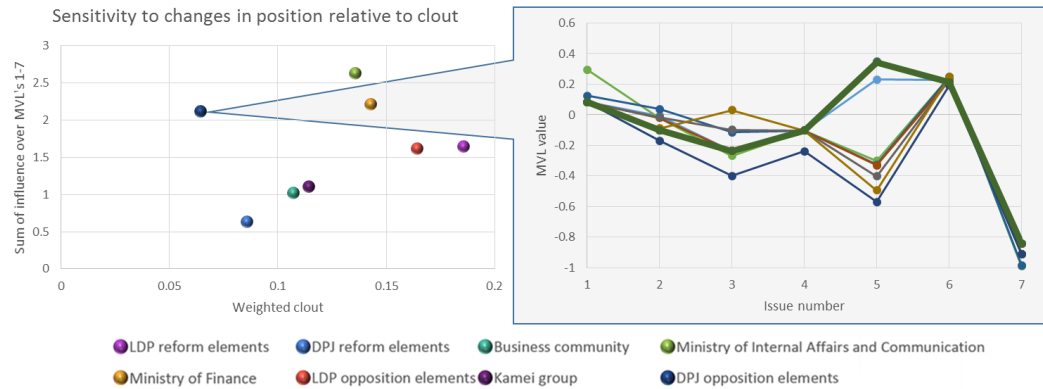Figure 8-26 Expanded view of DPJ opposition elements sensitivity to MVL5

Figure 8-26 expands on the DPJ opposition group's runs. Once again, the control run (Initial Ph5 = -0.15) is denoted by the thick green line. Two factors work in concert to produce the extent of fluctuations seen here: once the DPJ opposition group's initial position reaches -0.5 it causes their activation matrix to engage at t=1. Secondly, Table 8-5 shows that *operations* (MVL5) is the most common exchange issue and together they create a cascade effect of exchanges.

Figure 8-27 Expanded view of Ministry of Internal Affairs and Communications sensitivity to MVL5
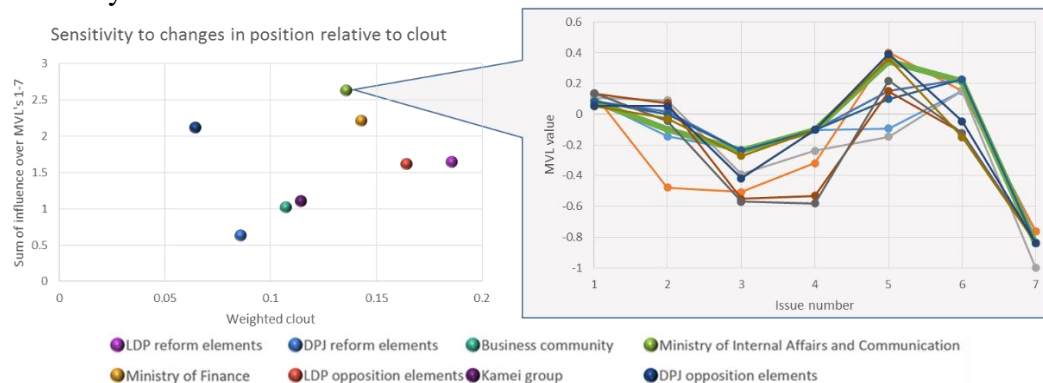
Figure 8-27 expands on the Ministry of Internal Affairs and Communications' runs. Initial positions of -0.1, -0.2, -0.3, 0.2 and 0.5 cause *playing field* (MVL2) to stabilise above zero. Positions of 0.2 or higher result in *asset management* (MVL6) becoming negative. If initial positions can be adjusted, reform-minded supporters therefore could potentially make gains over *playing field* (MVL2) but at significant cost to *universal financial services* (MVL3), *shares* (MVL4), and *operations* (MVL5). Initial positions of -0.1 and -0.2 result in *separation* (MVL1), *playing field* (MVL2), *operations* (MVL5), and *asset management* (MVL6) being slightly positive, all of which are the first and second equally ranked for effective reform. Nevertheless, the simulation demonstrates that

gains in some areas are most commonly associated with losses in others, which, given the strength of the opposing forces, seems plausible.

Figure 8-28 Expanded view of Ministry of Finance sensitivity to MVL5
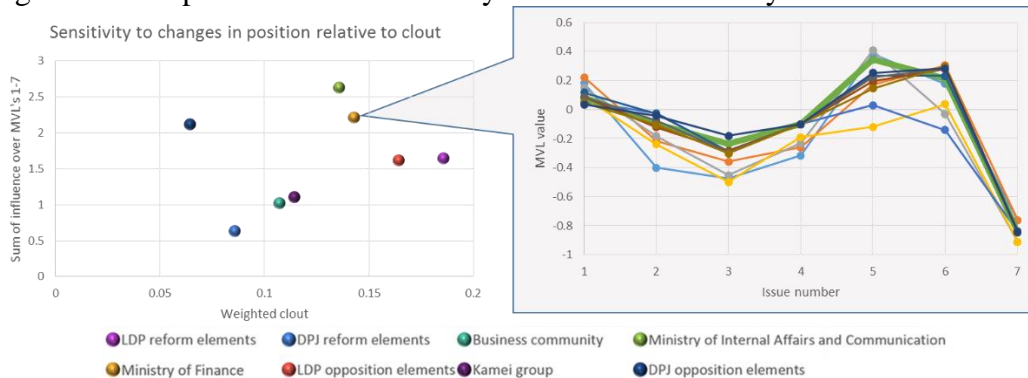
Figure 8-28 expands on the Ministry of Finance's runs, the control run again being represented by the thick green line. All initial positions except -0.2 result in positive outcomes for *operations* (MVL5). *Asset management* (MVL6) changes sign with initial positions of -0.1 and -0.3. Therefore, whilst the Ministry of Finance is neutral over *operations* (MVL5), reform supporters have little to gain by persuading the Ministry of Finance to take up an initially positive position. Reform detractors, however, can cause noticeable reductions in MVL values by persuading the Ministry of Finance to take a negative position.

Figure 8-29 shows issue sensitivity with respect to changing inputs over MVL5.

Figure 8-29 Global effects: changes to position and salience, MVL5
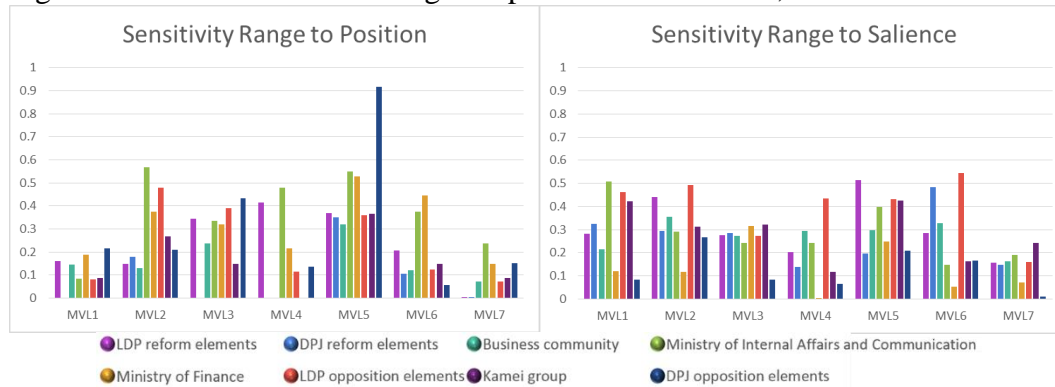
Changing salience values have consequential effects elsewhere in the model for most players, largely due to the prevalence of *operations* (MVL5) as the exchange issue. Position however shows greater sensitivity owing to the ministries' neutral initial stance and the chain-reaction caused by the activation of the DPJ opposition group.

8.8.6   Summary: MVL5

The simulation displays some of the greatest fluctuations observed as a result of altering position and it is interesting because the weakest player causes one of the largest changes. Both ministries also have a strong impact on outputs through *operations* (MVL5) as their initial positions are zero. Although some gains to important issues could be achieved through exogenous shocks to the Ministry of Internal Affairs and Communications, they are realised at the cost of other issues. Similarly, whilst intuitive logic suggests that altering the Ministry of Finance's initial stance from a neutral one may be beneficial for reformists, the results indicate that losses elsewhere outweigh the gains. For many players, salience results in relatively similar global effects even though their clout levels are different. In terms of the ripple effects, position appears to be more clustered than salience.

Figure 8-30 displays the relationship between clout and the overall effect on outputs from altering position and salience over *asset management* (MVL6).

Figure 8-30 Sensitivity to changes in initial position and salience, MVL6
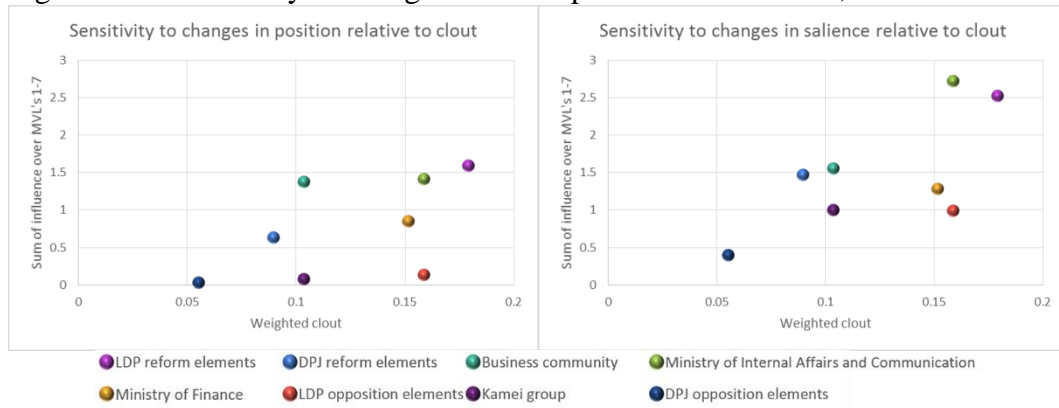
Changes to initial positions result in fewer fluctuations than many other issues. The business community can engender a positive value for *playing field* (MVL2) with positions of 0 and 0.1 as can the Ministry of Internal Affairs and Communications with positions of 0, 0.1, 0.3, and 0.4. The LDP opposition and 'Kamei' groups produce negligible changes despite being active. The DPJ opposition group's tests show no change at all to any other issue.

Salience sees larger effects and the pattern of influence again is relatively consistent with the power of the group. Figure 8-31 shows issue sensitivity with respect to changing inputs over *asset management* (MVL6).

Figure 8-31 Global effects: changes to position and salience, MVL6
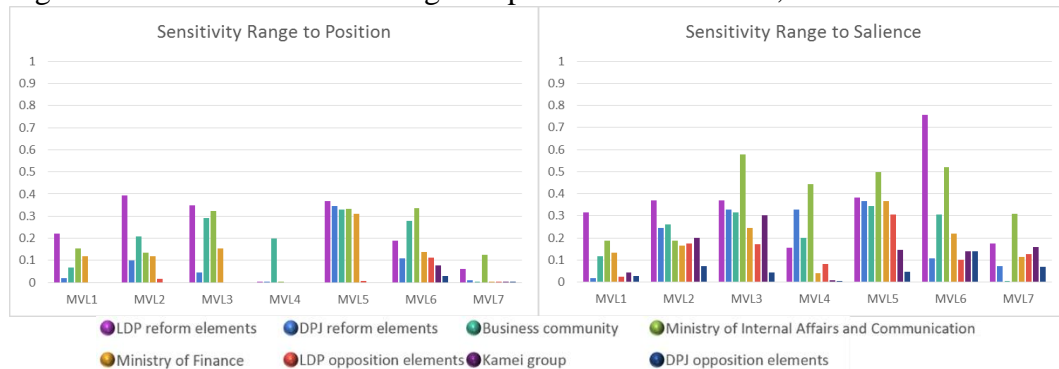
Variances in position display consequences for *universal financial services* (MVL3) and *operations* (MVL5) for the most part but have almost no impact upon *shares* (MVL4) and *minimum network* (MVL7). Salience produces much greater variations.

8.8.7   Summary: MVL6

Adjusting initial inputs over *asset management* (MVL6) indicates generally positive relationships between overall influence and clout; larger players have larger impacts. *Operations* (MVL5) contains the most variance from position although the LDP reform group's tests show fluctuations in *separation* (MVL1), *playing field* (MVL2), and *universal financial services* (MVL3). Salience creates larger variances and these are dispersed throughout the issues.

Figure 8-32 displays the relationship between clout and the overall effect on outputs from altering position and salience over *minimum network* (MVL7).

Figure 8-32 Sensitivity to changes in initial position and salience, MVL7
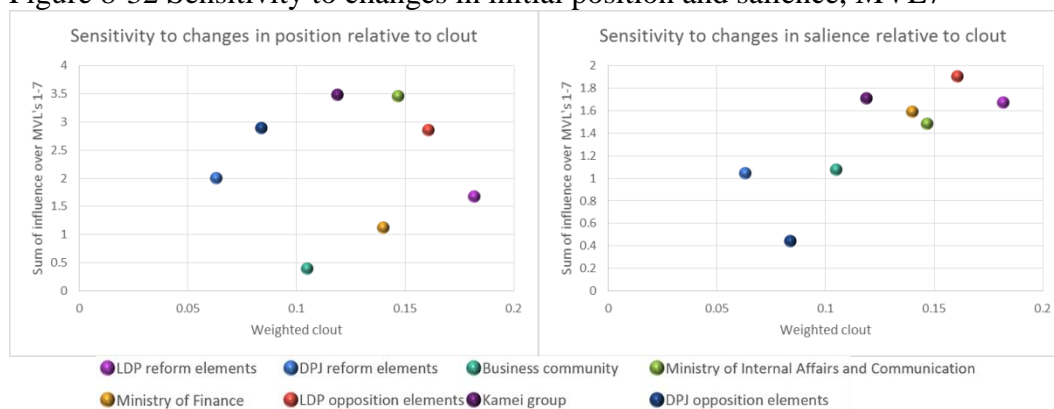
This issue shows considerable volatility with respect to position, particularly from the DPJ opposition (control = -0.85), 'Kamei' group (control = -1) and Ministry of Internal Affairs and Communications (control = -0.7). Considering the interests they represent it intuitively follows that these groups should have the largest impact, particularly so for the 'Kamei' group, who exchange other issues in favour of *minimum network* (MVL7). More neutral initial positions result in smaller exchanges, which explains some of the sensitivity as the four major opponents have particularly low initial positions. Influence with respect to salience appears to display a positive relationship with clout with the more powerful players exerting greater overall influence. Figure 8-33 shows issue sensitivity with respect to changing inputs over *minimum network* (MVL7).

Figure 8-33 Global effects: changes to position and salience, MVL7
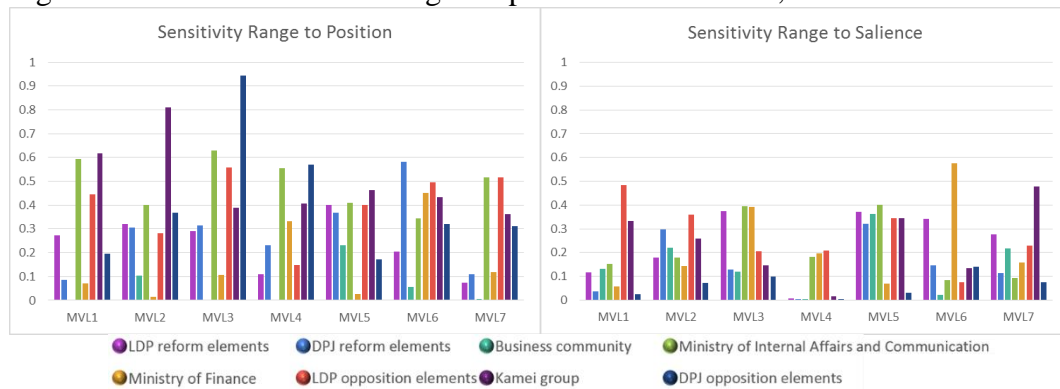
From these two panels it is clear that *minimum network* (MVL7) causes far greater changes through position than the other issues. This is due in part to it commonly featuring as an exchange issue or a primary issue for many players. The 'Kamei' group's influence through salience is higher than other players since they play a key role in bringing other players onto the negative side and allowing for consequent salience lobbying.

8.8.8 Summary: MVL7

Whilst overall sensitivity and weighted clout share a positive relationship through changes to salience, position shows chaotic behaviour. This is due in part to the frequent appearance of *minimum network* (MVL7) in the primary issue table: changing initial positions alters the type of relationship between players and the strategies they level against one another.

Changes to position create a number of ripple effects, with particularly high peaks observed in *separation* (MVL1), *playing field* (MVL2), and *universal financial services* (MVL3). Salience also creates ripples but these are of a smaller magnitude and tend to have larger impacts on the other issues.

8.8.9 Sensitivity testing at the global level

Figure 8-34 presents the average variance from all players' sensitivity runs in respect to the issue's more influential input. *Operations* (MVL5) and *minimum network* (MVL7) produce the highest values, indicating these are the most sensitive issues. This is consistent with the results of the control run as *operations* (MVL5) and *minimum network* (MVL7) displayed the greatest change from initial to final settings.

Operations (MVL5) is most sensitive primarily owing to the neutral initial positions of the Ministry of Internal Affairs and Communications and Ministry of Finance, and the cascade of actions resulting from the DPJ opposition elements crossing the activation threshold when the initial position is -0.5.

Minimum network (MVL7) sensitivity is primarily explained by the placement of opposition elements and the exchanges they are willing to make elsewhere in order to secure it. Lower starting values would elicit smaller exchanges and the resulting alliances would be more inclined towards weak ones rather than strong ones, making salience lobbying in later iterations more difficult. Additionally, fewer instances of successful strong ally lobbying would reduce the frequency of *minimum network* (MVL7) as a primary issue.

Figure 8-34 Overall issue sensitivity
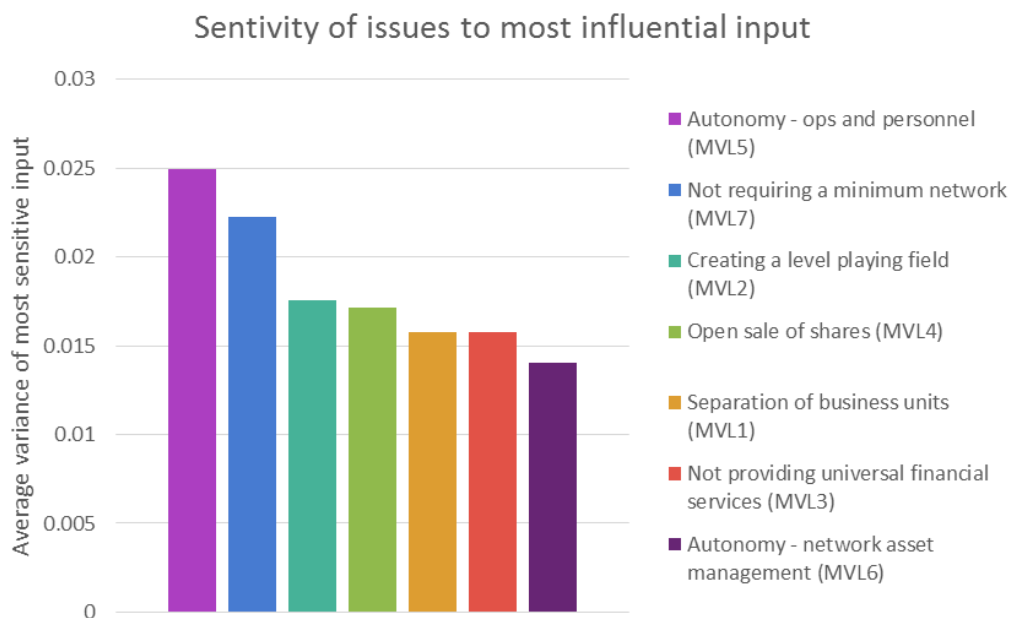
To determine an overall measurement of global sensitivity relative to player clout, the maximum range of changes to every MVL from adjusting individual player's input values were summed together and charted against the player's average weighted clout. Figure 8-35 and Figure 8-36 present the results for position, Figure 8-37 and Figure 8-38 for salience. Players with larger bubbles have a greater effect.

Figure 8-35 Comparison of average weighted clout to global sensitivity: position
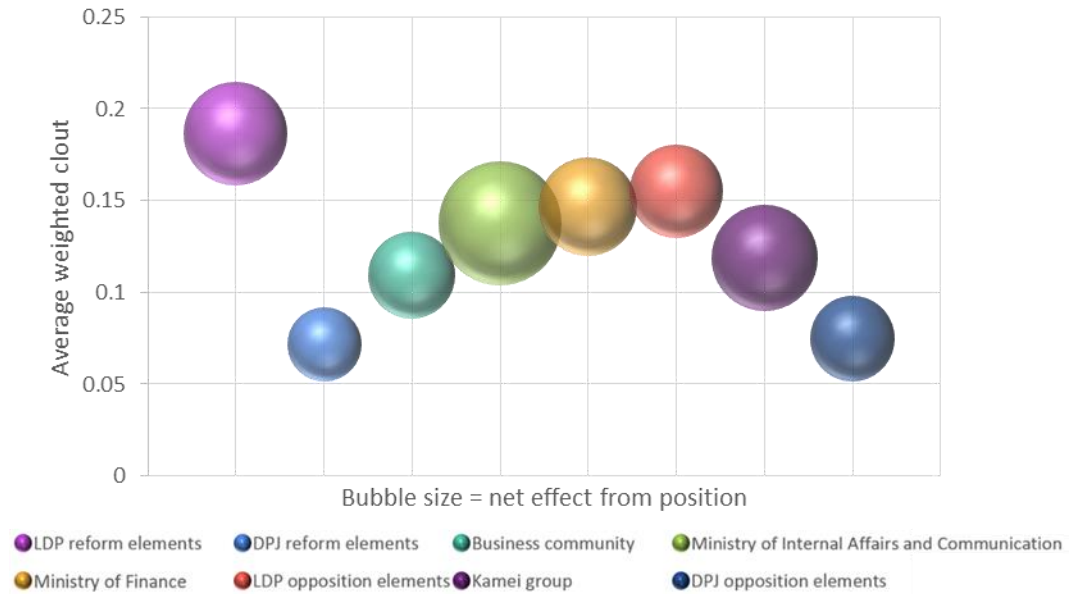
The x-axis denotes the player number. Overall, the LDP reform elements represent the most powerful group and exhibit high sensitivity to position. The Ministry of Internal Affairs and Communications has the greatest overall effect despite being of moderate clout. The 'Kamei' group's position also has a large influence.

Figure 8-36 Overall comparison of clout to global influence: position
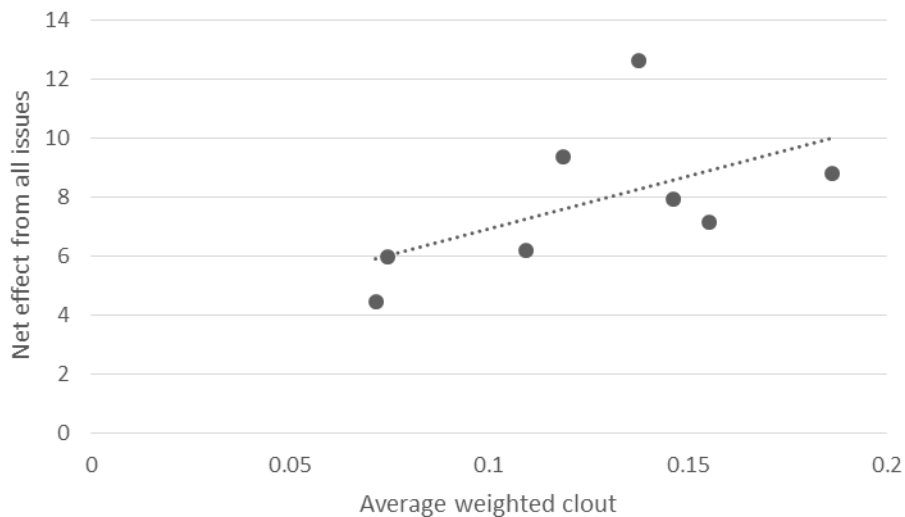
Y-axis values were determined by taking the summed value of each player's maximum range over each MVL after altering their initial position on every issue. The relationship appears to be generally positive. Moderate correlation is observed at 0.5644, indicating that as power increases the overall effect on all issues also increases. The 'Kamei' group and the Ministry of Internal Affairs and

Communications however are exceptional and display higher influence on overall outcomes than their clout alone would suggest.

Figure 8-37 Comparison of average weighted clout to overall sensitivity: salience
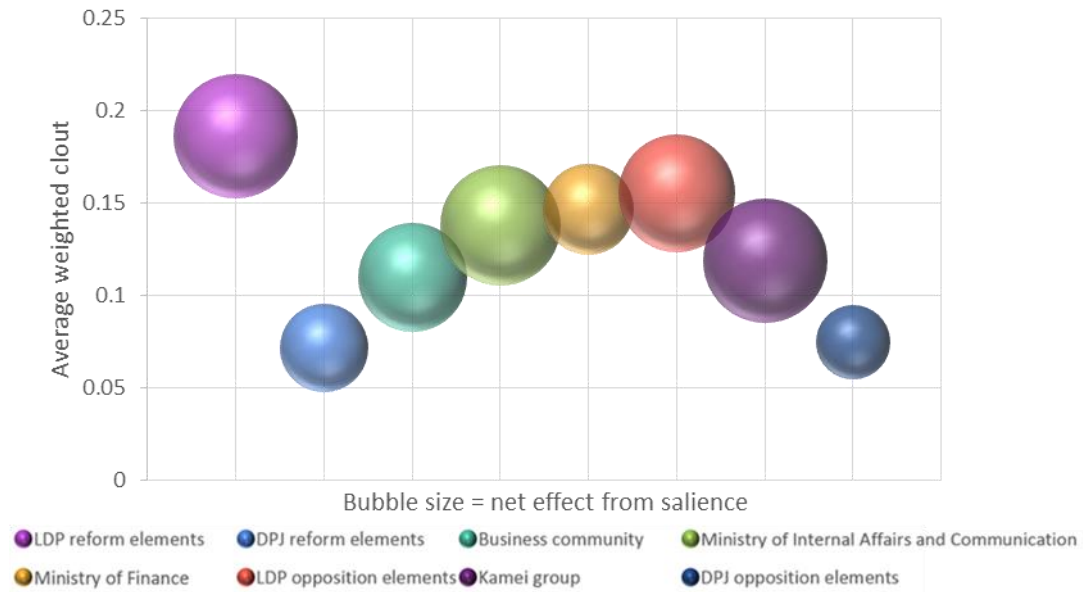
Net impact is often larger for salience than position. This is due in no small part to the mechanics of exchange and primary issue determination: by definition, altering salience values alters the two algorithms whilst position does not. Once again, the Ministry of Internal Affairs and Communications and the 'Kamei' group exhibit influence disproportionate to their clout measurement, while other players are generally more consistent relative to their power.

Figure 8-38 Overall comparison of clout to global influence: salience
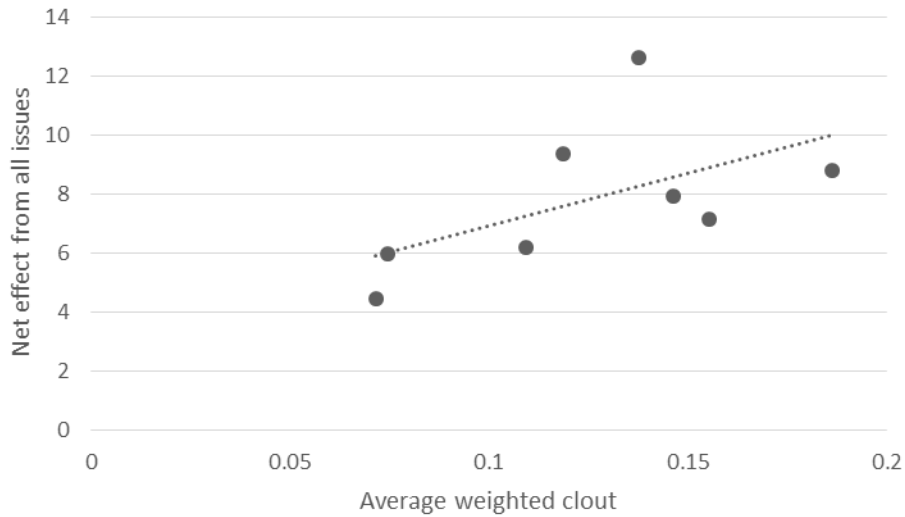
Using the same y-axis measurement as in Figure 8-36, salience produces a data cluster with a greater correlation of 0.6966.

Figure 8-39 Combined comparison of overall sensitivity

Figure 8-39 displays the net effect on all issues and orders players by descending weighted clout. With the exception of the DPJ opposition elements, salience has a larger effect than position. Table 8-6 lists players by ranked order of weighted clout and also returns the rank order of overall influence via changing position and salience. The shading is provided for easier visualisation; darker shades of green represent greater influence.

Table 8-6 Ranked weighted clout against global influence

	Ranked global influence		
	Average WC	Position	Salience
LDP reform elements	1	3	2
LDP opposition elements	2	5	4
Ministry of Finance	3	4	6
Ministry of Internal Affairs and Communication	4	1	3
Kamei group	5	2	1
Business community	6	6	5
DPJ opposition elements	7	7	8
DPJ reform elements	8	8	7

The data show the Ministry of Internal Affairs and Communications and the 'Kamei' group having the greatest overall influence despite being middling players in terms of clout. The LDP reform group, whilst significant, has less effect than their clout would suggest and this applies even more so for the LDP opposition elements. The Ministry of Finance's clout is roughly reflected in sensitivity to position, but less so with salience. The business community and both DPJ groups' effects are quite congruent with their weighted clout. In summary, larger players tend to have larger effects, but there are two clear exceptions with the Ministry of Internal Affairs and Communications and the 'Kamei' group – changes to their initial values create significant changes in global MVL values.

8.8.10 Summary: Sensitivity testing at the global level

The data show that *operations* (MVL5) and *minimum network* (MVL7) are the most sensitive issues on average, which is consistent with their respective larger changes from initial to final location in the control run. For the majority of cases, changes to initial salience values result in larger changes. This outcome is unsurprising as exchange issue and primary issue selection are functions of salience.

In overall terms, average weighted clout loosely corresponds with global influence, which implies that more powerful players tend to have greater sway although the 'Kamei' group's influence is disproportionate to their weighted clout. This result, however, is logical, as similar examples of junior coalition members eliciting considerable influence over policy change are not uncommon in politics. This group has a particularly vested interest in postal reform and given the extremity of their views it is not surprising that altered initial values produce very different results.

The Ministry of Internal Affairs and Communications also has substantial influence relative to its size. Part of the reason for this is due to its mixed views on reform, supporting some issues and opposing others.

Despite the experimental nature of the model, is it interesting to note that the two most influential players include representatives of those who stand to lose the most, and the branch of the bureaucracy that administers and regulates the industry. In real-world settings, we might very well expect these two groups to be some of the prominent players, even if their clout is proportionately small. I am therefore cautiously optimistic about the accuracy with which the model represents the real world.

8.9 Simulation Results: Exogenous Shocks

As an extension of the sensitivity testing, the efficacy index was calculated for each of the 1,232 runs. Changing the simulation's initial values can represent exogenous shocks to players and by cross-referencing them against the efficacy index and control values, shocks that result in high and low efficacy can be identified. Note that the use of the word 'shock' indicates some form of external pressure on a player that causes a change in position or salience that is external to the three strategic options modelled. Table 8-7 displays input changes needed for the 10 shocks resulting in high efficacy. Darker shades of green in the efficacy column represent increasingly 'better' outcomes over the control value. Green and red shading in the *Δposition* and *Δsalience* columns offer a visual representation of the changes required to inputs that produce their corresponding efficacy values. Longer bars indicate greater changes to the respective input.

Table 8-7 Top 10 single exogenous shocks for high efficacy

MVL	Player	Δposition	Δsalience	Efficacy	Positive MVLs	Negative MVLs
7	Ministry of Internal Affairs and Communication	0.1		0.5581	1 2 3 5 6	4 7
4	Ministry of Internal Affairs and Communication	-0.15		0.5527	1 2 3 5 6	4 7
7	DPJ opposition elements	0.25		0.5524	1 2 3 5 6	4 7
4	Ministry of Internal Affairs and Communication	-0.65		0.5474	1 2 5 6	3 4 7
4	Ministry of Internal Affairs and Communication	-0.45		0.5421	1 2 3 5 6	4 7
7	Kamei group	1		0.5379	1 2 5 6	3 4 7
5	LDP opposition elements		0.475	0.5342	1 2 6	3 4 5 7
1	Kamei group		-0.375	0.5324	1 2 5 6	3 4 7
1	LDP opposition elements		-0.4	0.5304	1 2 5 6	3 4 7
5	Ministry of Internal Affairs and Communication		0.3	0.5287	1 5 6	2 3 4 7
			Control	0.4828	1 5 6	2 3 4 7

Sensitivity to the Ministry of Internal Affairs and Communications is further reinforced here as five of the ten shocks derive from this player. It is interesting to

note that a small positive change to the Ministry of Internal Affairs and Communications' position over *minimum network* (MVL7) creates a scenario where five MVL values are positive. This is would represent a significant gain for reform supporters over the control run although *shares* (MVL4) and *minimum network* (MVL7) would still remain negative. Also noteworthy, all but the last of the shocks affecting the Ministry of Internal Affairs and Communications are over issues where the ministry is *not* neutral.

The cases where the Ministry of Internal Affairs and Communications takes negative positions over *shares* (MVL4, control position=-0.35) show improvements in overall outcomes, suggesting that some shocks may result in 'tunnel vision': focusing efforts to defeat one issue at the expense of others.

The top 10 exogenous shocks do not include the LDP reform elements, the business community, Ministry of Finance or DPJ reform elements, which suggests that the largest overall gains occur from changes to opposition forces. Changes to salience are as intuitively expected: lowering an opposing player's commitment over an issue improves the likelihood of a positive outcome in the data range.

These results give rise to a potential strategy for reform supporters outside of those described by the mechanics of this model. Appointments of individuals to the Ministry of Internal Affairs and Communications who have stronger views on maintaining the Ministry of Internal Affairs and Communications' influence over JP financial units could induce the shocks necessary over *shares* (MVL4) to produce a more effective outcome.

Table 8-8 displays input changes needed for the 10 shocks resulting in low efficacy

Table 8-8 Top 10 single exogenous shocks for low efficacy

MVL	Player	Δposition	Δsalience	Efficacy	Positive MVLs	Negative MVLs
5	LDP opposition elements		0.175	0.3838	1	2 3 4 5 6 7
5	DPJ opposition elements	-0.85		0.3861	1 6	2 3 4 5 7
4	Kamei group		-0.7	0.3896	1 *	2 3 4 6 7
2	Business community	-0.25		0.3913	1 5 6	2 3 4 7
5	Ministry of Finance	-0.2		0.3986	1 6	2 3 4 5 7
2	Kamei group		0.15	0.4021	1 5 6	2 3 4 7
4	Business community		-0.225	0.4031	1 6	2 3 4 5 7
3	DPJ reform elements		-0.05	0.4037	1 5 6	2 3 4 7
2	Business community	-0.55		0.4042	1 5 6	2 3 4 7
2	Business community	-0.65		0.4070	1 5 6	2 3 4 7
			Control	0.4828	1 5 6	2 3 4 7

* MVL5 is exactly 0

300

The business community appears four times in the 10 greatest exogenous shocks for low efficacy, but not at all in the high efficacy shocks. This leads to the suggestion that a stronger reformist orientation from the business community will not produce significant changes but a withdrawal of support or complacence could result in noticeable deteriorations in efficacy.

The 10 greatest low-efficacy shocks are more directly intuitive: lowering positions on issues from either supporters or detractors yields lower results. Increasing salience from detractors and decreasing salience from supporters both reduce efficacy. The 'Kamei' group's reduction of salience over *shares* (MVL4) is an exception, however. Nevertheless, lowering the salience from a control value of 0.9 to 0.2 completely reverses the primary and exchange issue algorithms, which, although possible, seems unlikely.

Once again, the LDP reform elements are not present in this top 10 list (or the Ministry of Internal Affairs and Communications), which is interesting as they are the most powerful group: they have a significant effect on a whole but appear less sensitive to exogenous shocks than other players.

Figure 8-40 Dual comparison of high and low efficacy shocks
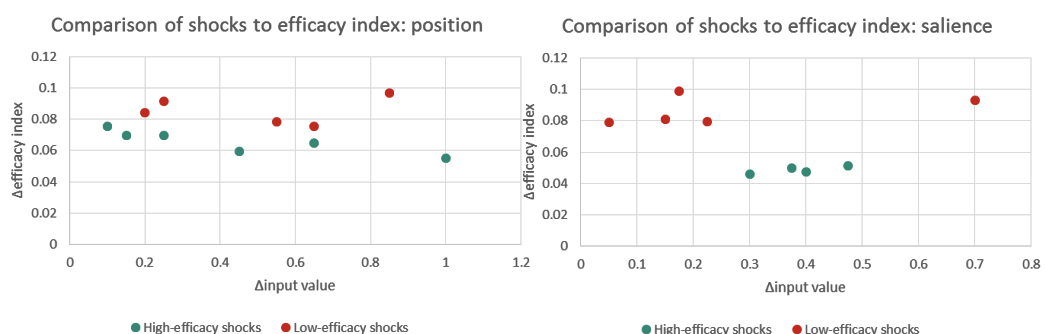
Average change in position: high-efficacy shocks = 0.43

Average change in position: low-efficacy = 0.5

Average change in salience: high-efficacy = 0.39

Average change in salience: low-efficacy = 0.26

Presenting the 10 high-efficacy and low-efficacy shocks by colour (see Figure 8-40) shows that in all cases modelled here, low-efficacy shocks have a greater effect than high-efficacy shocks. Note, however, that the average change to position from low-efficacy shocks is bigger than that from high-efficacy shocks and therefore would intuitively result in greater changes. The results from salience however are unambiguous; negative shocks have markedly higher impacts upon

efficacy and the average change required to produce them is less than for high-efficacy shocks.

Figure 8-41 Combined view of high and low efficacy shocks
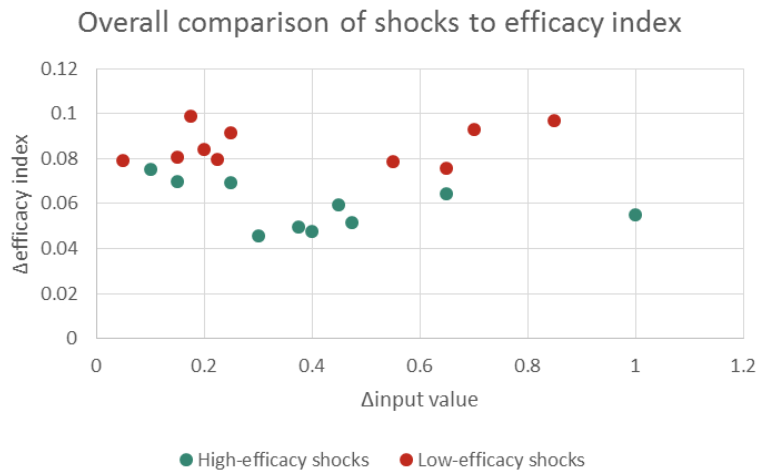
Figure 8-41 further reinforces the distinction between high and low efficacy shocks. Irrespective of input source, even the smallest low-efficacy shock is greater than the largest high-efficacy shock. This simulation therefore exhibits greater downside risk than upside risk.

One final method of testing outcomes is to examine what changes are derived from the combined effects of multiple shocks. Table 8-9 combines high-efficacy shocks. Shading is provided to more clearly illustrate 'better' outcomes; the darker the shade, the greater the efficacy index.

Table 8-9 Concerted high-efficacy shocks

Shocks imposed	Efficacy	Positive MVLs	Negative MVLs
1 to 2	0.5233	1 2 3 5 6	4 7
1 to 3	0.5432	1 2 3 5 6	4 7
1 to 4	0.4630	1 2 5 6	3 4 7
1 to 5	0.4630	1 2 5 6	3 4 7
1 to 6	0.4953	1 2 5	3 4 6 7
1 to 7	0.5730	1 2 5 6	3 4 7
1 to 8	0.5473	1 2 6	3 4 5 7
1 to 9	0.5625	1 2 5 6	3 4 7
1 to 10	0.4754	1 3 6	2 4 5 7
Control	**0.4828**	**1 5 6**	**2 3 4 7**

The figures above were calculated by applying the ten shocks for high efficacy from Table 8-7 to initial input values. The first row applies the first two shocks: increasing the Ministry of Internal Affairs and Communications' initial position over *minimum network* (MVL7) by 0.1 and decreasing it by 0.15 over *shares* (MVL4). The second row applies the first three shocks and so on. Shocks two, four, and five from Table 8-7 all impose changes on the Ministry of Internal Affairs and Communications' initial position over *shares* (MVL4) and when combined, produce a change that breaches the bounds of the position continuum. A limit was therefore applied and hence shocks one through five do not result in any differences to shocks one through four.

Note that in the case where all 10 high-efficacy shocks are applied simultaneously, the calculated efficacy output is actually *lower* than the control output. Although in the shocked case *universal financial services* (MVL3) is likely not to be required, *operations* (MVL5) is more likely to be interfered with. The range of outputs for concerted high-efficacy shocks is quite similar to the range of outputs for individual shocks particularly so in terms of the number of negative MVLs. At best, *shares* (MVL4) and *minimum network* (MVL7) are negative both in the individual and concerted ranges.

These results suggest that reform-minded actors may wish to engender favourable outcomes through 'fine-tuning' as opposed to overarching strategies. Focusing on the Ministry of Internal Affairs and Communications alone can result in greater numbers of positive MVLs than the control run and in even the 'best case' situations *shares* (MVL4) and *minimum network* (MVL7) remain negative. As observed previously, the dynamics of this particular application show that gains in one area are often associated with losses in others. Consequently, it may be advisable to focus on scenarios where the most important MVLs for efficacy are secured and losses elsewhere are suffered.

Table 8-10 combines low-efficacy shocks and increasingly darker shades of red indicate lower efficacy values.

Table 8-10 Concerted low-efficacy shocks

Shocks imposed	Efficacy	Positive MVLs	Negative MVLs
1 to 2	0.409613	1 6	2 3 4 5 7
1 to 3	0.393293	1 6	2 3 4 5 7
1 to 4	0.396171	1 6	2 3 4 5 7
1 to 5	0.423746	1 6	2 3 4 5 7
1 to 6	0.361954	1 4 5 6	2 3 7
1 to 7	0.35704	1 4 5 6	2 3 7
1 to 8	0.377345	1 4 6	2 3 5 7
1 to 9	0.413264	1 5 6	2 3 4 7
1 to 10	0.402643	3 4 5 6	1 2 7
Control	**0.482797**	**1 5 6**	**2 3 4 7**

Once again, changes to player positions were confined within the bounds of -1 and +1. If shocks one through seven all apply then the lowest measured efficacy value is returned. The negative MVLs are confined to *playing field* (MVL2), *universal financial services* (MVL3), and *minimum network* (MVL7), indicating very low values and therefore suggesting the likelihood of these issues passing is particularly low. Interestingly, as with concerted high-efficacy shocks, the combined shocks presented here do not produce outcomes significantly different to the outcomes from individual shocks. Again, the principle of exchange applies and gains to some issues are counterbalanced by losses over others. In this case, reform opponents may also consider realising gains through 'fine-tuning'.

Ultimately, from the perspective of Koizumi's definitive ideal, the outcomes appear to be relatively hidebound; only a great upheaval in the political landscape would be sufficient to drive all MVLs into the positive domain, let alone approach values resembling his dream. From a more moderate perspective however, outputs show sensitivity to shocks that alter the sets of positive and negative MVLs. These shocks must be engendered exogenously to the strategies covered by the simulation and are applied to *initial* values. The same shocks occurring *during* the simulation however would likely have different effects.

8.9.1 Summary: Exogenous shocks

Altering initial inputs changes the final outcome. In the interests of examining what deviations from control inputs could benefit supporters or opposition, 10 shocks for maximum and minimum efficacy were found.

The ten high-efficacy shocks highlight that a more favourable outcome can occur from adjustments to opposition inputs. Increasing an opponent's position constitutes a softening of stance and is intuitively logical in its effects. Additionally however, greater resistance in certain cases can produce 'tunnel vision' whereby one issue is focussed on at the expense of others.

The ten low-efficacy shocks show that supporters losing interest causes deterioration in efficacy, as does extra commitment from the opposition. Reductions in position uniformly result in lower efficacy amongst the shocks presented.

Outputs display greater sensitivity to low-efficacy shocks than high ones. This is likely due to the greater number of opposing players as interactions between them outnumber interactions between supportive players.

Combining shocks together does not produce results much different to individual shocks. Players on both sides may therefore be better off attempting to engender singular shocks as the range of outcomes is similar and would be less costly than attempts to cause multiple ones.

The population within the simulation is such that Koizumi's ideal appears unattainable; there is simply too much opposition. Whilst gains on certain issues can be realised, concessions elsewhere prevent all MVLs settling above zero. In terms of the efficacy index, one of the best outcomes (Table 8-7, row one) results in five positive MVLs but retains a minimum network and does not offer separate floats of the financial arms. Interestingly, should such an outcome occur, it would share a number of characteristics with New Zealand's experience: a level playing field, independent management and decision making, no universal financial services, continued government ownership, and some type of formal requirement specifying minimum network penetration[113].

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[113] By contract in New Zealand but likely by law in Japan.

8.10   Activation Override Testing

As described in Chapter Seven, the model includes a feature that forces player activation. To examine the effects, three tests were devised and applied to the control run.

The first test performed was an issue-specific step test, engaging the override at t=0. The term 'step' is applied from Vensim where levels can be forced from one value to another, in this case stepping the activation override from zero to one. The effect forces all players to become permanently active over a selected issue from the first round onwards. Results are displayed below (see Figure 8-42).

Figure 8-42 Activation override: single issue step test
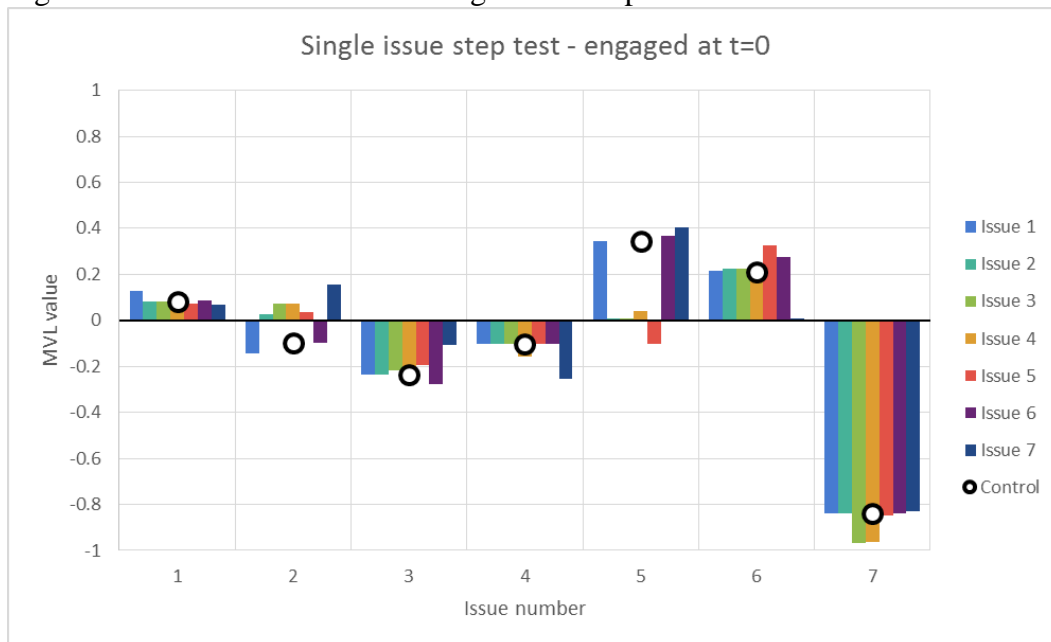
The control run appears as the black intermittent rings. Issues appear along the x-axis and their corresponding MVL values are described by the y-axis. With respect to the control run, *separation* (MVL1), *operations* (MVL5) and *asset management* (MVL6) are positive whereas the other issues are negative. The coloured bars display the MVL value of each issue when a particular activation override is engaged. The difference between the control run and the individual override test can be observed by comparing the respective coloured bar against the control run.

Comparing the first light blue column of each MVL-issue, engaging the override over *separation* (MVL1) does not alter overall outcomes very much from the control run; the efficacy index only differs by 0.0001. Stepping *playing field*

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(MVL2), *universal financial services* (MVL3), *shares* (MVL4), and *operations* (MVL5) produces significant changes in *playing field* (MVL2) and *operations* (MVL5). Interestingly, gains to the playing field coincide with declines in operational independence, which reinforces the recurring theme of advances in one area coming at the cost of others. Stepping *asset management* (MVL6) produces some marginal increases in the efficacy index. The largest gains to efficacy occur by stepping *minimum network* (MVL7). Activating the override consistently increases the number of bilateral negotiations and the simulation requires a greater amount of iterations to stabilise. In all cases, stability was achieved within 20 rounds – twice as many as the control run.

Figure 8-43 Efficacy index: single issue step test
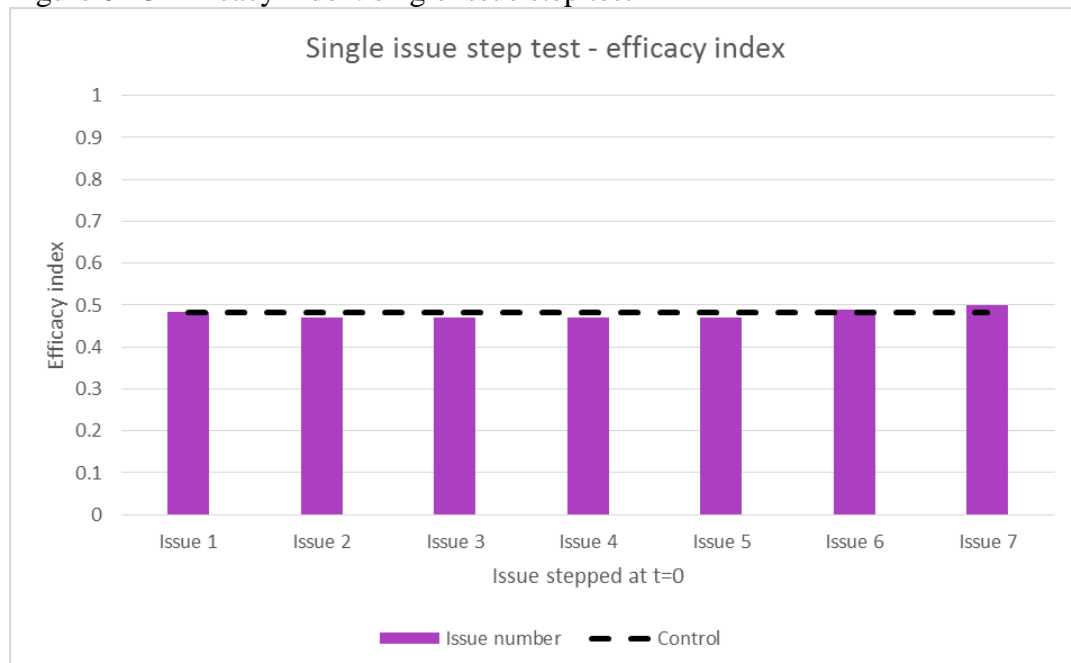
Figure 8-43 presents the efficacy index at equilibrium after stepping each issue and compares it against the control run. Whilst differences exist, there is relatively little deviation from the control run. The control efficacy index value is 0.4828, stepping *separation* (MVL1) for example produces a value of 0.48274. The greatest change, caused by stepping *minimum network* (MVL7) yields 0.49995. By comparison, the single exogenous shocks commonly produced values around 0.4 from low-efficacy shocks and around 0.53 for high-efficacy shocks. Engaging the override over single issues therefore does not have a significant impact on this particular application.

The second test performed was a pulse test applied to all issues (see Figure 8-44). This has the effect of forcing activation over all issues for all players for a pre-determined number of rounds (three in this case). This can be pictured as resembling a short term crisis in which the focused attention of the public for instance forces players to act, even if they believe that they are unable to affect the outcome[114]. The pulse was first applied at t=0 and subsequently rolled through further rounds. Every pulse initiated after t=10 produced identical results to the pulse at t=10 and thus these have been omitted.

Figure 8-44 Activation override: pulse test
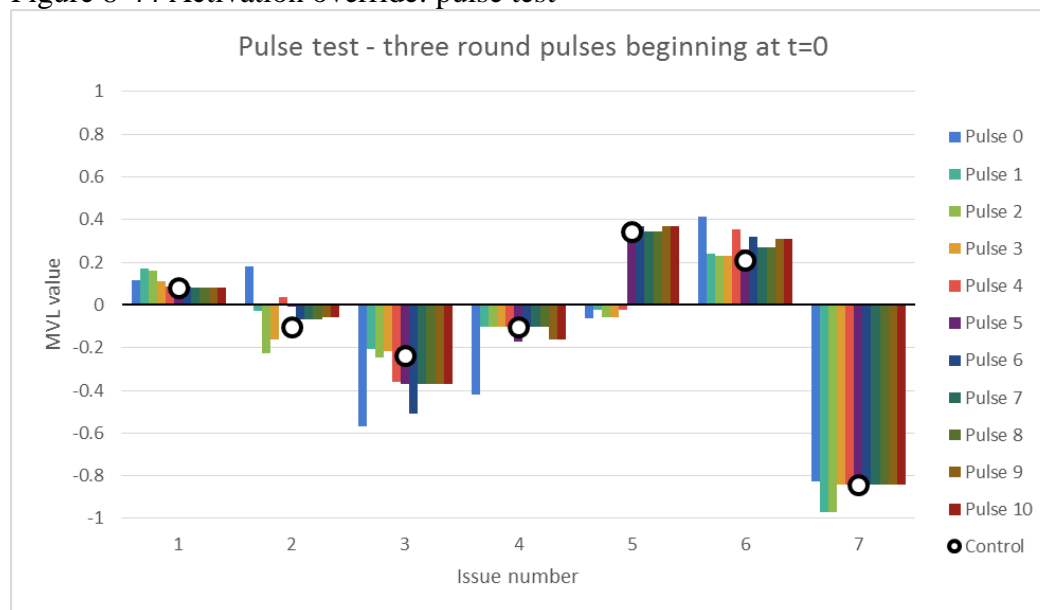
Once again, the control run appears as the black rings. The pulse beginning at t=0 produces the largest change amongst the data set. Gains appear over *playing field* (MVL2) but compared to the control run *universal financial services* (MVL3), *shares* (MVL4), and *operations* (MVL5) show considerable deterioration. It is also interesting to note that greater fluctuations arise from pulses originating in earlier rounds; pulses initiated after t=5 produce results quite similar to the control run and every pulse after t=10 yields identical results. This suggests that the effects of pulsed activation have less of an impact over time since prior negotiations create an increasing consensus that becomes progressively more difficult to destabilise.

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[114] Note that the default activation process takes into account the influence the player can have on the system and players less able to do so are more likely to remain inactive.

Figure 8-45 Efficacy index: pulse test
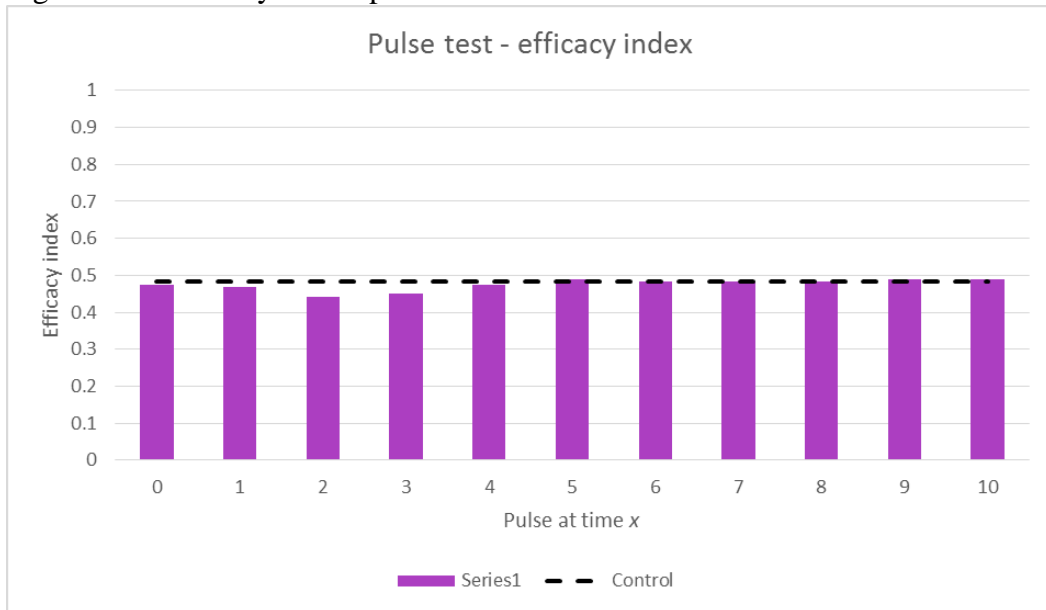
Figure 8-45 shows that pulses in earlier rounds have a detrimental effect upon overall efficacy. This is reasonable as there is considerable opposition in the input array and activating more of these players increases the number of negotiations that draw MVL values down.

The final test performed was a delayed step test (see Figure 8-46). This models a scenario much like the pulse test but whilst the pulse lasts for three rounds, the delayed step test forces continued activation. The first delay was set at zero, causing all players to activate over all issues indefinitely. Further delays occur in one round increments.

Figure 8-46 Activation override: delayed step test
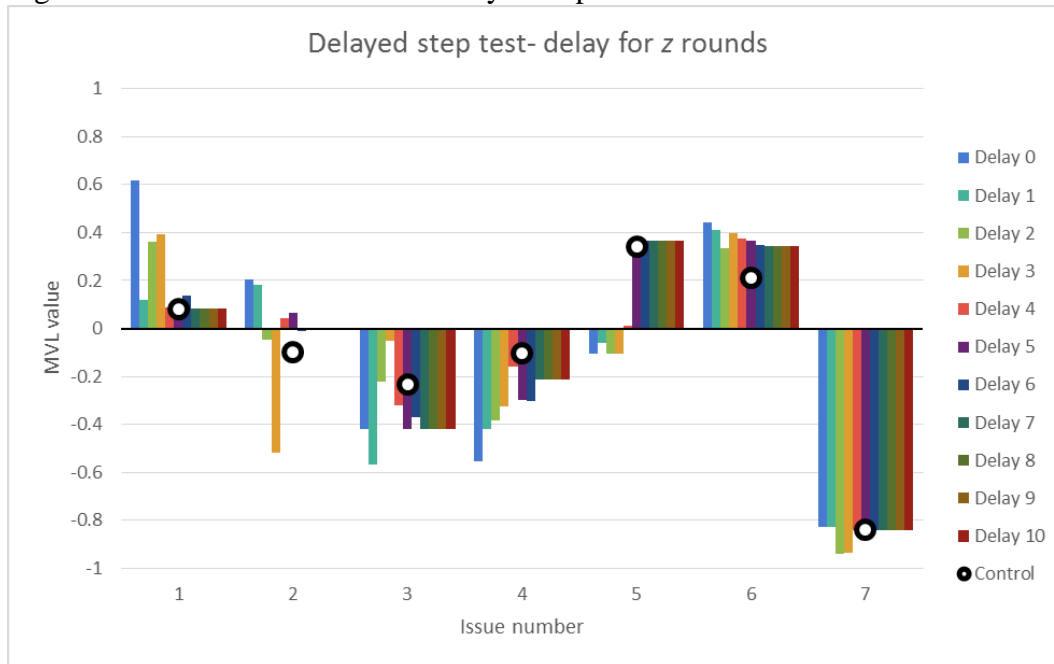
Delayed step testing produces more fluctuations than pulses, which is understandable since continual activation produces a greater number of negotiations. Similar to the pulse test, later delays in simulation-wide activation see fewer changes than earlier ones. Interestingly, the first delay produces the highest efficacy value of all delays (0.5331), which is due to strong gains over *separation* (MVL1), *playing field* (MVL2), and *asset management* (MVL6). However these gains are accompanied by declines in *universal financial services* (MVL3), *shares* (MVL4), and *operations* (MVL5).

Figure 8-47 Efficacy index: delayed step test
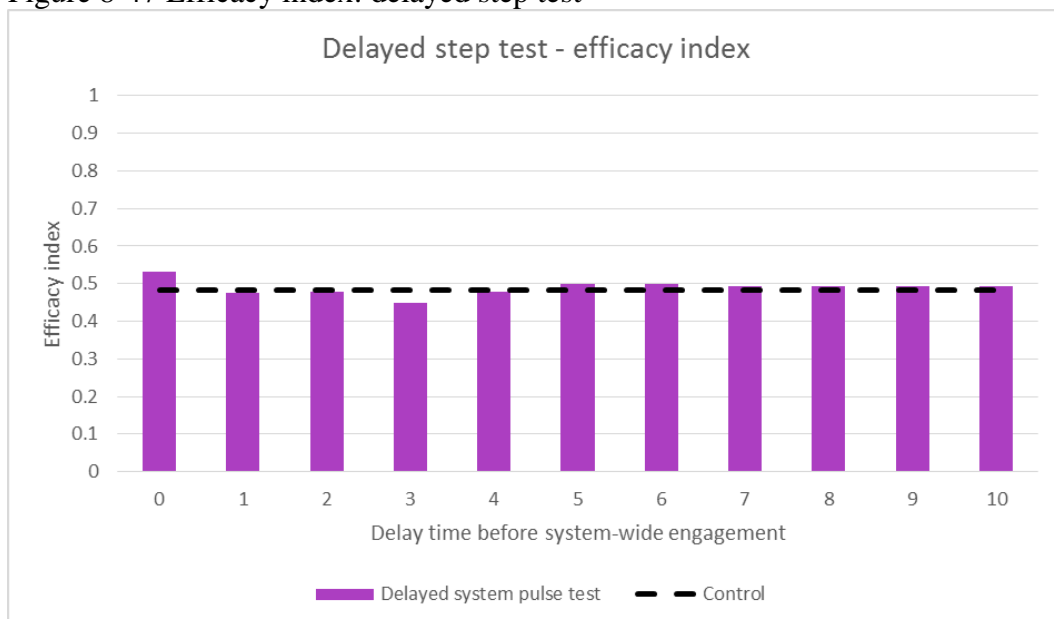
Figure 8-47 shows the delayed step test's efficacy outcomes. Consistent with pulses, greater changes are observed when delays are shorter. Many early delays also display lower efficacy values whilst later delays show marginal improvements.

It must be noted that the delayed step test represents a strict set of assumptions as it implies postal reform becoming a prominent issue, which appears to be unlikely at the moment. Pulses are proportionately more likely as elections often politicise issues such as reform, but as the data indicates, later pulses are less likely to cause significant deviations from the control run.

8.10.1 Summary: Activation override testing

The three tests derived for this data set show that the override does indeed affect results. In all cases, forced activation is associated with more lengthy negotiations before equilibrium is reached. In terms of when both pulses and delayed steps are applied, the simulation displays greater inertia as the number of rounds increase; this arises from players having already negotiated with one another and reached a consensus, which appears to be logically consistent.

Altering the activation process changes the assumptions about the model and as far as this research extends, the control run is considered to be more indicative as there does not appear to be sufficient evidence to suggest that any one particular issue warrants overriding. Similarly, given the lower placement of postal reform amongst Japan's other current issues, pulses and delayed steps do not appear to describe the current context more accurately than the control run.

All other things being equal, simulations with smaller player populations may be more accurately represented by forcing the activation process as opposed to the default setting, since one is more likely to observe greater commitment to every issue from every player. As the player and issue count increases, it becomes increasingly probable to find players who may be interested in some issues but not others and therefore the default setting may be more indicative. Whilst perhaps not as appropriate for this particular application, the option to override behaviour is still a significant advancement and allows greater tailoring that could be useful for future research.

8.11   Chapter Conclusion

This chapter has presented the results of the simulation. Its purpose was to establish what changes might be expected as a result of negotiations surrounding the distilled MVL-issues.

The simulation's context was defined by first detailing the initial ownership and regulatory structure of JP Group. As of this writing, the group is still completely owned by the government and is affected by a number of issues. Cross-subsidisation of postal services through financial services is one such issue, as is the matter of the playing field, which is particularly tilted in favour of JPC with respect to general correspondence. Government interference exists in terms of operations, personnel and network asset management. Universal service obligations are extensive, covering general correspondence, some packages, and financial services. Entry barriers to general correspondence effectively prevent competitor entry. *Amakudari* also exists, which encourages rent-seeking behaviour. Connections are present between the Group and the Ministry of Finance-administered Fiscal Investment and Loan Programme. These issues are highly interconnected and mutually reinforcing.

This chapter has shown that the fundamental objectives of postal reform were to ameliorate these issues and dissolve their connections. Seven MVL-issues were introduced. Embedded in these were proposals that, if successful, would address various sections of the initial image. The parties engaged in reform negotiations were distilled into eight player groups, representing political parties, areas of the bureaucracy, and interest/lobby groups. A pre-simulation illustration of the political landscape showed considerable differences in ideology with respect to the seven MVL-issues.

The process of postal reform began with former Prime Minister Junichiro Koizumi. As such, an image of his 'ideal' outcome was presented to establish a point of reference to which the simulation's outputs could be compared in addition to comparisons against the current state. Koizumi envisioned separated, privately-owned business units conducting themselves in a market freely accessible to competing firms. The state of the political landscape, as populated by the player groups, indicated however that this ideal was unattainable.

The efficacy index was presented as a measuring tool; it assumes that not all MVL-issues are equally important in determining overall reform effectiveness from an economic perspective. Separating the business units and establishing a level playing field were identified as the most important MVL-issues, followed by

managerial independence, universal financial services and a minimum network presence, and finally the open sale of shares. The index is useful in terms of providing relative comparisons between expected outcomes, Koizumi's 'ideal', and the results of sensitivity testing.

The control run shows *separation* (MVL1), *operations* (MVL5), and *asset management* (MVL6) issues settling above zero, indicating that there is a better than even probability of their proposals passing. The *playing field* (MVL2), *universal financial services* (MVL3), *shares* (MVL4), and *minimum network* (MVL7) are negative, suggesting these proposals are more likely to be defeated. *Playing field* (MVL2) and *shares* (MVL4) are quite close to zero, however, so there is a close to even chance. The expected political landscape shows continued strong divisions over *playing field* (MVL2), *universal financial services* (MVL3), and *shares* (MVL4); moderate divisions over *separation* (MVL1), *operations* (MVL5), and *asset management* (MVL6). *Minimum network* (MVL7) however displays a high degree of consensus on the negative side of position, although this was conceded in exchange for gains elsewhere – particularly separation.

As a result of positive *separation* (MVL1), *operations* (MVL5), and *asset management* (MVL6), some of the linkages between key issues are expected to be broken. Observers might be inclined, therefore, to suggest that some reform is better than none; the predicted outcome infers JP will have greater freedom to conduct operations and less government interference with aspects of the business. This is encouraging as it could suggest increased efficiency, productivity, and profitability within the Group. What is concerning, however, is that these changes are likely to occur in a regulatory environment where the playing field is uneven and entry barriers are not expected to be relaxed. Gains to JP may therefore be at the expense of private businesses, which is inconsistent with Koizumi's aims of invigorating the private sector.

Furthermore, whilst the business units are expected to be separated, cross-subsidisation will likely continue, firstly because universal financial services provide substantial agency fees, and secondly because for as long as the government retains a majority share in JPH, internal transfer pricing can be influenced. These factors may place private operators at even more of a disadvantage: as JPC's income is heavily supported by the financial units there is potential to use pricing structures independent firms simply cannot match.

One of Koizumi's key objectives was to sever the link between postal savings and the Fiscal Investment and Loan Programme. By directing funds away from the Fiscal Investment and Loan Programme, capital markets were expected to be revitalised and the Fiscal Investment and Loan Programme would be left with little choice *but* to reform. Several links between the Group and Fiscal Investment and Loan Programme remain at the end of the simulation however, suggesting that much of the Group's deposits will still find their way into Fiscal Investment and Loan Programme bonds and dampen prospects of greater access to funds on the part of private financial firms. Greater operational freedom for JPB and JPI could potentially perform a similar task but so long as government maintains control of JPH such advances into private sector operating areas will likely be met with criticism.

The financial arms can begin new operations by notification only once at least 50% of their shares have been sold. This initially appears to be consistent with reform ideology because private owners would be incentivised to divest away from Fiscal Investment and Loan Programme bonds in favour of higher yielding investments. However with a less than an even chance of separately listing JPB and JPI shares, and continued links to Fiscal Investment and Loan Programme through *shares* (MVL4), this raises questions about whether there is a true motivation to reduce state share holdings.

Ultimately, the control run depicts an outcome that falls far short of Koizumi's ideal with both the efficacy index and '*probability of effective reform*' from the HOS less than 0.5. With the presence of such resistance, Koizumi's goal appears to be out of reach since securing meaningful gains over one issue often requires sacrificing another. From a reformist perspective, the single greatest disappointment is projected failure to level the playing field. The partial reforms presented by the simulation potentially threaten the private sector and therefore appear inconsistent with original intentions.

Sensitivity analyses performed around the control run show that the relationship of clout to global influence differs from issue to issue but is generally positive. Whilst the LDP reform group may have the largest weighted clout figure, it is the 'Kamei' group and the Ministry of Internal Affairs and Communications that create the greatest overall changes through adjustments to their initial inputs. With respect to outcome variations, *operations* (MVL5) and *minimum network* (MVL7) are the most sensitive, experiencing the largest change from starting values

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in the control run. *Operations* (MVL5) is the most common exchange issue, which explains to a large extent why it shifted significantly to the right on the position continuum: opposing players were willing to give ground on this issue for gains elsewhere. *Minimum network* (MVL7) becomes the most common primary issue following a series of exchanges, challenges and lobby actions. In terms of which input creates greater overall fluctuations, salience proves more volatile in the majority of cases. This is principally due to the mechanics of primary and exchange issue identification.

The two ministries involved in postal reform displayed an initially neutral position over *operations* (MVL5). Whilst this may appear to represent an opportunity for reformists to gain an ally, the sensitivity tests show that changes to their initial position over *operations* (MVL5) result in significant losses elsewhere and thus such a strategy is unadvisable.

Further tests to sensitivity showed that in some cases stronger resistance over a particular issue can create a chain of events whereby the MVL of the issue in question falls, but is accompanied by significant increases in other MVL values. This phenomenon appears to resemble a form of 'tunnel vision' whereby opposition is concentrated on one issue to the exclusion of others.

The shock analysis found that this particular application is more sensitive to negative shocks than positive ones. Reformist groups therefore cannot afford to become lax. Whilst more radical stances or commitments from reformist groups may not be among the largest high-efficacy changes, reductions result in substantial losses in efficacy. It would appear that the analogy of an uphill battle is an accurate description; ground is hard to gain but easy to lose.

Combining shocks produced results not dissimilar to singular shocks in both high-efficacy and low-efficacy cases. We could therefore infer that reformists and detractors both may be better off attempting to engender individual shocks and thus 'fine tune' overall outcomes as such actions would be less costly than wider campaigns.

The shock of changing the Ministry of Internal Affairs and Communications' initial position over *minimum network* (MVL7) produces one of the highest efficacy indexes observed in the data range and only requires a change of 0.1. This particular scenario results in positive values for *separation* (MVL1), *playing field* (MVL2), *universal financial services* (MVL3), *operations* (MVL5), and *asset management* (MVL6). Interestingly, this particular scenario presents a number of similarities to

the New Zealand experience: separated units, a level playing field, no universal financial services, and freedom from government interference. The trigger of this shock however must reside outside of the strategies programmed into the model. The endogenisation of these shocks presents a fascinating opportunity for further research and may allow a broader range of options to be included to address future research questions. Attention now turns to identifying the post-simulation institutional environment and final comparison against New Zealand.

9 JP's New Institutional Environment and a Way Forward

9.1 Introduction

A key contribution of the thesis is the construction of a model that simulates negotiations over a range of issues populated by an array of players, yielding probabilities of changes and relative measurements of effectiveness. Through this approach, it becomes possible to estimate if the outcome represents a 'full' reform[115] or a 'partial' reform. In this study, the model is used to estimate the outcome of Japan's postal privatisation negotiations and produce a post-simulation institutional environment. Comparisons against New Zealand are useful as New Zealand represents a successful case in terms of overcoming reform resistance and may offer potential lessons for Japan.

Section 9.2 elaborates on the expected changes to the Japanese institutional environment derived from the simulation. The degree of internal consistency is analysed and discussed in section 9.3. Section 9.4 compares the new Japanese institutional environment against New Zealand's, offering explanations of the differences and why New Zealand was able to enact successful reforms whereas Japan appears to be unable to. Section 9.5 measures the effects of a potentially transplantable reform lesson that could be used to overcome some of the resistance in Japan. Finally, section 9.6 explores other strategic options to increase the probability of reform through changes to initial positions over all MVL-issues.

9.2 Changes to JP Institutional Environment

This section is the culmination of the analyses presented in Chapter Six and Chapter Eight. From Chapter Six, the initial institutions constraining JP were identified and illustrated, reproduced here as Figure 9-1 for convenience. Koizumi's reforms were designed to address the problems created by these institutions by installing new ones, just as New Zealand had done in the 1980s. By incorporating the changes thus far and the results of the simulation model in Chapter Eight, it now becomes possible to describe an image of the expected institutional environment of JP and discuss the changes and internal consistency.

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[115] A 'full reform' meaning that all MVL-issues settle in positive values.

Figure 9-1 JP initial institutional environment
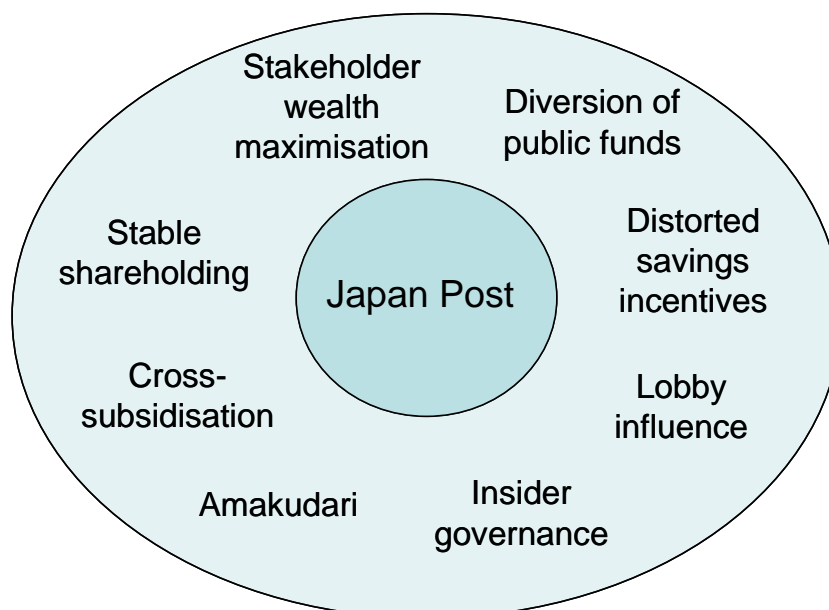
The 2003 environment catered to special interests and stakeholders at the cost of efficiency by distorting savings incentives and channelling funds into Fiscal Investment and Loan Programme budgets. *Amakudari* landings also helped maintain the system. Using the final MVL locations from the simulation and the linkages they are expected to break[116], institutional changes resulting from both the reforms to date and simulated changes are presented in alphabetical order.

9.2.1   Amakudari

Operations (MVL5) suggests greater independence over operations management, which extends to outsourcing and support business selection processes. Separated business units should also help increase transparency to a degree and in turn make *amakudari* landings more conspicuous. These factors are expected to reduce *amakudari* pressure. Nevertheless, continued government influence through issues concerning *shares* (MVL4), *minimum network* (MVL7), and *playing field* (MVL2) does not eliminate *amakudari* pathways. The failure to completely remove insider governance also contributes to the continuation of *amakudari*.

In summary, JP has greater ability to resist *amakudari* by virtue of operational independence, but there needs to be more reform at a higher level to

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[116] See Table 8-7 for the changes suggested by the simulation.

disincentivise *amakudari*. Such changes are beyond the scope of this study however, as *amakudari* extends much further than just postal reform.

9.2.2 Cross-subsidisation

JPC received commissions from JPB and JPI amounting to approximately 48% of all operating revenue in 2013 and MVL3 suggests that universal financial services will continue. Likewise, *minimum network* (MVL7) suggests that the minimum network clause will be preserved, placing a financial burden on the financial units. Separate listings of the financial units are marginally unlikely given the result of the *shares* (MVL4) and since the government is expected to maintain significant holdings in JPH as a result of the 2012 postal reform bill, this further increases the likelihood of cross-subsidisation continuing.

Operations (MVL5) and *asset management* (MVL6), however, present a mitigating factor: the increased freedom to manage the network without interference, including post office closures and other real-estate ventures, may bolster operating revenue and reduce reliance on the financial arms. Ultimately however, the requirement to offer financial services through the network effectively guarantees sizable income and cross-subsidisation is expected to continue as mail volumes fall.

9.2.3 Distorted savings incentives

This institution shows some signs of progress but other factors limit the amount of expected reform. Encouragingly, the removal of interest rate controls allows private banks to match JPB, however the raising of deposit caps permits individuals to save up to ￥20M in JPB. Whilst not technically guaranteed, government ownership has been argued by business circles to constitute an implicit guarantee that places JPB at an advantage.

Imposing universal financial services infers that JPB will have greater market exposure than other banks and this factor may play a role in the depositor's choice. Similarly, as was noted in Chapter Three, the depth of the financial system is likewise important for savings decisions in addition to interest rates. Postal reform provides opportunities for JPB to expand its services and offer new products which lessens the service gap between JPB and private banks.

In summary, whilst some of the reasons to convert to postal savings have been removed, there is also little reason to leave JPB as it expands to cover

traditional banking products. Consumer decision-making is now based more on competitive advantage, although the implicit guarantee and forced national presence still artificially distort the market.

9.2.4   Diversion of public funds

Postal links to the Fiscal Investment and Loan Programme have been weakened, but the connections through *playing field* (MVL2) and *shares* (MVL4) are still in place. Government holdings in JPB and JPI limit their ability to enter new businesses[117] and therefore Fiscal Investment and Loan Programme bonds still represent an attractive investment option for the units. For the time being, the majority of JPB and JPI funds are still placed in Fiscal Investment and Loan Programme bonds and therefore this institution is only moderately weakened.

9.2.5   Insider governance

Progress at the executive level is encouraging. Following Abe's purge of the DPJ-appointed board, outsider leadership was greatly increased. The Ministry of Finance does not have representation on the board, constituting a significant step towards separation of governance and ownership. Nevertheless, the influence of the postal lobby is not dismissible as they have since reunited with the LDP following the disbanding of the People's New Party. The Ministry of Internal Affairs and Communications still has freedom to appoint commissioned postmasters and there is not enough evidence to suggest these positions will not be influenced by political motivations. *Operations* (MVL5) suggests that JP will have greater autonomy with respect to employment. This, too, is encouraging but it does not preclude politically-influenced postmaster appointments.

Overall, outsider governance structures have been implemented but there still remains work to be done at lower levels. As such, outsider governance is argued to replace the incumbent institution, at least at the executive level.

9.2.6   Lobby influence

The postal lobby's influence has decreased by way of supra-cabinet policy-making organs where the lobby has less representation. The loss of public servant status has also reduced their power although at the same time it allows them to

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[117] Whilst the government maintains a majority shareholding, expansion is subject to approval. If over half the shares are sold, entry into new operations is by notification.

legally mobilise; in Japan, public servant status forbids mobilising for political goals. Union mergers and subsequent alliance with postmasters in opposing privatisation does mitigate losses of influence in policy debates to a degree however.

Overall, the lobby is still strong but has lost some of its most vocal supporters after the dissolution of the People's New Party, although ties with the Ministry of Internal Affairs and Communications still appear to be present. The greatest progress in removing this institution is suggested to be the loss of influence in policy formation.

9.2.7 Stakeholder wealth maximisation

A number of factors suggest that stakeholder wealth maximisation will persist. The requirement to provide full universal services, forced reopening of selected rural post offices, maintenance of a minimum postal network, implementation of the temporary worker conversion scheme, and unwillingness to lower entry barriers indicate that the government still places value in providing for those connected to JP Group over returns to shareholders. The separation of social and corporate objectives does not appear to have been successful, if even considered.

9.2.8 Stable shareholding

Shares (MVL4) suggests that the government will continue to hold a large percentage of JPH. The 2012 bill lessens obligations to sell and preserves a greater government stake. The financial units can engage in new business operations by notification once at least half of their shares are unloaded; in such an event purchases of Fiscal Investment and Loan Programme bonds would likely fall. However, the apparent unwillingness to list JPB and JPI separately may be linked to a reluctance to sever postal links to the Fiscal Investment and Loan Programme as it would lessen the flow of capital into the so-called 'second budget'. Resistance to foreign ownership has also been observed, particularly from the People's New Party and former JP head Yoshifumi Nishikawa. The culmination of these points suggests that stable shareholding is likely to continue.

9.2.9 New institutional environment

As a result of the aforementioned changes, an updated illustration of JP's institutional environment appears as Figure 9-2:

Figure 9-2 JP simulated institutional environment
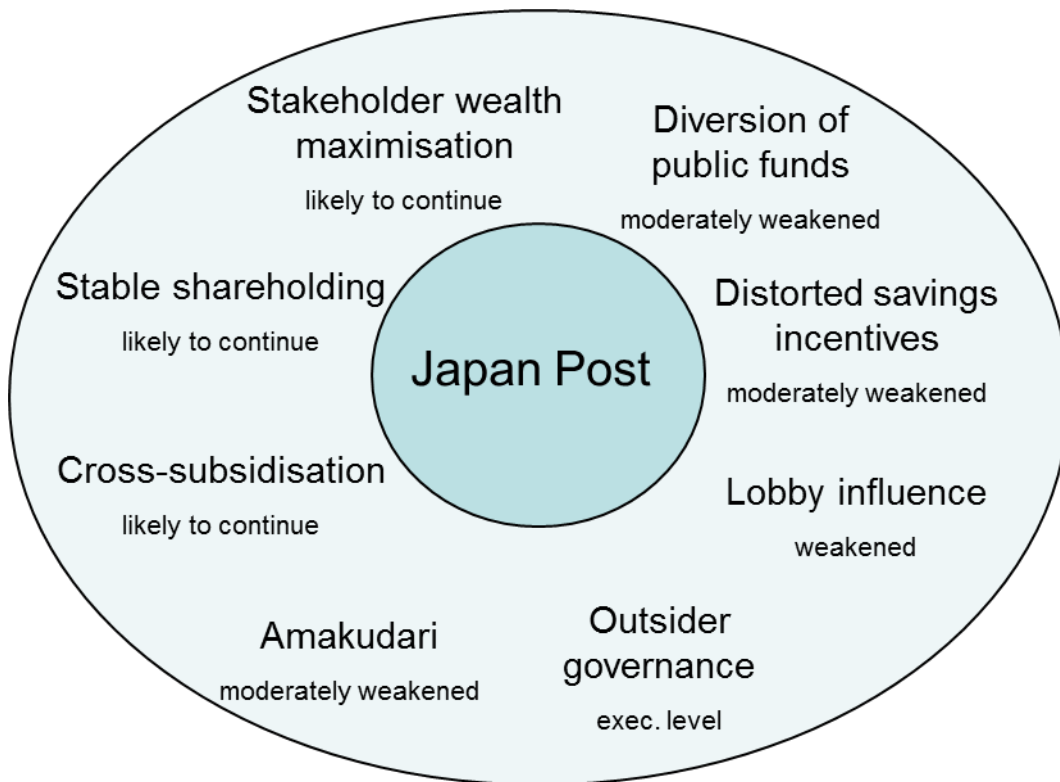
9.2.10 Observations

The instalment of outsider leadership at the executive level is promising as it is often accompanied with increases in efficiency and productivity. Outsider leadership is expected to reduce the likelihood of *amakudari* landings occurring and whilst total preclusion is doubtful, this is consistent with reform ideology. However, JP's objectives remain convoluted as stakeholder wealth maximisation governance principles still apply and this raises questions as to whether profitability incentives may be eroded.

Requiring universal postal and financial services is a socially oriented policy and permeates many of the institutions listed above, stakeholder wealth maximisation in particular. Universal service limits flexibility and efficiency (Heitzler, 2010) and therefore dampens the positive influence of outsider governance. A second issue associated with universal service is the divergence between its cost of provision and revenues received as mail volumes decline. Mizutani and Uranishi (2006) estimate that the cost of universal service is large,

approximately JPY 348 billion[118]. Data from Japan Post Group (2013) also show a continual decline in mail volumes from 23.9 billion items in 2009 to 22.3 billion in 2013: a 6.7% decrease in four years. Considering these data, it is likely that cross-subsidisation will continue. Additionally, as a large proportion of the financial burden is absorbed by JPI and JPB, this reduces the likelihood that distorted savings incentives will be removed. This system is comparable to the pre-reform institutional context and therefore inconsistent with Koizumi's ideology.

A third issue is the opaque nature of universal service. Mizutani and Uranishi (2006) arrived at their results through estimation and whilst this is a considerable effort, it still infers that the exact figure, its sources and applications, are uncertain. Without transparency, there is the potential for opportunistic behaviour and inefficiency.

Fourthly, universal service obligations are a primary reason for the maintenance of entry barriers. The 100,000 mailbox requirement was installed in direct response to universal service commitments. Distortions in the market are therefore directly linked to the continued entanglement of social and commercial objectives arising, at least in part, from universal service obligations. The failure to separate these conflicting goals therefore represents a major factor limiting reform effectiveness. In addition to all these points, the continuation of universal service in an environment where new communications technologies are steadily replacing physical mail correspondence grows increasingly questionable, particularly so when Japan's national telecommunications provider, NTT, is also bound by universal service obligations that ensure access to such technologies.

Nevertheless, greater operational freedom and expansion into new forms of business may result in funds moving towards investments other than JGBs or Fiscal Investment and Loan Programme bonds; this contributes to one of the goals for privatisation but it does not necessarily achieve a secondary objective of revitalising capital markets. The projected increases in profits for JPI and JPB may be to the detriment of private financiers and the possibility these profits might be utilised to provide socially desirable but commercially unjustified outcomes is concerning. Such an outcome was precisely one of the factors the New Zealand reforms sought to address.

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[118] This figure is presumably more today given the more recent requirement to include financial services.

Given the stakeholder-leaning aspects of the proposed outcomes and the costs involved in maintaining them, it raises doubts with respect to finding private buyers for JPH. Performance measurements indicate the return on equity for JPH was 1.7% in 2013 and return on assets 1.5%. Return on assets for the group as a whole were 0.19% (Japan Post Group, 2013). Banking and insurance returns to equity were 4.05% and 6.95% respectively. The universal service and network obligations further enhance the social aspects of the business, potentially reducing the likelihood of finding buyers. Mizutani and Uranishi (2006) argue that by removing special post offices, costs could be decreased by JPY 75 billion per year. Profits could therefore be increased should more aspects of shareholder wealth maximisation be adopted, but this appears unlikely as the institution of stable shareholding is more likely to continue.

The findings of the simulation suggest that entry barriers will persist and the lack of full privatisation will preserve the Ministry of Internal Affairs and Communications' involvement in the financial units through JP's special regulatory office. These constitute two significant factors in the continual favouring of JP Group, representing an inconsistency with reform ideology considering the extra freedom afforded. Nevertheless, even though JGBs and Fiscal Investment and Loan Programme bonds still make up the vast majority of JPB and JPI investments, the percentage is gradually decreasing. The influence of the postal lobby has also decreased but still remains strong. Both of these points are consistent with reform ideology but require ongoing attention.

Ultimately, between the changes witnessed to date and the projections of the simulation, the reforms appear to be diverging from the course laid by the Koizumi government, whose objectives could be described as more akin to the New Zealand experience in terms of commercial orientation. Whilst not to the same degree historically speaking, there still appears to be remnants of a paternalist state visible in the regulatory structure, and JPC continues to be funded to a large extent by the financial units. This is not necessarily undesirable but the units are the recipients of artificial distortions that place them at an advantage; entry barriers to general correspondence are by far the greatest and effectively block private firms from operating in a market that would otherwise be contested. Whilst some progress has been made to weaken the institutions that first bound the post office, there is still much to be done and greater progress could have been achieved if not for the resistance encountered both during Koizumi's term and subsequent administrations.

9.3   Inconsistencies in Partial Reform

With respect to the study's overarching questions, it would seem that reform can be implemented in Japan but the outcomes are anticipated to fall significantly short of Koizumi's goals. His administration appears to have exhibited a partial commitment to neoliberal ideals although stakeholder concerns were still prevalent. Subsequent administrations have been shown not to hold to the same ideology and thus the changes begun by Koizumi have been diluted to the point where only a partial reform is observed.

The debate of whether partial reform is preferable to none is both a matter of perspective and circumstance. In the case of the simulated changes, the study contends that there may be some marginal benefits although serious concerns exist. The additional freedom of operations and ability to expand into new businesses potentially threatens private sector interests, while preserving entry barriers and continued tilting of the playing field in favour of JP amplifies the risk. Increased deposit caps at JPB and universal financial services may also weaken the competitive positioning of private banks against JPB. From the perspective of the private sector therefore, no reform may indeed have been better than some.

Reforms can sometimes be visualised as representing a wall or a bridge; inconsistencies, compromises, and dilutions can be considered as damage to the structure. In the case of a wall, significant damage may be sustained yet, overall, the wall remains structurally sound. However, if one pictures an arched stone bridge, removal of the keystone can easily lead to collapse. In the case of New Zealand, the disentangling of social and commercial objectives formed such a keystone, and the manifest outcome of that desire was the SOE Act. Without this legislation, NZP, and many other SOEs, would likely have continued to operate as they had done, possibly becoming recipients of targeted legislation to ensure that their non-commercial activities would continue to be provided should they be sold.

Japan appears to face a similar problem and many of the issues presented in Chapter Six stem from debates concerning the continued integration or separation of social and commercial objectives. The partial reform observed thus far is likely to be ineffective as long as these objectives remained intertwined. For example, creating a level playing field would presumably encourage more competition although simultaneously imposing socially-motivated constraints upon JP would, by their very nature, countermand such actions. It therefore may be preferable for Japan's lawmakers to oblige JP to either serve as a social agency or a commercially-

oriented organisation, but not both simultaneously. As it is, the continued integration of objectives perpetuates pre-reform institutions that have been shown to be problematic.

Universal service obligations also illustrate inconsistencies in the proposed partial reform. Postal services aside, forcing the provision of universal financial services directly contributes to the continuance of a number of problematic institutions. Through these services, financial markets are distorted, household incentives are warped, and cross-subsidisation is maintained. The rationale for including universal financial services stems from a desire to care for stakeholders. Such motivations are laudable although the government's delivery mechanism, JP, creates a fundamental reform inconsistency as long as the two objectives are intertwined. Until this matter is addressed, the observed partial reforms will likely remain ineffective.

To reinforce the point, consider also some of the other stakeholder wealth maximisation principles that create inconsistencies with reform ideology, such as the minimum network requirements and the temporary worker conversion scheme. Whilst they doubtlessly provide benefits for their recipients, they reduce the efficacy of Koizumi's envisioned reforms by further integrating socially-oriented policy into what was hoped to be a commercial operation. If the Japanese government wishes to continue advancing social policy through JP, it may be preferable for the state to purchase those services at full cost or provide subsidies to the equivalent value, perhaps even extending to all postal operators. Alternatively, if the government intends to allow JP the same liberties that private firms enjoy and the ability to compete within the same markets, the organisation should not be conflated with social and commercial objectives. This distinction was a vital component of the New Zealand reforms, a figurative keystone. As Koizumi's goals shared a number of similarities to New Zealand, this distinction is also vital for Japan.

9.4   New Zealand-Japan Comparison

At the beginning of their respective processes, both the New Zealand and Japanese cases were governed by insiders, isolated by protective monopolies, and cross-subsidised by non-postal operations. Both were also inefficient providers of postal services, due in part to a lack of capital investment that was arguably

attributable to the motivations of both governments to use their respective agencies as a source of employment creation.

The corresponding goals of the Lange and Koizumi administrations also display a number of parallels: a desire to reduce the size of the state, improve efficiency and remove cross-subsidisation, level the playing field, and introduce competition. In the Japanese case, an additional key objective was to separate the post office from the Fiscal Investment and Loan Programme and its inherent issues. Although the Post Office Savings Bank in New Zealand also held a high proportion of government bonds, the amount was insignificant to the economy when compared against Japan Post. The Fiscal Investment and Loan Programme also created a number of issues for Japan that were not mirrored in New Zealand but nevertheless postal reform in both countries was considered part of wider structural reforms.

At a fundamental level, the two administrations essentially pursued the same goals: greater transparency, accountability, self-reliance, and a separation between ownership and governance. Chapter Five showed that NZP represents a case where opposition to reform was overcome via an array of factors. The analyses presented in Chapter Six and Chapter Eight, however, suggest that Japan's case falls significantly short of Koizumi's goals and that whilst some of the changes enacted are promising, more work is needed yet.

9.4.1   Key factors explaining the differences in outcomes

There are some factors that aid in explaining the disparate outcomes. At the broadest level they can be categorised as either resistance-based or ideology-based.

One of the most important factors in explaining the 'failure'[119] of Japan's reforms lies in resistance levied against them. Although it has since been weakened, the postal lobby had the ability to exert considerable influence over parliamentarians and policy making. Resistance from postmasters in Japan was considerably stronger than New Zealand as they were more involved in the political process and had deeper interests in the continuation of the status quo. Postmasters in Japan had their own union; New Zealand did not. This would have allowed postmasters to highlight issues that directly affected them more so than had they been part of a broader, more inclusive union where their interests would be diluted among the collective. Japanese postmasters also frequently owned the physical

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[119]The term 'failure' is used in this case to describe the inability to achieve Koizumi's vision for JP.

premises themselves, were connected to special postal corporations, collected votes for their respective patrons, and held positions of regard with the possibility of ascending into political office. All of these points serve to strengthen incentives to maintain the pre-reform arrangement. New Zealand by comparison did not have such a system, although postal employees did hold the title of 'civil servant'. Nonetheless, the entwining of private interests and possibilities of economic rents help explain why internal resistance in Japan was so much stronger. As a result, New Zealand's reforms were less vulnerable to the pressures of special interests as their opportunity costs were less.

Intrinsic factors aside, New Zealand took a number of deliberate actions that helped overcome reform resistance. The scale of reform was critical. Had reforms been implemented on a piecemeal basis it is quite possible that opposing stakeholders could have capitalised on the focused attention and politicised it to their advantage. As it was, such a broad package reduced the ability for particular groups to promote their cause over others. In effect, the scale of reform effectively diluted the relative power of interest groups. Japan's case differs as it appears to exhibit a more sequential approach.

Another key difference was the speed of the New Zealand reforms. To offer perspective, consider that Koizumi intended for JP to be privatised 12 years after his bills initially passed, and even that was considered too rapid by many within his own party, let alone the opposition. In the same time period, New Zealand had corporatized and privatised some 30 SOEs, completely overhauled the public sector, deregulated banking, and rewritten regulations surrounding trade, industry, and the labour market. Such speed allowed the government to capitalise on political power and enact changes such that by the time that transition costs began to mount, the most painful aspects had already been implemented. Speed was critical to overcoming resistance; changes were occurring so rapidly that opposition forces had little time to respond. In this respect, Koizumi's approach was reminiscent of New Zealand's, but was subsequently undermined by successive administrations.

The State Owned Enterprises Act was also an important point for reducing resistance when compared with Japan. The Act encompassed all SOEs, creating a consistent regulatory framework between them (notwithstanding industry-specific rules). Japan's approach differs. Public corporations often have legislation

specifically drafted to them, including Japan Post[120]. Targeted bills provide advantages in terms of tailoring specific clauses to specific organisations but also present opportunities for special interests to influence policy formation. The postal lobby has been argued to possess less sway in policy but *less* must not be confused with *none*. If special interest groups had sought to influence the SOE Act it would have affected every SOE, and manipulating overarching policy would likely be far more difficult than organisation-specific policy.

Other critical factors stem from differences in ideologies. Again, the SOE Act served a number of purposes, chief among which was the requirement to produce profits and operate as private businesses would. This was a particularly important factor for countering resistance from the rural sector. The requirement to focus on efficiency and profitability as opposed to providing social benefits gave the company a clear set of objectives, diminishing the justification for the counter-argument. Postmasters in Japan often praised the socially-leaning aspects of the post office, using such points as evidence that the status quo should be maintained. Such notions would conflict with the SOE Act and therefore be rendered impotent. Indeed, the lawsuits brought against NZP with respect to rural delivery were dismissed on those very grounds and hence the Act was an important factor in overcoming resistance.

The Act was also a critical component in separating ownership from governance and shareholder wealth maximisation played an important role in its ideological foundation. The New Zealand Government wanted to disentangle commercial and social objectives; SOEs would focus on the former and government agencies the latter. Japan by comparison still exhibits behaviour indicative of a desire to realise social objectives through JP. The effective separation of objectives can be observed in terms of postal network penetration. In New Zealand, the number of PostShops[121] decreased by 17.33% between 2008 and 2011, largely in response to changing market dynamics, implying that NZP responded to competitive pressures as a private company would by reducing fixed costs. Over the same time period, JP's network only decreased by 0.06% despite considerable decreases in consigned mail deliveries. The language of the respective annual reports also differs: NZP's 2012 report refers to 'social responsibility' on three

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[120]Although JPB and JPI are subject to the industry-wide Banking Act and Insurance Business Act, they are still administered by the FSA special office.

[121] Post offices in New Zealand are referred to as PostShops.

occasions whilst JP's 2012 report promotes its 'social contribution' and 'social mission' approximately 27 times. As of their most recent annual report, NZP is also engaging with the government to propose changes to the Deed of Understanding to increase flexibility, indicating that the company is pursuing multiple avenues to streamline the business. Negotiations are still ongoing. Finally, it must be noted that whilst NZP is contractually bound to certain delivery and network criteria with respect to postal operations, the provision of financial services is at the discretion of the company. JP however is obligated by legislation to provide both universal postal and financial services. All of these points contribute to the observation that commercial and social objectives have been disconnected in New Zealand but not in Japan.

The differences in ideologies can perhaps most clearly be seen in the comparative approaches to universal service. Under Koizumi's leadership, the LDP pressed for universal *postal* service but Taro Aso[122] and other sections of the LDP supported by the postal lobby argued for the inclusion of *financial* services too[123]. Universal service became the first clause of the postal reform bill, although financial services were not included. When the DPJ rose to power and the postal lobby defected to the People's New Party these two parties also favoured universal service, as did other minor parties including the Social Democratic Party and the Japanese Communist Party. In summary, universal service appears to be supported by the majority of the Japanese political spectrum, although the strongest opposition forces also wanted financial services included in the obligations; under the DPJ/People's New Party coalition they were. In New Zealand, the issue was far less inflammatory and addressed via simple contractual agreement. Even then, the limits it imposed (including 240 post offices) are loose ones which NZP outperforms by a comfortable margin even today.

Traditional Japanese government/business ties and cultural attitudes significantly contribute to explaining the observed rationale. The ties between government and businesses in Japan have long been recognised and are enduring practices, which also extend to providing stakeholder benefits. Lifetime employment, company loyalty, and government subsidies to maintain employment levels are hallmarks of Japanese corporate governance. The development of 'iron

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[122] Minister of Internal Affairs and Communications from September 2003 to October 2005.

[123] The postal lobby still supported the LDP at this time.

triangles', *amakudari*, and other opportunistic behaviour associated with the government/business interconnect is not despite this arrangement, but rather *because* of it. To the Japanese government, the separation of social and commercial objectives appears to be a difficult concept to adopt as it runs contrary to well-established practices and cultural values. These practices and cultural values must not be lightly dismissed either as they formed a part of Japan's highly successful post-war economic growth model. Despite many years of economic recession, the Japanese still enjoy a high standard of living. The general support for universal service across the political spectrum suggests that, for the majority of Japanese politicians, they are as yet unwilling to relinquish these cultural values.

One final point was the continuation of reform despite a change in government. New Zealand's process began in 1984 under Labour; when National took power in 1990 they did not seek to undo the changes made. This was not the case in Japan. Two factors aid in providing an explanation. Firstly, New Zealand's two major parties shared an ideological grounding in neoliberalism, favouring greater economic freedom and liberalisation. Secondly, interest groups had been largely rendered impotent by the scope of reform. In Japan, the DPJ originally began as a reform-oriented party but reversed course following coalition agreements with the People's New Party who had captured the support of the postmasters. Further progress may have occurred had the Japanese government undertaken a more holistic approach rather than a piecemeal one. It must be noted however that whilst the successive reform efforts in New Zealand contributed to the observed outcome, it is unclear whether a similar result would occur should the New Zealand experience be 'run again'.

9.4.2   New Zealand-style reforms in Japan

New Zealand-style reforms could potentially be used in Japan but hinge on three crucial elements. The regulatory environment needs to be neutral regarding private businesses and entry barriers must be removed. Transparency of the public sector is critical, particularly so if the government intends to maintain ownership of JPB and JPI whilst the Fiscal Investment and Loan Programme still operates. Incidentally, New Zealand ranks first on the political corruption index (Transparency International, 2014). Finally, there must be a clear separation between social and commercial objectives as opposed to a mixture of the two. In this respect, New Zealand's experience goes much further towards achieving a

neoliberal 'ideal' and given the current landscape of Japanese politics it seems unlikely that Japan could enact similar changes. Nevertheless, the New Zealand experience has often been criticised for marginalising social concerns; between that and the unadulterated Western ideals neoliberalism embodies, there is also the question of whether such reforms are congruent with Japanese cultural values.

The scope of New Zealand reforms was more encompassing, covering SOEs and the public sector as a whole; they were also enacted more rapidly. Given the scale of the Japanese economy and public sector, New Zealand-style reforms would be much more difficult to implement and carry substantially higher levels of inherent risk. Nevertheless, the nature of implementation in New Zealand was an important factor in reducing resistance and represents a key point of difference in explaining why New Zealand was successful whereas Japan was not.

Whilst the political setting may make it difficult to enact similar reforms in Japan, the management practices employed at the time by NZP would be less provocative. The combination of exit packages, close working relationships with the unions, employee investment, and potential career opportunities may assist in fostering a change in corporate culture. Greater changes in the wider economy at the same time would likely help in instilling a recognition of the need for change, although without greater structural reform this may prove more challenging.

Nevertheless, the SOE Act offers Japanese lawmakers a potentially useful alternative. Section Seven compels the state to adequately compensate the SOE for imposed non-commercial activities. In effect, the 'social service' aspects could still be provided through JP but directly financed by the state. This would allow the government to revise the postal reform bill and disentangle the conflicting objectives. JP could then be permitted to operate more like private firms and focus on profitability and efficiency. Secondly, as the distortions to the playing field arose out of the need to insulate JP with respect to its universal service obligations, government funding for universal services would alleviate the need for such barriers and the market could therefore be deregulated. This alternative arrangement is explored further in the following subsection.

9.5 'Section Seven' Runs

Under Section Seven, the New Zealand SOE Act provides an avenue for the government to deliver socially-motivated policies through SOEs, providing they are appropriately compensated. Should the Japanese government employ a similar legislative device it is possible that some of the players may soften their attitudes over selected issues. It is assumed that part of their rationale stems from fears of losses of socially desirable services. The postal lobby for instance has cited universal financial services as a desirable facet of JP, particularly so with respect to elderly and rural residents. Likewise, maintaining at least one post office in every village ensures all citizens have access to a range of essential services. They are concerned that privatisation may endanger these services and hence oppose the reforms.

As these examples serve social purposes, the SOE Act would compel the New Zealand Government to pay NZP for their provision or tender with all providers to maintain universal services. Were Japan to adopt a similar strategy, service levels would be maintained, assuaging opposition fears, and JP would be directly compensated by the state. This alternative would also relieve pressure on the financial units to cross-subsidise postal operations. Under such a hypothetical arrangement it is assumed that players aligned against *universal financial services* (MVL3) and *minimum network* (MVL7) would review their opposition and shift position upwards over these two issues.

Using the simulation model, two alternate series of data were created; the first adjusted the positions of all players opposing *universal financial services* (MVL3) in 0.1 steps. This included the Ministry of Internal Affairs and Communication, the Ministry of Finance, the LDP opposition elements, the 'Kamei' group, and the DPJ opposition elements. The second adjusted positions of all players opposing *universal financial services* (MVL3) and *minimum network* (MVL7) in 0.1 steps, including all the previously mentioned groups plus the DPJ reform elements.

Figure 9-3 MVL differences to control run from stepping MVL3
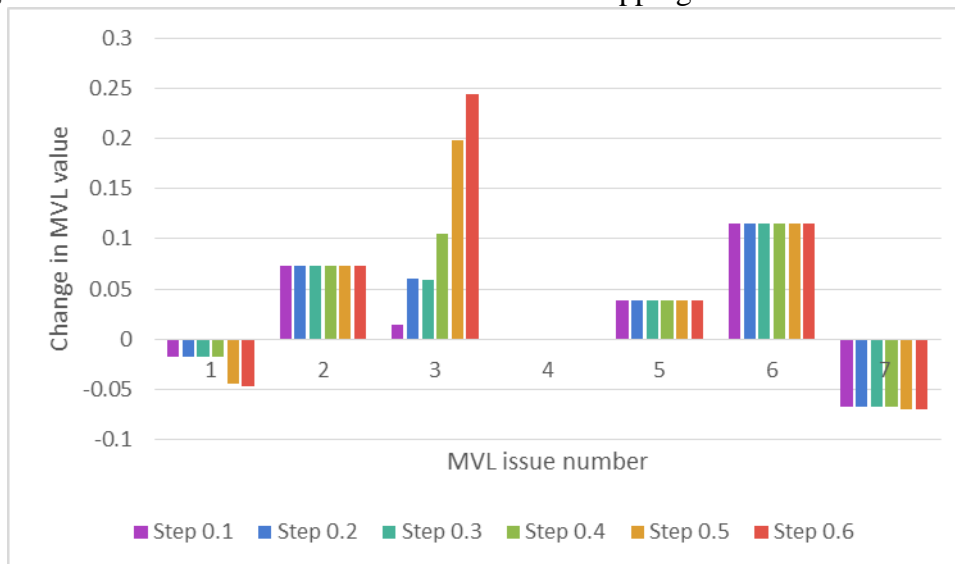
Figure 9-3 shows that stepped increases in positions over *universal financial services* (MVL3) produce increasingly larger changes; this is expected as greater support implies a greater chance of reform. Upward steps also have positive effects upon issues involving *playing field* (MVL2), *operations* (MVL5), and *asset management* (MVL6). What is interesting is that these secondary effects have the same magnitude, suggesting that the first step sparks a critical event. Excluding *universal financial services* (MVL3), 18 other player inputs are affected as a result of stepping *universal financial services* (MVL3), six of which relate to the Ministry of Finance. The ministry's initial position over *universal financial services* (MVL3) is -0.05 and therefore the first step allows other reform-oriented players to lobby and challenge them. In other words, a small change in the ministry's attitude regarding universal financial services changes their fundamental view point from very marginal opposition to very marginal support. This provides an opportunity for other reform-supporting players to apply further pressure to the ministry and capture gains over other issues.

Also of interest is the point that increasing positions on the universal service issue causes decreases in MVL values for *separation* (MVL1) and *minimum network* (MVL7), suggesting that if universal financial services are purchased by the state, resistance forces move on to other concerns. The first data series assumes only universal services are state-funded, not the minimum network. It therefore intuitively seems that opposition forces would harden their attitudes over the minimum network as this becomes their new centre of attention.

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Figure 9-4 Probability of issue reform after stepping MVL3
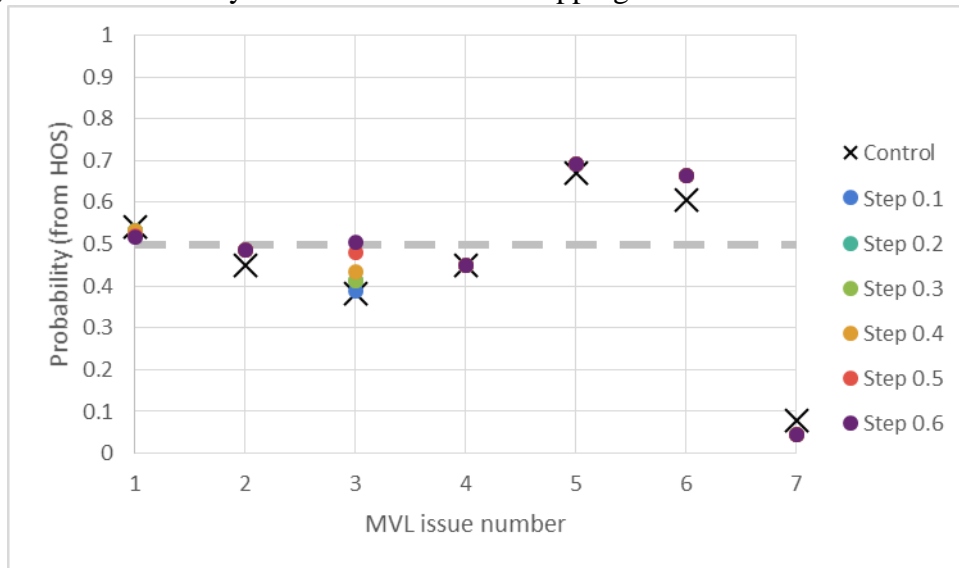
Figure 9-4 displays the probability of each issue's reform. The control run is represented by the black crosses. Stepping *universal financial services* (MVL3) produces slightly higher probabilities of reforming *playing field* (MVL2), *operations* (MVL5), and *asset management* (MVL6). *Separation* (MVL1) is slightly less likely but retains a better than even chance. *Minimum network* (MVL7) probability is very low. As expected, *universal financial services* (MVL3) shows the greatest sensitivity but only rises above 0.5 with a step of 0.6, meaning that opposing players would have to be quite confident of promises that universal financial services would be suitably delivered. Nevertheless, the efficacy index rises from 0.4828 to marginally over 0.5 following steps of 0.2 or more, indicating that this alternative is at least partially effective.

The second data series assumes that both *universal financial services* (MVL3) and *minimum network* (MVL7) will be state-funded.

Figure 9-5 MVL differences to control run from stepping MVL3 and MVL7
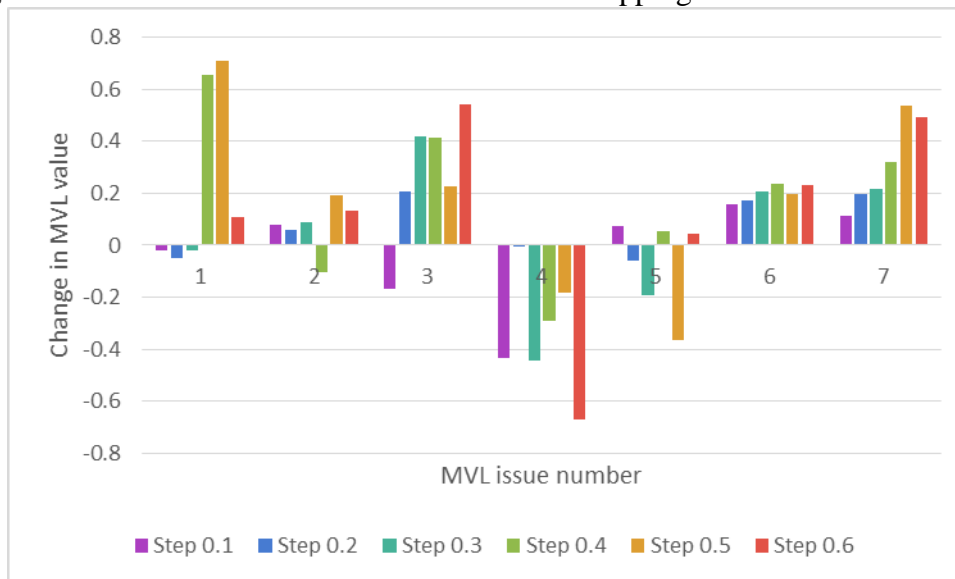
Figure 9-5 shows that stepping opposition players over *universal financial services* (MVL3) and *minimum network* (MVL7) produces more varied outcomes than *universal financial services* (MVL3) alone. More often than not, higher positions over these two issues lead to increases elsewhere. Interestingly, by offering to secure universal financial services and a minimum network, it is possible to realise gains over *separation* (MVL1) and *playing field* (MVL2). This may reflect a change in attitude amongst opposition players whereby once the social aspects of the organisation have been addressed they feel more comfortable with the idea of a more commercially-oriented JP.

Shares (MVL4) presents an interesting outcome. Whilst it did not change at all in the first data series, here we observe considerable decreases in its MVL value, particularly at higher steps. This suggests that as the government becomes responsible for financing the social aspects, parties become less willing to offer individual floats of JPI and JPB, and a greater likelihood of restricted foreign ownership arises. Intuitively, this might be interpreted as reluctance to allow others to profit from a more commercially-oriented JP whilst the state supplies non-commercial activities through it.

Figure 9-6 Probability of issue reform after stepping MVL3 and MVL7
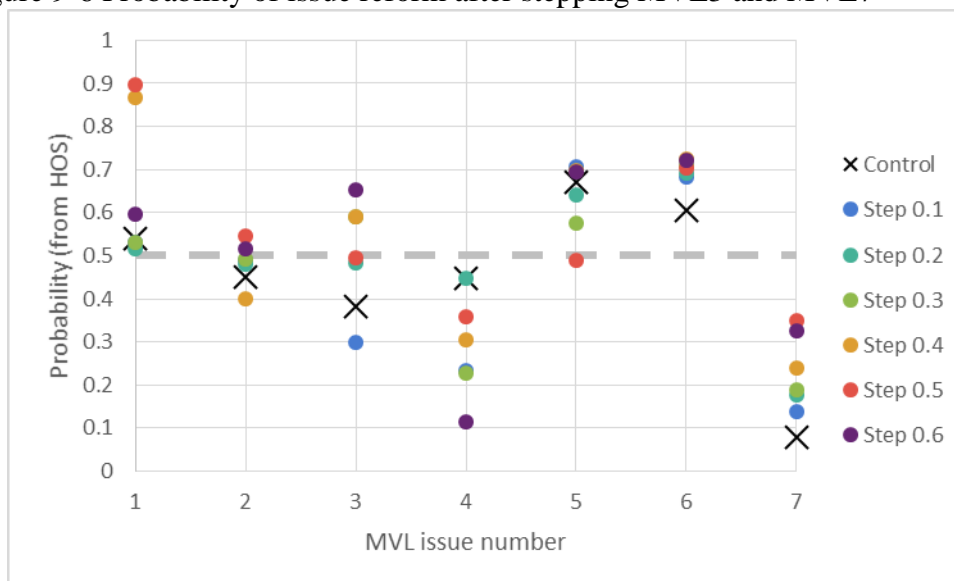
As with Figure 9-4, Figure 9-6 presents the likelihood of each issue reforming. By comparison there is considerably more variance in each step's respective probability values. Steps of 0.3 and 0.4 produce four issues with a greater than even chance of reform whilst a step of 0.6 yields five issues with probabilities greater than 0.5. Steps of 0.4 to 0.6 produce efficacy index values of 0.5946, 0.5999, and 0.5669 respectively, suggesting that whilst still short of the 'ideal', applying Section Seven of New Zealand's SOE Act represents a significant improvement in the overall likelihood of reform.

9.6   The Impact of Changed Attitudes to Reform

Another possible alternative examined here is to analyse the effects of changing attitudes to reform by adjusting initial player positions over *every* issue, singularly, in groups, and finally by raising consensus. This is done by incrementally increasing positions over all MVL-issues in steps of 0.1, representing increasing support for reforms[124]. However, as players have different positions on each of the issues, a limiter was installed whereby once position over a particular issue reached +1, no further steps could be applied to that issue[125]. The maximum step applied in these tests had a magnitude of 1. Data were generated for individual

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[124] Or, depending on the player, less opposed to the issues, but this is a matter of semantics.

[125] For instance, if a player had a position of 0.7 over MVL1 and 0.4 over MVL2, a step of 0.4 would raise the initial positions to 1 and 0.8 respectively; the limiter ensures that only 0.3 can be added to MVL1 and 0.6 added to MVL2.

players, joint action from the three major reform groups, and finally all player groups shifting simultaneously. The figures are presented in Table 9-1

Table 9-1 Incremental steps to position over every MVL-issue

| Unilateral actions	Runs	Average efficacy	# better outcomes	# worse outcomes	Best outcome	Step needed
LDP reform elements	8	0.4957	7	1	0.5118	0.7
DPJ reform elements	9	0.4615	2	7	0.5055	0.1
Business community	9	0.4927	8	1	0.5089	0.9
Ministry of Internal Affairs and communications	10	0.5134	7	3	0.5623	0.9
Ministry of Finance	10	0.5242	8	2	0.5634	0.8
LDP opposition elements	10	0.5037	9	1	0.5568	0.9
Kamei group	9	0.5361	8	1	0.6133	1
DPJ opposition elements	9	0.4809	2	7	0.4949	1
Multilateral actions	**Runs**	**Average efficacy**	**# better outcomes**	**# worse outcomes**	**Best outcome**	**Step needed**
LDP reform elements & DPJ reform elements	10	0.4963	9	1	0.5181	0.9
LDP reform elements & Business community	9	0.5220	9	0	0.5487	0.7
DPJ reform elements & Business community	10	0.4945	9	1	0.5101	0.5
LDP reform elements, DPJ reform elements & Business community	10	0.5403	10	0	0.5833	0.3
Global action	**Runs**	**Average efficacy**	**# better outcomes**	**# worse outcomes**	**Best outcome**	**Step needed**
All players	10	0.7346	10	0	0.8321	1
Control run		0.4828				

9.6.1 Shifts in the reform attitudes of individual players

Table 9-1 shows the greatest changes to average efficacy from unilateral action deriving from opposition players. In rank order, the best results for reform supporters come from changes to the 'Kamei' group, the Ministry of Finance, the

Ministry of Internal Affairs and Communications, the LDP opposition elements, the LDP reform elements, the business community, and finally the DPJ reform elements. The findings appear logically consistent as players who already support reforms have less 'headroom' than opposition forces. Similarly, larger steps are more likely to cause a change in MVL sign whereby reform forces can then bring other strategic options to bear. Larger steps are also generally associated with higher efficacy values, particularly for the 'Kamei' group, LDP opposition, and DPJ opposition elements, however larger steps also imply greater changes in attitude and therefore become proportionately less likely for these players given their views on privatisation.

Without exception, changing attitudes of single players resulted in some MVL values rising and some MVL values falling, indicating that a single player acting in isolation does not have the capacity to cause global gains; some compromises must be made as Figure 9-7 and Figure 9-8 exemplify.

Figure 9-7 Probability of issue reform: stepping all issues - LDP reform elements
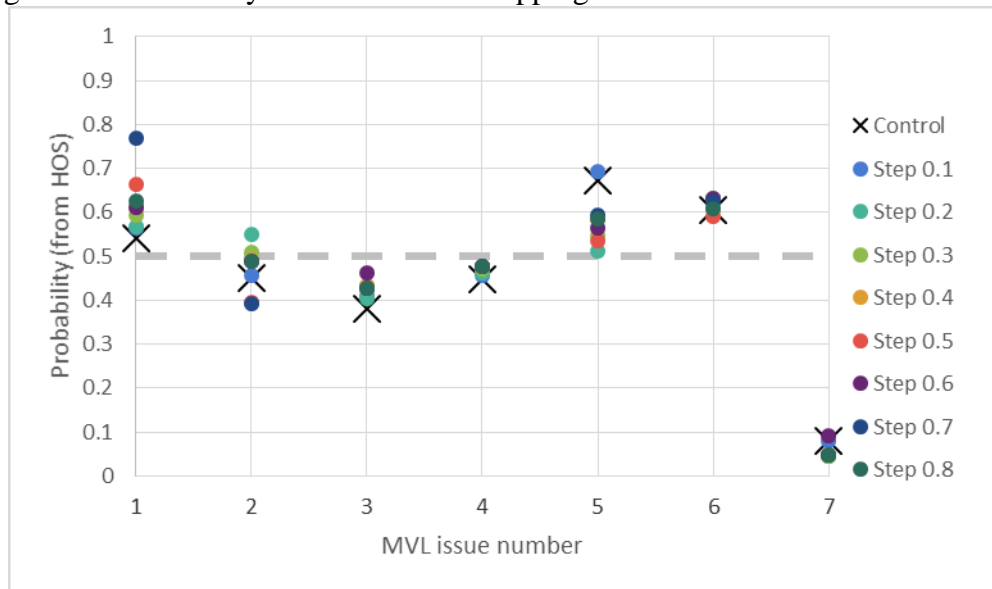
By increasing the LDP reform element's initial position to reflect a stronger reform attitude over all issues, *separation* (MVL1) increases over all runs although losses can occur elsewhere, particularly in *operations* (MVL5). Nevertheless, all runs except step 0.5 produce slightly higher efficacy values than the control run. Whilst this player is the most supportive of reforms and therefore has the least 'headroom' for position steps, it is also the most powerful, meaning that the exchanges, challenges, and salience lobbying it enters into have proportionately more impact on other players.

Figure 9-8 Probability of issue reform: stepping all issues - 'Kamei' group
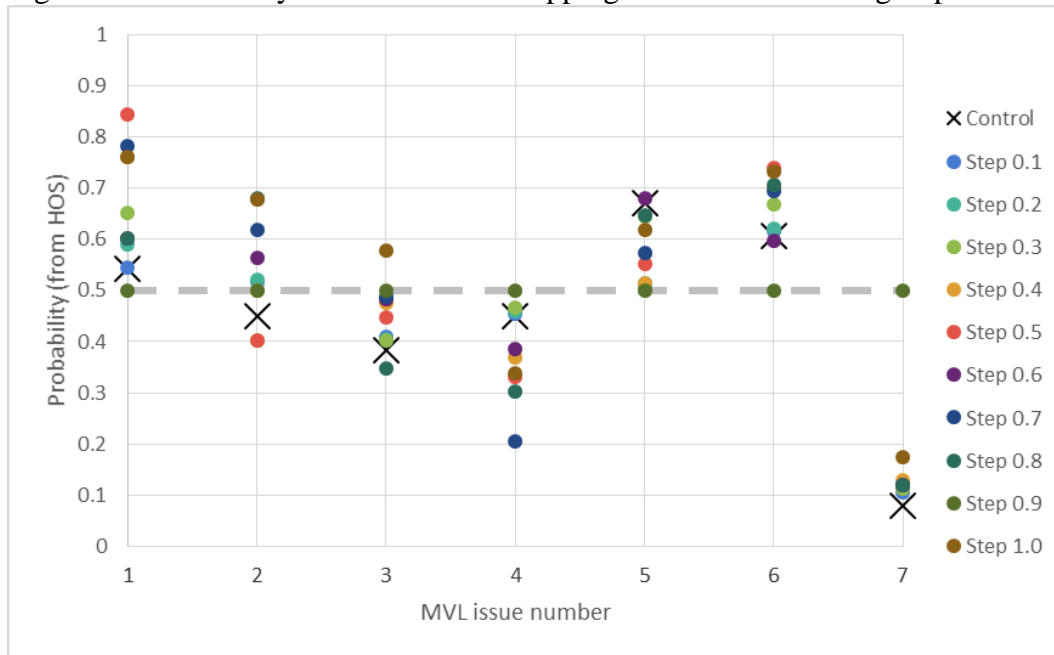
The 'Kamei' group runs display considerably more variance than the LDP reform group runs. In this sense the results comply with expectations as higher positions are associated with disengagement of its activation matrix[126], meaning that as their attitudes shift more towards support they take less opposing action. For the most part, reducing this player's opposition has significant positive effects on the first three issues although *shares* (MVL4) and *operations* (MVL5) decrease considerably. Nevertheless, the weighting coefficients of the efficacy index are such that, overall, the gains in the first three issues more than compensate for losses over *shares* (MVL4) and *operations* (MVL5).

It is also interesting to note that of the DPJ reform group's nine runs, seven of them result in *worse* outcomes. This is due in part to its relatively weak clout value whereby it must give significantly more ground than more powerful players. Excluding the DPJ reform elements, increasing support for reforms via unilateral action can improve outcomes. However, as the largest gains result from changing the attitudes of opposition forces these scenarios are probably more difficult to engender than changes to reform-oriented players.

9.6.2 Shifts in the reform attitudes of groups of players

The three player groups that most support reform are the LDP reform elements, the business community, and the DPJ reform elements. From this

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[126] Even the first step of 0.1 disengages the 'Kamei' group's initial activation over MVL5 and MVL6.

triumvirate, four possible combinations arise and the results are summarised in Table 9-1. For the most part, multilateral action affects outcomes positively however out of the 39 runs performed, two create slightly worse outcomes when the DPJ reform elements are paired with another partner. Table 9-1 also indicates that best results for reform occur from the combination of all three reform-oriented parties followed by joint action from the LDP reform elements and the business community.

Figure 9-9 Probability of issue reform: stepping all issues - LDP reform elements & business community
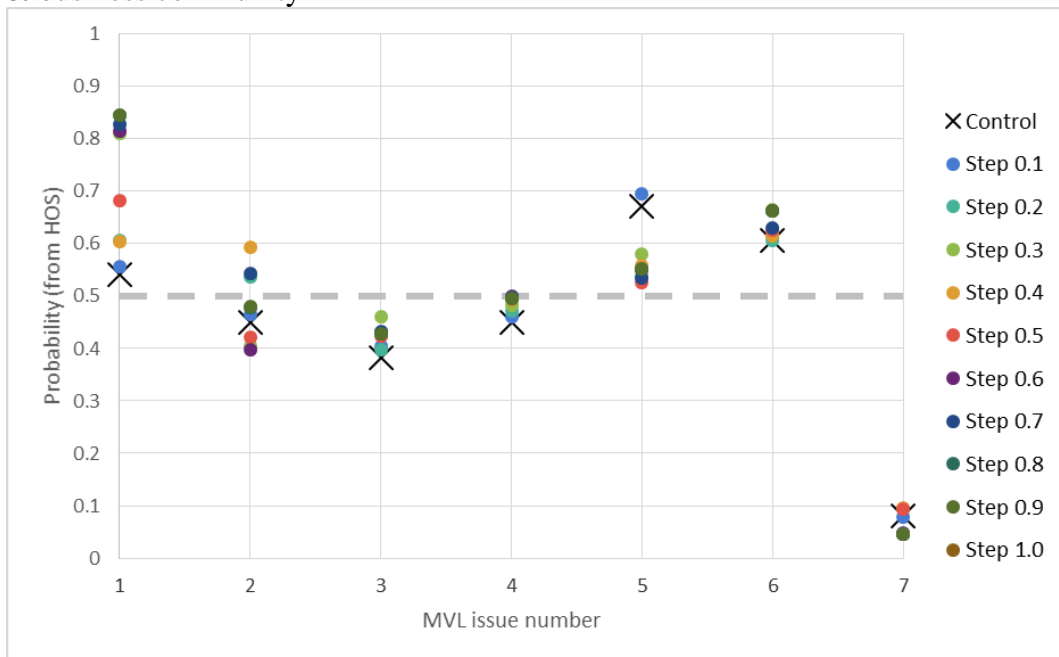
Figure 9-9 shows joint action from the LDP reform elements and the business community producing better outcomes than the control run for most issues. Steps of 0.2, 0.4, and 0.7 produce four MVL-issues where the probability of reform is greater than 0.5. The step of 0.7 offers the highest efficacy value from this series where *separation* (MVL1), *playing field* (MVL2), *operations* (MVL5), and *asset management* (MVL6) issues are more likely to pass.

Figure 9-10 Probability of issue reform: stepping all issues - LDP reform elements, DPJ reform elements & business community
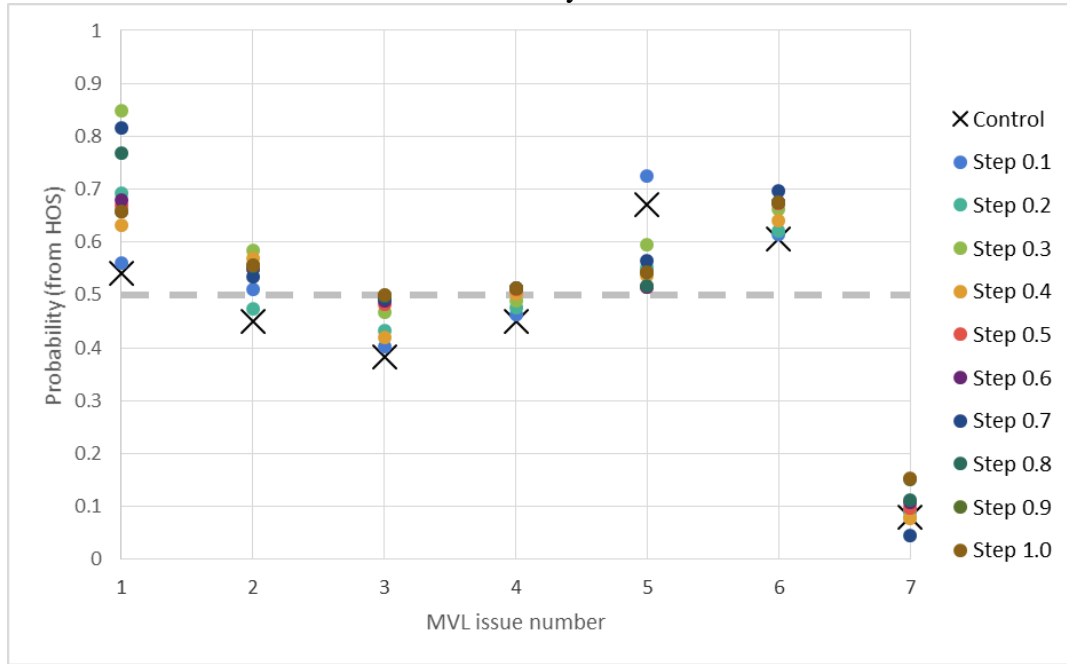
Figure 9-10 shows action from the three reform-oriented players improving outcomes for most issues except *operations* (MVL5) and *minimum network* (MVL7). However, even though concessions over operational independence are made, it is still more likely than not to pass. The step of 0.3, representing a moderate increase in reform attitudes, has the highest efficacy index of 0.5833. However, steps of 0.4 to 0.8 yield five MVL-issues with probabilities of 0.5 or greater and steps of 0.9 and 1 yield six. These results suggest that multilateral action can significantly affect reform outcomes. Figure 9-11 offers a comparative illustration of the effects of multilateral action against the control run in terms of the efficacy index.

Figure 9-11 Efficacy values from multilateral action
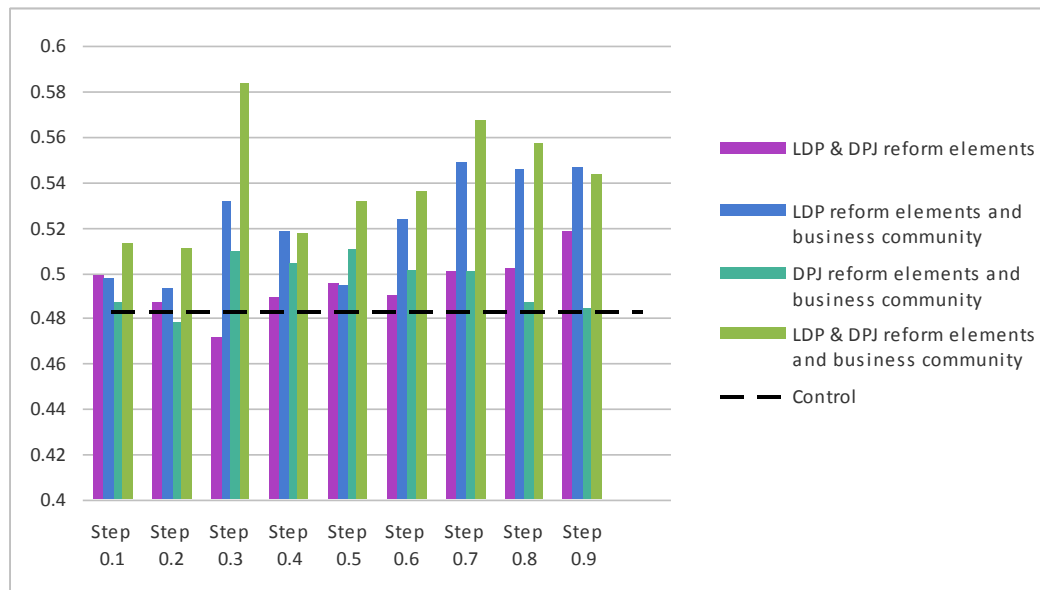
For the most part, multilateral changes in reform attitudes increase the efficacy index above its control value. Bigger gains are generally associated with greater shifts and between the four possible combinations joint action from all three players is most preferable followed by the LDP reform elements/business community pairing.

9.6.3 Shifts in the reform attitudes of all players

The last series of runs measures the effects of stepping the initial positions of *all* players upwards, representing a greater consensus favouring reform. Logically inferring higher outcomes, this test would therefore also expose anomalous behaviour in the model. Without exception, every step resulted in higher probabilities than the control run. Probabilities for individual runs are compared against the control run in Figure 9-12.

Figure 9-12 Probability of issue reform: global position steps
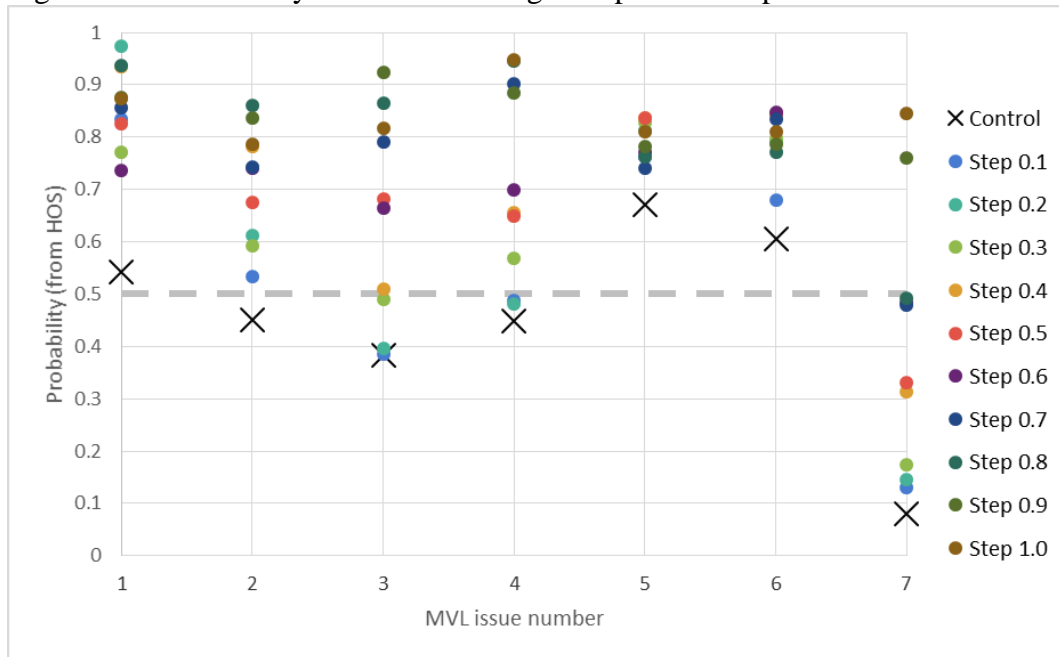
Whilst the probabilities of MVL-issue reform universally increase, the gains themselves do not uniformly increase as Figure 9-13 illustrates:

Figure 9-13 MVL values from global position steps
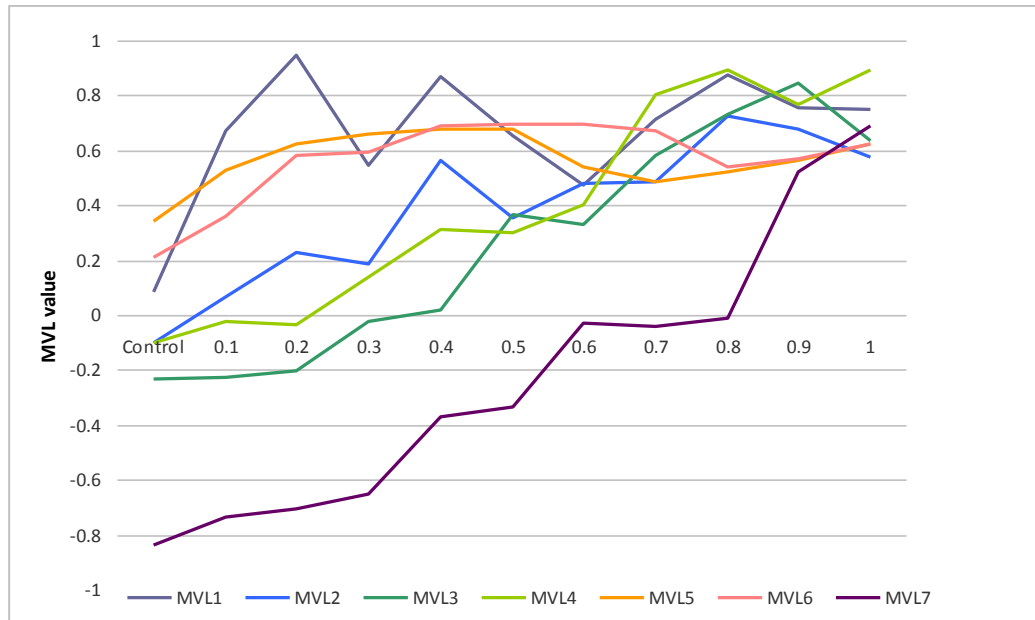
The control run appears at the extreme left and the progression of each issue follows its respective colour-coded line as step magnitude rises. At no point do steps result in values lower than their control probabilities but the changing dynamics create some peaks and troughs. The most difficult issues to cross into positive values (where the probability of reform is greater than 0.5) are the *minimum network*

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(MVL7) and *universal financial services* (MVL3) issues, although *universal financial services* (MVL3) requires a smaller step. This is interesting as it was these very issues that were addressed earlier through the 'Section Seven' runs.

9.6.4   Summary: Global position shift

An increasing consensus favouring reforms produces the greatest increases in MVL values and accompanying efficacy index values. Whilst this would be most preferred for the reform-minded individual, it is also the least likely as it represents all factions moving towards Koizumi's viewpoint. Changing attitudes for individual players can also produce gains although there are many cases where the actions of weaker players can result in outcomes worse than the control run. Even for the strongest players, compromises have to be made, which indicates that a player acting in isolation is insufficient to foster positive change across all issues. However, when a coalition of reform-minded players simultaneously revise their attitudes, compromises become comparatively smaller relative to observed gains. Joint action between the LDP reform elements, DPJ reform elements, and business community represents the better option, although the outcomes from the LDP reform elements and business community pairing is also preferable to the control run. The likelihood of these 'coalitions' arising is greater than fostering a change in consensus; they are also more effective than players acting individually and therefore represent an attractive strategic alternative to increase the probability of reform.

9.7   Chapter Conclusion

By integrating the analyses presented in Chapter Six and Chapter Eight, Chapter Nine has developed a simulated institutional environment for Japan Post. Whilst the institutions of distorted savings incentives, diversion of public funds, and lobby influence have been weakened and outsider governance has been installed at the executive level, stakeholder wealth maximisation, cross-subsidisation, and stable holding are expected to remain. When viewed in their entirety, the reforms enacted to date and the model's simulated outputs constitute only a partial reform that creates a number of internal inconsistencies. One of the greatest concerns is the increased freedom and scope to expand into new business and thus infringe upon the private sector whilst retaining a number of artificial advantages, entry barriers being a chief example.

It is argued that a critical factor hampering the effectiveness of Japanese reform is the continued entanglement of social and commercial objectives. A clearer distinction is suggested to be superior to the current arrangement as it would clarify objectives and separate otherwise incongruent governance principles and incentives. The delineation of social and commercial objectives is argued to represent a 'keystone' for the Japanese experience and the ineffectiveness of the observed partial reform is largely due to their continued amalgamation. The basis for this claim derives from a comparative analysis of JP and NZP. Separation of social and commercial objectives was a key part of the New Zealand experience and was achieved through the SOE Act. The importance of this point becomes clearer when noting that the initial goals of the Japanese and New Zealand governments displayed marked similarities. In New Zealand, where social and commercial goals had been separated, NZP has since become a commercially successful company, returning dividends and taxes to the state almost every year whilst simultaneously improving service performance and even claiming the title of "Company of the Year". Such results would likely not have materialised if not for the effective separation of objectives.

Reforms in Japan have been shown to suffer more delays and dilution at the hands of opposition forces than New Zealand. In New Zealand, resistance was overcome by a combination of factors including reform speed and scope, legislative support, a continued commitment to neoliberal ideology from both major political parties, and a conciliatory approach from management.

Whilst some of these lessons may be difficult to implement in Japan, Section Seven of the SOE Act offers a potentially viable alternative. Using this legislative device, the Japanese government could 'purchase' the non-commercial activities, represented in the simulation by *universal financial services* (MVL3) and *minimum network* (MVL7). This would maintain current service levels and assuage (some) opposition fears, thereby increasing the likelihood of reform. It would also be a step towards objective separation; if the government were to finance the socially-leaning aspects, JP would be more able to focus on commercial concerns and apply corresponding models of corporate governance. This arrangement would, however, require transparency and proper accounting methods to ensure that the true cost of providing such non-commercial activities is correctly estimated and properly communicated.

The chapter also found that changing attitudes towards reform, represented by increasing position on all issues, also produced higher MVL values. If this were to occur there is a corresponding greater probability for reform. Nevertheless, to claim truly successful separation of social and commercial objectives with reasonable conviction would require changes in reform attitudes to a point where all MVL-issues are positive. Although this is not impossible, it would be difficult.

10 Conclusion

This thesis conducts a comparative study of institutional change and in doing so examines the economic issues in reforming New Zealand and Japanese postal services. Using Institutional Economics as a theoretical foundation, it examines the initial institutions that constrained both systems and tracks reform and institutional evolution. The study is important as Japan is currently privatising its postal system, which is widely considered a significant milestone towards greater structural reform. The work represents a more timely approach to studies of institutional change as many focus on comparative institutional changes retrospectively. Through the use of the simulation model, however, comparisons can be drawn against simulated outcomes.

10.1   The Story So Far

Constructing a comparison begins with the New Zealand case described in Chapter Five. By the 1980s, the initial institutional environment had become ill-suited to efficiency, constrained competition, and served state welfare objectives relating to employment creation. Reforms were implemented in response to a declining economy and falling international competitiveness; covering broad swathes of the economy, they included the landmark State Owned Enterprises Act, which this study identifies as a critical element in separating ownership from governance and disentangling commercial and social objectives. The separation of social and commercial objectives was found to be one of the highest ranking objectives of the state and I contend that their division represented a 'keystone' of the reforms as their integration had created many of the problems faced by NZP.

One of the major gaps in New Zealand's reform literature was the matter of how resistance was overcome. To address this issue, I conducted a series of interviews with range of participants who had intimate knowledge of the New Zealand experience. It was found that resistance was minimised through careful use of legislation, the wide scope of reform, rapid implementation, and managerial acuity. The resulting post-reform institutional environment represents a paradigm shift and is much more conducive to efficiency and competition.

This study also offers an answer to the question of why NZP was corporatised, but never privatised. Interview data suggest that a number of factors culminated in the decision not to privatise NZP, the most significant of which were

the ongoing commercial success of NZP and a change in the political landscape that reflected the public's hesitance regarding further asset sales.

The analysis then turns to tracing the Japanese experience and is described in Chapter Six. Expert interviews were conducted here as well to establish a better understanding of changes made since 2005. A similar pre-reform institutional environment was found although one key difference was the connection between JP and the Fiscal Investment and Loan Programme, a primary source of economic inefficiency. Whilst government bonds did make up a similar proportion of New Zealand's postal savings bank, the size of the bank, and the actual amount of government bonds held was trivial by comparison. Prior to reform, the amount of money Japan Post had invested in JGBs was over 1,700 times more than its New Zealand counterpart.

Discussions with interview participants indicated that postal privatisation was considered to play a key role in greater structural reform and capital market revitalisation. Reform implementation occurred but only by way of concessions, coercion, and Koizumi's leadership. Delays and interferences from successive administrations hindered progress. The chapter concluded by charting reform evolution to the present date, providing the basis for the simulation model developed in Chapter Seven to predict final expected outcomes.

The model simulates negotiations between an array of players over a selection of issues. It is based upon the principle that greater support for an MVL-issue's proposal corresponds with a greater likelihood of that proposal being adopted. Initial inputs are derived from expert opinion. The model synthesises approaches used in other investigations and supplements them with additional player strategies and functionality. Extensive original contributions are made through the algorithms developed for salience lobbying and position exchanges. The facility to override default behaviour also represents a significant innovation in this field as it allows a wider range of underlying assumptions to be explored. Its complexity[127] is such that it can process much more information than thought experiments and therefore can return interesting and potentially counter-intuitive results.

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[127] Recall that for this application covering seven issues with eight players, 1.2 million equations are processed in 3,300 calculation centres.

Detailed results of the simulation appear in Chapter Eight where the control run estimates final outcomes. The group is expected to maintain its three-unit structure in addition to the holding company, the playing field remains tilted in favour of JP, and universal service extends to financial products. Share sales will likely not include separate floats of JPB and JPI, although the units are expected to be given greater freedom with less government interference in terms of operations, personnel, and asset management. Finally, the simulation also shows that there is a very high likelihood that the minimum network presence clause will remain in place.

Using the simulation's outputs, Chapter Nine presents an image of the expected institutional environment. Whilst some of the institutions are weakened relative to the pre-reform arrangement, many of them remain in place; cross-subsidisation, stable shareholding, and stakeholder wealth maximisation in particular. Comparing the two countries shows that the progenitors of reforms shared a number of similar goals. Nevertheless, the study shows that New Zealand was able to enact proposals and conclude reforms. Only a partial reform appears in Japan and produces a number of inconsistencies, not least of which is the threat to the private sector an expanding JP constitutes.

I contend that one of the primary factors hampering reform efforts in Japan is the continued intertwinement of social and commercial objectives as this obfuscates corporate governance practices, misaligns incentives, and perpetuates many of the pre-reform institutions. As the goals of the original reformists in New Zealand and Japan shared many similarities and the separation of objectives was a vital part in the New Zealand experience, I suggest that separation of social and commercial objectives is also a 'keystone' of the Japanese reforms and without it, reforms may remain partial and ineffective. With respect to this point, Chapter Nine offered an alternative whereby the socially-leaning MVL-issues were assumed to be purchased by the state; the resulting outputs yielded a higher probability of overall reform. This is doubly encouraging when considering Boycko et al. (1996), who note that the cost of subsidies from the Treasury are related to monetary policy. A loose monetary stance reduces the costs of subsidisation. Japan's stance is very loose. A secondary alternative was also proposed whereby if reform forces were to polarise initial positions over all issues, the likelihood of reform also increases although the requisite actions leading to such changes in initial positions would be the subject of further research.

10.2   Implications

The findings of this study present some contributions to institutional change theory within IE, primarily by supplying empirical evidence from two separate reform instances. The study finds that external changes in the pre-reform institutional environments created problems and in response a series of changes were proposed. Furthermore, in the case of New Zealand, the interlocking institutions were reformed simultaneously and with NZP having relatively high cognitive openness, successful changes were made very quickly. In Japan, it appears that there is a degree of inconsistency that may result in a longer transitory period. Both of these two conclusions support the notions presented in institutional change theory.

There are also some implications for the privatisation literature. Whilst the Japanese section of the work concurs with Peng (2002) in the sense that reforms can be diluted following the departure of their progenitors, it also presents evidence to the contrary via the New Zealand experience whereby reforms were continued despite a change in government. This was perhaps due to the pervasiveness of neoliberal ideology in both major parties at the time.

Child-Hill and Fujita (2000) contend that close ties between politicians and the bureaucracy can hamper reform efforts. This study supports the claim in both the positive and negative contexts as dilutions were witnessed in Japan where close ties exist, but not in New Zealand, where reforms were implemented as intended.

The simulation model used to complete a pre-reform/post-reform image of Japan has a number of implications for advancing multi-player multi-issue negotiation theory. At the time of writing, it is one of very few models of this type to numerically process three distinctive strategic options, which therefore places it amongst the most sophisticated alternatives. Although the Stokman model also proposes three strategies, some components are manually processed, which limits the number of players and issues that can be analysed. Similarly, some models consider only the more motivated and able players to be active, while other models assume that all players are active over all issues. The model provided here has the facility to accommodate both sets of assumptions and can do so on a player-specific, issue-specific, and round-specific basis[128]. Thus, whilst inspired and adapted from

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[128] The override can be engaged at the start of, or during negotiations.

existing work, the model proposed here represents an advanced alternative for future negotiation analyses.

10.3   Limitations and Further Avenues of Research

Despite the contributions offered by the model, it must be noted that there are a number of limitations surrounding it.   Offering three strategies to players increases the complexity of the simulation and as such it necessitates a greater number of behavioural assumptions than more simplistically elegant ones. Whilst great effort has been expended to make them as logical and plausible as possible, it may result in a constricted view of behaviour.

The three input metrics are taken as given and their drivers remain exogenous. Position, for example, as determined by expert opinion, plays a critical role in many elements of the mechanics. The shock analysis indicates what might happen if inputs were to change due to exogenous forces but these forces remain unexplored. Examining the drivers of player inputs therefore presents an opportunity for further research and greater application. Investigating, for instance, the effect the intensity of media coverage has on position and salience could endogenise more factors and improve future designs. Exploring drivers for all inputs would likely require a series of studies.

Whilst the facility exists, the model has not been tested on different scales. It is hypothesised that the populations of smaller negotiations are more likely to all be active than larger ones but this is a matter beyond the scope of this thesis. Nevertheless it remains a fascinating question that could be addressed.

Being experimental, the model has not been applied to many other applications and whilst based on successful pre-existing constructs, it remains to be seen if such a complex alternative produces results that are more accurate. This in itself offers an opportunity for future research; the position/salience/clout input mix is common to models of this type and with a few minor transformations, initial values from other studies could be transferred and ensuing results compared to actual outcomes. Similarities and discrepancies might then be used to produce more sophisticated designs and augment our understanding of the dynamics of multilateral negotiations.

In Chapter Three, one point the literature raised was the notion of value differentials between the government and the private sector, and the consequent influence upon receipts that can be expected from share sales. Given that the

simulation shows a number of factors constraining JP (universal service obligations, maintaining a minimum network presence, and possibly less-than-open share sales) it may prove interesting to examine the links between these constraints and the perceived value of shares in JP.

Another line of enquiry that this study identifies but does not pursue is the matter of whether 'full' privatisation is necessary for effective reform. This study shows that NZP has been made into a competitive organisation but questions of whether even greater performance may ensue from private ownership still remain unanswered. These questions could also extend to the institutional environment as well: given an appropriately constructed institutional context, does state ownership or private ownership make a considerable difference?

Appendix A: Expert Interview Questions for New Zealand

Question 1:

In the early 1980s New Zealand's macroeconomic conditions could be summarised as follows:

- growth approaching 0%,
- high levels of protectionism and government intervention,
- weakening domestic competitiveness, and
- high inflation and large levels of public debt (32% of GDP by 1984).

Do you think the underlying macroeconomic conditions in the early to mid-1980s were a contributing factor in the perceived need to reform the post office? How so?

Question 2:

During the early 1980s to the early 1990s the government exhibited a desire to reform the overall economy. Did the government's desire to reform the rest of the economy translate into a desire to reform the post office, or was it just more convenient to do it at the same time? Was it seen as a critical part of the overall reform process?

Question 3:

A major part of the reforms carried out was the separation of mail operations, banking, and telecommunications, which then followed their own distinct reform processes. What made it possible to separate these units?

Question 4:

The post office was corporatised, but never fully privatised. Why do you think that was?

Question 5:

In studying the literature surrounding the corporatisation of New Zealand Post, I was unable to firmly identify major opposition to the reforms. Overall, the reforms seemed to be implemented with a minimal amount of dilution: meaning that the actions taken were what was initially proposed, there were very few (if any) concessions made to interest groups.

- Do you think there was any resistance to the move to corporatise NZP? If so, where from and how strong do you think that opposition was?
- Do you know of any reasons why the reforms were so easily implemented?
- Do you think there were any dilutions/concessions made?
- Do you think there were any factors that made the reforms harder to implement?

Question 6:

How did the staff react to the prospect of reform? Was there much opposition to reform at a managerial level? What about at operational levels? Do you know if they actively opposed the prospect of redundancies or were they more accepting (if only begrudgingly so)?

Question 7:

Outside managers and directors were appointed to the post office. What do you suppose the reason was for appointing outside managers and directors? Do you think they were able to help placate internal opposition? How so? Do you know if these managers and directors had any pre-existing relationships with the post office?

Question 8:

Were the unions involved in decision making processes at the post office? How much power do you think they possessed in relation to management?

Question 9:

The rural sector appeared to oppose the reforms. Do you know how that opposition was overcome? Were their concerns addressed?

Question 10:

Did postmasters in New Zealand have their own unions? Were they in a position where they had political power? How do you think the community perceived postmasters?

Question 11:

The post office agreed to the removal of the rural delivery fee in the Deed of Understanding. Why did they agree to it? Did they oppose it? To what degree?

Question 12:

If we were to assume for a moment that the corporatisation of New Zealand Post could be called 'successful' on the criteria I have specified:

- being turned into a profitable company,
- producing those profits in a competitive, lightly regulated market open to competition,
- being able to act like a private company with a minimum of political interference, and
- increasing delivery efficiency and reducing overheads.

What do you think were the key features behind that success? Are there any reservations you have about labelling it as 'successful'?

Question 13:

As far as I can tell, the state seemed to have four major objectives for the reform of the post office:

(1)   to reduce the presence of the state within the economy,

(2)   to raise profitability of the post office,

(3)   to increase efficiency, and

(4)   to disentangle social and political goals from commercial concerns.

If we limit ourselves to these objectives, would you mind putting these in what you think the order of importance was to the government?

Appendix B: Expert Interview Questions for Japan

Question 1:

In your mind, who are the major factions for postal privatisation? These could be whole parties, groups within the parties, or their support groups.

Question 2:

In your mind, who are the major factions against postal privatisation? These could be whole parties, groups within the parties, or their support groups.

The next few questions specifically relate to the time when Koizumi was Prime Minister.

Question 3:

From the government's perspective, how was the privatisation of the post office seen? That is, was it designed to be part of an overall package or a stand-alone project?

Question 4:

How did Koizumi manage to push his reforms though?

      Follow up: What methods did he use to overcome resistance?

      Follow up: Was his personal leadership a factor?

      Follow up: What concessions did he make?

Question 5:

It has been suggested that during Koizumi's term, one of the reasons for the delays to the programme was due the government's reluctance to confront LDP members who had strong connections with the post office and/or its support groups. What are your thoughts on that?

Question 6:

During the Koizumi administration, the initial proposal was to separate postal savings into regional units – not unlike the case of Japan Rail. LDP members were cautious about regional units. Eventually, it was decided that postal savings would remain a single unit nation-wide. Why do you think that members within the LDP would have been hesitant towards regional providers?

Question 7:

Whilst Koizumi was in power, the DPJ did not out-rightly oppose privatisation. Do you think there was a political or strategic motivation behind this?

> Follow up: Do you think there was any link in wanting to break the LDP's relationship with the postmaster support group?

Question 8:

Was there anyone under the Abe administration who really pushed against privatisation?

The next few questions relate specifically to the Aso administration

Question 9:

Political interference with respect to the post office seems to be more prevalent under Aso than the other LDP led administrations. Why do you think that is?

Question 10:

During Taro Aso's term as Prime Minister, the Association of Commissioned Postmasters had switched their support from the LDP to the PNP and DPJ. The newspapers at the time also suggested *Zentoku*'s ability to influence votes was a key factor in explaining some of the dissenting views in the LDP. What do you think?

Question 11:

How much dissent was there in the LDP under Aso?

The next two questions focus on the Hatoyama administration

Question 12:

During the DPJ's term in office, the deposit cap was raised to 20 million yen. Do you think there was any relation between the raising of the cap and the falling revenue of the post office and declining sales of JGBs?

Question 13:

In April 2010, the DPJ arranged for temporary workers to become full-time workers under a scheme suggested by Shizuka Kamei. What do you think the motivation behind it was?

These questions are not specific to any particular administration

Question 14:

How strong is *Zentoku*? How do they apply pressure? Did they pressure the LDP? What are their aims? How do they apply pressure: to individuals or to parties?

Question 15:

How strong are the postal labour unions? Are they factional or are they united?

Question 16:

Is there any relationship between the pro-farm LDP politicians and the pro-post office?

Question 17:

Are members of various factions in the political parties likely to defect to other factions able to gain more influence? What I mean is that if one faction begins to enjoy a greater amount of influence, does this bring in members from rival factions? Is there a chain reaction?

Finally, I have a few questions to ask you that will be used to fine-tune my simulation model:

There are three variables I include in the model:

1. Position: whether they are for or against something – like being for or opposed to raising the deposit cap.
2. Salience: how important an issue is to a player.
3. Clout: the amount of power the player has to influence the outcome of a negotiation over a given issue.

Question 18:

When a player forms a position over an issue, what do you think drives it? What sorts of factors are important in determining whether someone will support or oppose a given piece of reform?

Question 19:

What sort of things might cause a player to change their minds about an issue? For instance, if the public began to support privatisation more, would that change a player's mind?

Question 20:

What would it take to alter a player's salience over an issue? What would need to happen to make them fight harder (or less hard) for an issue?

Question 21:

What do you suppose determines the amount of power a player has in a negotiation? Where do they get power from? I mean, is it related to the amount of votes they can gather for the party for instance.

Question 22:

How do you suppose that players would attempt to change other players standing on an issue? How would they try to influence the perceived importance of an issue to other players? How (if indeed they can) would they influence the power of other players?

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Appendix C: Expert Survey

Survey of group inputs

Thank you very much for taking the time to complete this survey. The data collected here will be used as part of my study into reforming Japan Post. All data submitted in this survey are confidential and individual responses are not identifiable.

This survey asks you to consider the following groups who have been identified as having a role in the reform process of Japan Post. Please provide your expert opinion over three variables: *Position, Salience,* and *Clout* over the issues on the following pages.

For purposes of this project, the groups are as follows:

Group name	Brief description
LDP coalition reform elements	This covers the sections of the LDP and New Komeito that support privatisation, including Mr Koizumi, Mr Takenaka and the committees they worked with. Also included is "Your Party" and other supporting members such as Tetsuzo Fuyushiba.
DPJ coalition reform elements	Sections of the DPJ that support the privatisation in principle even though they may not agree on the details. This includes individuals such as Kazuhiro Haraguchi and Seiji Maehara.
Business community	Organisations such as *keidanren*, the Regional Bankers' Association, the Bankers' Association of Japan and other institutions. Note please that this does not include special corporations connected to the FILP.
Ministry of Internal Affairs and Communications (MIAC)	Please consider the ministry's overall stance.
Ministry of Finance (MOF)	Please consider the ministry's overall stance.
LDP coalition opposition elements	The sections of the LDP who oppose privatisation. Examples include Taro Aso, Seiko Noda, Kohei Tamura, Kenji Furuya etc.
"The Kamei Group"	This includes groups who are fiercely opposed to privatisation – as was Shizuka Kamei. It includes the Association of Commissioned Postmasters (*Zentoku*), Association of Retired Postmasters (*Taiju*), the postal workers' union, and special corporations attached to the post office or through FILP. The Japanese Communist Party and The Social Democratic Party are included here too.
DPJ coalition opposition elements	The elements of the DPJ and Japan Restoration Party that oppose privatisation but not as strongly as "The Kamei Group".

Position refers to a given player's standing over an issue. It is in regards to the phrasing of a proposed issue, values range from 0 – 100 where 0 means completely opposed and 100 means completely supporting, an answer of 50 means that the player is neutral.

    For example, a player who supports separating the business units of Japan Post would have a *position* value between 51 and 100, depending upon their degree of support.

Salience refers to a given player's perceived importance of a given issue in regards to all other issues pertinent to privatising Japan Post. Salience is also measured from 0 – 100 with 0 meaning that the issue is not important at all, 100 meaning that the issue is more important than any other issue and the player would drop everything to attend a meeting about it. 50 meaning that the issue is of average importance.

Clout refers to a given player's power to influence a given issue. This includes the actual power of the player and the ability of the player to influence other players in the simulation. Once again it is measured from 0 – 100 where 0 refers to a player having no power, 100 implying that the player has more power than anyone else. 50 meaning that the player has moderate power. Please note that total clout need not sum to 100, you need only provide a relative figure.

As a summarised guide, the index values for *position, salience* and *clout* appear here with their descriptive connotations.

Index value	Position	Salience	Clout
0	Totally opposed	Completely unimportant	No influence
10	Majorly opposed	Very unimportant	Very little influence
30	Moderately opposed	Marginally unimportant	Some influence
50	Neutral	Average importance	Moderate influence
70	Moderate support	Fairly important	Large influence
90	Major support	Very important	Very large influence
100	Total support	Most important	Dominance

Instructions for completing the survey:

Please enter a number you think best describes each player group's *position, salience,* and *clout* values in this document. When you have finished the survey, please save the changes and return it to me by email at your convenience. If you believe that a particular group is not involved in a particular issue, assigning a '0' to either salience or clout will remove that group from the issue.

Note on making judgements:

Please reserve your judgements to what you believe describes the player's attributes over an issue, it is not necessary for you to consider a projected outcome over an issue.

Please refer to the phrasing of the issue to determine whether a player group supports or opposes the issue. For example, the issue phrased as "Japan Post should be privatised" would be supported by 'LDP coalition reform elements' who would have a position value from 51-100, but opposed by 'the Kamei Group' who would have a position value from 0-49. Each issue appears with a continuum to act as a rough guide for how support and opposition is referred to.

Example of data entry

Example issue: Japan Post should be privatised.

Group	Position	Salience	Clout
"Example player"	85	90	15

Description: The example player is highly in favour of privatising Japan Post and believes it to be one of their most important issues. Unfortunately, however, they have very little influence in the decision making process.

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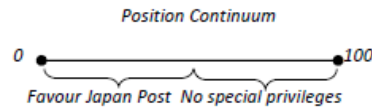### Issue 1: Separating Japan Post into Distinctive Units

This refers to severing the links between Japan Post Bank, Japan Post Insurance and Japan Post Co. and operating them as distinct and individual companies.

Group	Position	Salience	Clout
LDP coalition reform elements			
DPJ coalition reform elements			
Business community			
Ministry of Internal Affairs and Communications (MIAC)			
Ministry of Finance (MOF)			
LDP coalition opposition elements			
"The Kamei Group"			
DPJ coalition opposition elements			

Issue 2: Creating a Level Playing Field

This refers to removing special privileges and regulations surrounding Japan Post, allowing competitors to compete on an equal footing in the banking and insurance fields.

Group	Position	Salience	Clout
LDP coalition reform elements			
DPJ coalition reform elements			
Business community			
Ministry of Internal Affairs and Communications (MIAC)			
Ministry of Finance (MOF)			
LDP coalition opposition elements			
"The Kamei Group"			
DPJ coalition opposition elements			

Position Continuum

0 •————————————• 100

No separation Want separation

Position Continuum

0 •————————————• 100

Favour Japan Post No special privileges

Index value	Position	Salience	Clout
0	Totally opposed	Completely unimportant	No influence
10	Majorly opposed	Very unimportant	Very little influence
30	Moderately opposed	Marginally unimportant	Some influence
50	Neutral	Average importance	Moderate influence
70	Moderate support	Fairly important	Large influence
90	Major support	Very important	Very large influence
100	Total support	Most important	Dominance

Issue 3: Not providing universal financial services
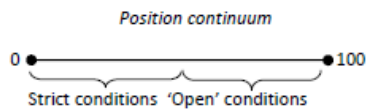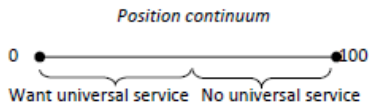
This refers to not requiring the nationwide provision of banking and insurance services. That is, players who want to place a requirement on Japan Post to provide universal financial services would exhibit positions between 0 and 49. Please note that universal provision of mail services is not considered here as that in itself was never contested.

Group	Position	Salience	Clout
LDP coalition reform elements			
DPJ coalition reform elements			
Business community			
Ministry of Internal Affairs and Communications (MIAC)			
Ministry of Finance (MOF)			
LDP coalition opposition elements			
"The Kamei Group"			
DPJ coalition opposition elements			

Position continuum

0 ●————————————●100

Want universal service   No universal service

Issue 4: Sale of shares

This refers to offering shares under more 'open' conditions, that is, listing shares from the banking and insurance units individually as opposed to listing just the holding company. It also includes allowing shares to be purchased by foreign investors. Players who support these ideas would exhibit positions from 51-100.

Group	Position	Salience	Clout
LDP coalition reform elements			
DPJ coalition reform elements			
Business community			
Ministry of Internal Affairs and Communications (MIAC)			
Ministry of Finance (MOF)			
LDP coalition opposition elements			
"The Kamei Group"			
DPJ coalition opposition elements			

Position continuum

0 ●————————————●100

Strict conditions 'Open' conditions

Index value	Position	Salience	Clout
0	Totally opposed	Completely unimportant	No influence
10	Majorly opposed	Very unimportant	Very little influence
30	Moderately opposed	Marginally unimportant	Some influence
50	Neutral	Average importance	Moderate influence
70	Moderate support	Fairly important	Large influence
90	Major support	Very important	Very large influence
100	Total support	Most important	Dominance

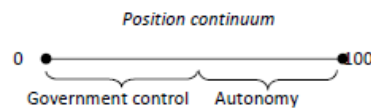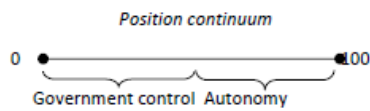## Issue 5: Managerial Autonomy – Operations and Personnel

This refers to allowing Japan Post to conduct operations and personnel decisions autonomously without government intervention. Please note network asset management is considered separately.

Group	Position	Salience	Clout
LDP coalition reform elements			
DPJ coalition reform elements			
Business community			
Ministry of Internal Affairs and Communications (MIAC)			
Ministry of Finance (MOF)			
LDP coalition opposition elements			
"The Kamei Group"			
DPJ coalition opposition elements			

Position continuum

0 ●————————⌣————●100

Government control Autonomy

Issue 6: Managerial Autonomy – Network Asset Management

This refers to allowing Japan Post to manage its network assets autonomously without government intervention. Please note the issue of maintaining a single post office in every village is considered separately in the next issue.

Group	Position	Salience	Clout
LDP coalition reform elements			
DPJ coalition reform elements			
Business community			
Ministry of Internal Affairs and Communications (MIAC)			
Ministry of Finance (MOF)			
LDP coalition opposition elements			
"The Kamei Group"			
DPJ coalition opposition elements			

Position continuum

0 ●————————⌣————●100

Government control Autonomy

Index value	Position	Salience	Clout
0	Totally opposed	Completely unimportant	No influence
10	Majorly opposed	Very unimportant	Very little influence
30	Moderately opposed	Marginally unimportant	Some influence
50	Neutral	Average importance	Moderate influence
70	Moderate support	Fairly important	Large influence
90	Major support	Very important	Very large influence
100	Total support	Most important	Dominance

365

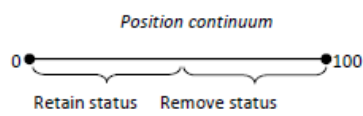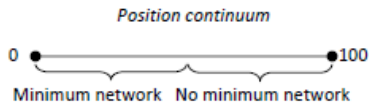## Issue 7: Not requiring a minimum network presence

This refers to not requiring Japan Post to maintain at least one post office in each village. That is, players who do not wish to impose this restriction on Japan Post would exhibit positions from 51-100.

Group	Position	Salience	Clout
LDP coalition reform elements			
DPJ coalition reform elements			
Business community			
Ministry of Internal Affairs and Communications (MIAC)			
Ministry of Finance (MOF)			
LDP coalition opposition elements			
"The Kamei Group"			
DPJ coalition opposition elements			

Issue 8: Removing public servant status

This refers to removing public servant status from postal workers. Players in favour of removing public servant status would exhibit positions from 51-100.

Group	Position	Salience	Clout
LDP coalition reform elements			
DPJ coalition reform elements			
Business community			
Ministry of Internal Affairs and Communications (MIAC)			
Ministry of Finance (MOF)			
LDP coalition opposition elements			
"The Kamei Group"			
DPJ coalition opposition elements			

Position continuum

0 ●————————————● 100

Minimum network   No minimum network

Position continuum

0 ●————————————● 100

Retain status   Remove status

Index value	Position	Salience	Clout
0	Totally opposed	Completely unimportant	No influence
10	Majorly opposed	Very unimportant	Very little influence
30	Moderately opposed	Marginally unimportant	Some influence
50	Neutral	Average importance	Moderate influence
70	Moderate support	Fairly important	Large influence
90	Major support	Very important	Very large influence
100	Total support	Most important	Dominance

Appendix D: Chapter Eight Tables

Table 8-11 MVL links at initial setting

Links to cross subsidisation		
From:	MVLs	Comment
Ministry of Finance	1, 4	The Ministry of Finance owns JPH, which in turn owns JPC, JPI & JPB. Separating the business units reduces the Ministry of Finance's influence over internal transfer pricing. Selling shares in JPH removes the ownership influence of the Ministry of Finance to propagate cross-subsidies.
JPH	1, 4	Separating units removes the ownership influence of JPH over other units and reduces risk of cross-subsidies through internal transfers.
Universal service	3	Not requiring universal financial services allows JPI & JPB to focus on profitable locations, eliminates the need to offer services everywhere and reduces accompanying commissions to JPC.
Universal service	7	The minimum network clause imposes considerable costs on JPC, which are subsidised by the financial units and the Social Contribution Fund. Removing the clause would reduce the need for cross-subsidies as presumably JPC would reduce the number of post offices.
Network asset management	6	Allowing freer management of network assets (deficit making post offices, inns, etc.) and their presumable divestiture lessens the need for cross-subsidies.
Links to network asset management		
From:	MVLs	Comment
Ministry of Internal Affairs and Communications	1	Separating business units gives a clearer view of precisely where Ministry of Internal Affairs and Communications' influence over network asset management takes place.
Ministry of Internal Affairs and Communications, government	6	Independent management of network assets allows JP to divest away from deficit incurring assets and move cost centres from fixed to variable ones.
Government	7	Not requiring a minimum network presence (≥1 post office per village) provides significant abilities to reduce deficit-generating post offices and possibly replace them with 'mobile' post offices or outsourcing arrangements.

Table 8-11 continued

Links to playing field		
From:	MVLs	Comment
Ministry of Internal Affairs and Communications	2	Ministry of Internal Affairs and Communications regulates JP and private delivery firms through different legislation. Consistent regulation would help level the playing field.
FSA special office	2	JPI and JPB supervised by special office in FSA (heavily staffed by Ministry of Internal Affairs and Communications) and Ministry of Internal Affairs and Communications itself until privatised. Private businesses are regulated by FSA only. Consistent supervisory organs would be more even-handed. JPH's allowance to hold non-financial businesses would be illegal for private firms; this favouritism should be removed if level playing field desired.
FSA special office	4	Sale of shares will remove Ministry of Internal Affairs and Communications supervision from financial units.
Amakudari	1	Separation of business units makes *amakudari* appointments more difficult to conceal. Fewer ex-Ministry of Internal Affairs and Communications officials connected to special corporations would reduce pressure to maintain tilted playing field.
Amakudari	4	Sale of shares would lessen Ministry of Finance influence over units and allow outside governance mechanisms to operate, weakening power of bureaucracy to conduct a*makudari*.
Amakudari	5	Permitting postal business units to appoint personnel and conduct operations autonomously reduces *Amakudari* likelihood by reducing vulnerability to bureaucratic influence over appointments and circumventing special corporations altogether via competitive bidding process.
Network asset management	7	Removal of the requirement to maintain a minimum network would contribute to a level playing field. Requiring JP to operate in all population centres creates an unequalled market presence that artificially maintains a point of competitive difference for JP Group.
Entry barriers	2	Abolishing the distinction between special and general correspondence would greatly level the playing field.
Universal service	2, 3	Not requiring universal financial services through postal networks would help level the playing field between financial units and private firms. JP has advantages in terms of network presence and implicit government support.

Table 8-11 continued

Links to universal service		
From:	MVLs	Comment
Network asset management	3	Maintenance of a broad postal network places strain on financial units. A smaller network reduces fixed costs of JPC and variable costs of financial units.
Network asset management	6	Autonomous network management decision making allows JPC to adjust size of network to suit, using outsourcing where needed, reducing fixed costs.
Network asset management	7	Requirement to operate at least one post office in every population centre places considerable costs on JP Group. Removing the clause would reduce costs on postal, banking, and insurance units for every post office displaced.
Ministry of Internal Affairs and Communications	None	Ministry of Internal Affairs and Communications regulates JP operations and imposes universal service obligations.
Links to entry barriers		
From:	MVLs	Comment
Universal service	2	Universal service obligations give rise to entry barriers (special/general correspondence distinction). A level playing field would ease USOs and lower entry barriers.
Ministry of Internal Affairs and Communications	None	Ministry of Internal Affairs and Communications regulates postal industry and has authority to impose entry barriers.
Amakudari	5	Outgoing Ministry of Internal Affairs and Communications officials have incentives to maintain high entry barriers; preventing competitive pressure allows for easier descent. Greater operational independence would likely see less of these connections and reduce Ministry of Internal Affairs and Communications opportunism to maintain barriers.
Links to Japan Post Co.		
From:	MVLs	Comment
JPH	1, 4	Selling shares in JPB is a critical part of creating a distinct business entity and removing bureaucratic ownership influence.

Table 8-11 continued

Links to operations and personnel management		
From:	MVLs	Comment
Entry barriers	2	High entry barriers protect JPC from competition in general correspondence, potentially reducing incentives for efficiency. A more even playing field suggests opening general correspondence, imposing competitive pressures and incentivising greater efficiency in terms of personnel and operations management.
Amakudari	5	JP is hampered by contracts to special corporations for support. These corporations are a popular landing pad for *amakudari* positions. Greater freedom in this area opens support businesses to competitive tenders, reducing *amakudari* pressure.
Government	4	Sale of shares to private investors weakens government influence and allows outsider governance practices a chance to operate. This would increase operations and personnel management independence.
Government	5	Less government involvement in postal operations by definition increases managerial autonomy.
Links to Japan Post Holdings		
From:	MVLs	Comment
Ministry of Finance	4	The Ministry of Finance owns JPH, affording the ministry great authority over management. Selling shares reduces this authority.
Entry barriers	2	Entry barriers to general correspondence artificially bolster JPH revenue from postal operations. A level playing field would reduce these distortions.
FSA special office	2	JPH operates under a special exemption forbidding other financial holding companies holding stocks in non-financial businesses. A level playing field would ideally see this inconsistency removed.

Table 8-11 continued

Links to Japan Post Bank		
From:	**MVLs**	**Comment**
JPH	1, 4	Selling shares in JPB is a critical part of creating a distinct business entity and removing bureaucratic ownership influence.
Cross subsidisation	1	Ownership connections through JPH increase the likelihood of cross-subsidisation. Separating these units and selling shares removes these connections and untangles financial services.
Universal service	3	JPB is constrained by obligations to provide financial services through the whole network, adding considerable costs to the company through commissions (JPY 609,578M in 2013). Removing USOs could raise profitability of JPB.
Ministry of Internal Affairs and Communications, FSA special office	2	JPB is regulated/supervised jointly by Ministry of Internal Affairs and Communications and FSA special office. Private banks are subject only to FSA regulation. A level playing field would require JPB to report to FSA – and not through the special office.

Links to Japan Post Insurance		
From:	**MVLs**	**Comment**
JPH	1, 4	Selling shares in JPI is a critical part of creating a distinct business entity and removing bureaucratic ownership influence.
Universal service	3	JPI is constrained by obligations to provide financial services through the whole network, adding considerable costs to the company through commissions (JPY 378,507M in 2013). Removing USO's will raise profitability of JPI.
Cross subsidisation	1	Ownership connections through JPH ensure that cross-subsidisation of JPC continues. Separating these units and selling shares removes these connections and untangles financial services from JPC.
Ministry of Internal Affairs and Communications and FSA special office	2	JPI is regulated/supervised jointly by Ministry of Internal Affairs and Communications and FSA special office. Private insurers are subject only to FSA regulation. A level playing field would require JPI to report to FSA – and not through the special office.

Table 8-11 continued

Links to Fiscal Investment and Loan Programme		
From:	MVLs	Comment
Government	1, 4	Separation of business units allows greater identification of source of Fiscal Investment and Loan Programme funding. Sale of shares reduces government influence over JP Group and installation of outsider management practices may reduce purchases of Fiscal Investment and Loan Programme bonds. Sale of shares will also permit entry to other business lines, presenting opportunities for higher-profit investments.
Government	2, 5	A level playing field and operational autonomy will allow financial units to revise investment in Fiscal Investment and Loan Programme bonds and permit investiture into other areas.

Links to Amakudari		
From:	MVLs	Comment
Ministry of Finance	1	Breaking the ownership connection between JP Group and the Ministry of Finance will help reduce the number of *amakudari* landings in special corporations.
Network asset management	7	A relatively minor link, but removing the requirement for minimum postal network presence also reduces need for supporting special corporations, which in term helps limit the preponderance of *amakudari*.

Table 8-11 continued

Other MVL-free connections		
From	To	Comment
Government	Ministry of Internal Affairs and Communications	Government influence of Ministry of Internal Affairs and Communications is ongoing and exogenous to simulation.
Government	Ministry of Finance	Government influence of Ministry of Internal Affairs and Communications is ongoing and exogenous to simulation.
Ministry of Internal Affairs and Communications	FSA special office	Ministry of Internal Affairs and Communications provides many staff for special office. Technically not *amakudari* or *yokosuberi* but places Ministry of Internal Affairs and Communications influence inside the regulatory organ of the Ministry of Finance. Exogenous to simulation.
Ministry of Finance	FSA special office	FSA special office and FSA proper are organs of the Ministry of Finance. Ministry of Finance therefore has authority over both. Link is exogenous to simulation.
Ministry of Finance	Fiscal Investment and Loan Programme	Ministry of Finance controls Fiscal Investment and Loan Programme. Fiscal Investment and Loan Programme reform *per se* exogenous to simulation.
Ministry of Internal Affairs and Communications	JPH, JPC, entry barriers and universal service	Ministry of Internal Affairs and Communications regulates postal industry and will continue to have regulatory authority irrespective of simulation output.

The rows under 'Other MVL-free connections' indicate that either they are certain to remain in place after postal reforms or are exogenous to the scope of the model.

Table 8-12 Changing linkages from initial setting to estimated setting

Links to cross subsidisation		
From:	MVL	Comment
Ministry of Finance	1	Separating the units and diluting the Ministry of Finance's ownership stance reduces their authority to maintain cross-subsidies.
JPH	1	Separating units narrows some avenues for cross-subsidisation by installing a management board for each unit but listing only JPH for sale and maintaining 100% ownership of the other units undermines the effects of separation.
Network asset management	6	The simulation suggests that JP will be able to manage the network assets without government interference. This will contribute to profitability assuming loss-making assets are disposed of, relieving some of the pressure for cross-subsidisation.
Links to playing field		
From:	MVL	Comment
Amakudari	1	Separation of business units makes *amakudari* appointments more difficult to conceal. Fewer *amakudari* landings may reduce bureaucratic resistance to level the playing field as economics rents are lessened.
Amakudari	5	Permitting postal business units to appoint personnel and conduct operations autonomously may reduce *amakudari* likelihood, as JP can circumvent special corporations altogether via competitive bidding processes or outsourcing to other private operators.
Links to network asset management		
From:	MVL	Comment
Ministry of Internal Affairs and Communications	1	Separating business units gives a clearer view of where Ministry of Internal Affairs and Communications' influence over network asset management takes place.
Links to network asset management		
From:	MVL	Comment
Ministry of Internal Affairs and Communications, Government	6	Assuming MVL6 passes as the simulation suggests, the Ministry of Internal Affairs and Communications and government should be less inclined to exert pressure over network asset management. This allows JP to divest away from deficit-incurring assets, and move cost centres from fixed to variable ones.

Table 8-12 continued

Links to universal service		
From:	MVL	Comment
Network asset management	6	Autonomous network management decision-making allows JP to adjust size of network to suit, using outsourcing where needed and potentially reducing fixed costs. This could also reduce the number of locations at which JPI and JPB have to provide their products assuming post office numbers are revised.

Links to operations and personnel management		
From:	MVL	Comment
Amakudari	5	Presuming operations and personnel management is less exposed to bureaucratic influence as MVL5 suggests, JP should have greater selection for supporting companies other than the special corporations led by outgoing ministry officials.
Government	5	MVL5 passing suggests that the government will be less inclined to exert influence over operations and personnel, meaning that incidents such as the temporary worker conversion scheme should not reoccur.

Links to entry barriers		
From:	MVL	Comment
Amakudari	5	The reduction in *amakudari* landings linked to JP should, if even only partially, reduce incentives to maintain high entry barriers to postal operations.

Links to Japan Post Bank		
From:	MVL	Comment
JPH	1	Separating the business units is an important step towards reform, but without individual listing of JPB via MVL4 the process is undermined.
Cross-subsidisation	1	MVL1 shows the units being discrete entities, which makes cross-subsidisation easier to locate and quantify. More reform would lessen the cross-subsidisation links but at least we are provided with an idea of how much subsidisation is occurring.

Table 8-12 continued

Links to Japan Post Co.		
From:	MVL	Comment
JPH	1	MVL1 shows the units being discrete entities, which adds a layer of executive management between the Ministry of Finance and JPC. This should help to reduce the amount of direct influence Ministry of Finance has over JPC.

Links to Japan Post Insurance		
From:	MVL	Comment
JPH	1	MVL1 shows the units being discrete entities, which adds a layer of executive management between the Ministry of Finance and JPC. This should help to reduce the amount of direct influence Ministry of Finance has over JPC.
Cross-subsidisation	1	MVL1 shows the units being discrete entities, which makes cross-subsidisation easier to locate and quantify. More reform would lessen the cross-subsidisation links but at least we are provided with an idea of how much subsidisation is occurring.

Links to Fiscal Investment and Loan Programme		
From:	MVL	Comment
Government	1	Separation of business units allows greater identification of sources of Fiscal Investment and Loan Programme funding through independent accounting records. Adding layers of management between government and JPI/JPB should reduce direct influence over fund diversion to Fiscal Investment and Loan Programme (assuming management is pro-reform).
Government	5	Greater independence over operations and personnel management allows JP to pursue greater yields with less government pressure to invest in Fiscal Investment and Loan Programme.

| Links to Amakudari		
From:	MVL	Comment
Ministry of Finance	1	Breaking the ownership connection between JP and the Ministry of Finance is suggested to help reduce the number of *amakudari* landings in special corporations as influence over contract selection is diluted.

Appendix E: Simulation Evolution

Examples of player interactions

The changes to the political landscape featured in Figure 8-12 are the net result of salience lobbying, weak ally challenges, and exchanges with rivals. Whilst these movements have been distilled into the initial and final values, it is possible to trace individual interactions by looking at the variables in the LOS and identifying the spikes in the player interaction elements. In other words, changes can be traced to which player acted over which issue in what round(s). The following provides two examples.

Figure 8-12 shows the 'Kamei' group shifting position on the separation issue (top left) from a very negative one to an almost neutral one. In addition, the minimum network issue (bottom left) shows the 'LDP reform elements' group shifting to the left[129]. These movements are an example of an exchange occurring at t=1; see Figure 8-48.

Figure 8-48 Position changes of players a and g over MVL1 and MVL7
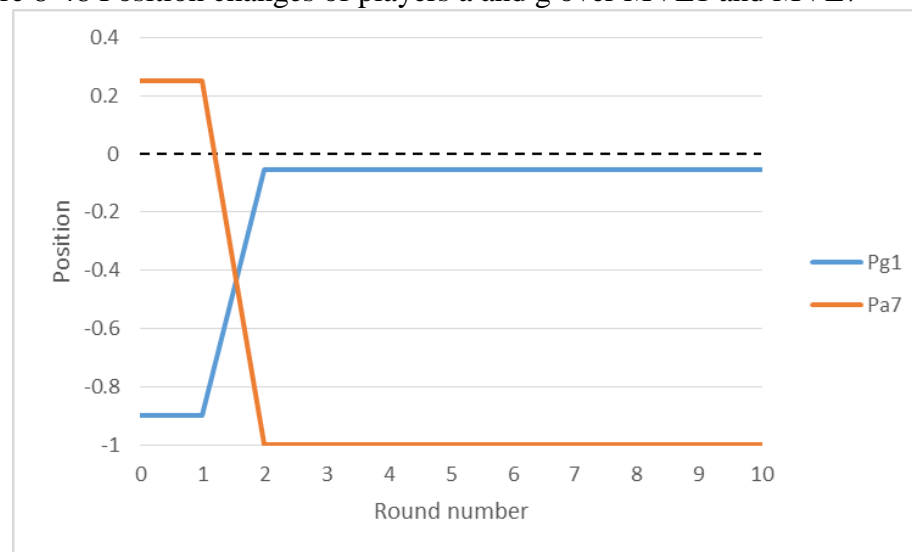
Pg1 refers to the position of player *g* ('Kamei' group) over *separation* (MVL1) and Pa7 refers to the position of player *a* (LDP reform elements) over *minimum network* (MVL7). We can see the 'Kamei' group's position rising and the LDP reform group's position falling. These changes were caused by an interaction

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[129] One also observes the LDP reform group moving upwards on the salience axis; this is a separate interaction and is explained shortly.

initiated by the LDP reform group over issue one. Taken from LOS1, Figure 8-49 is the raw Vensim exchange element between *a* and *g*. The variable names contain inputs and calculations, arrows denote the flow of information. Whilst it is not vital that the reader understand the mechanics of Vensim[130], for the purposes of tracing the simulation's evolution, attention is drawn to three variables, emphasised by superimposed callouts in red: observe the spikes in the variables *ΔPax a→g1*, *ΔPg1 a→g1*, and *ExCond a→g1*.

Figure 8-49 Exchange element between players *a* and *g* from LOS1
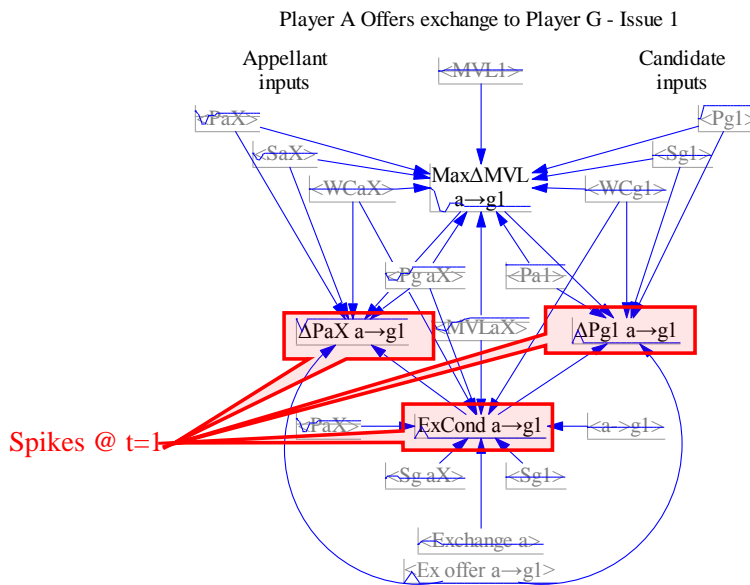
The LDP reform group's exchange issue algorithm returns issue seven as their least important issue at t=1 and they have been determined to be active over issue one. Action in the exchange element requires several criteria: the players must be adversaries over issue one, issue one must be more important to the appellant than issue seven, and issue seven must be more important to the candidate than issue one. In other words, separating the business units must be more important to the LDP reform group than the 'Kamei' group. Similarly, the minimum network issue must be more important to the 'Kamei' group than the LDP reform group.

The exchange algorithm calculates the best gains *a* can draw over issue one and necessary reciprocation to *g* over issue seven. The conditions are met at t=1 where we observe a spike in the *Ex Cond a→g1* variable. The exchange can be seen as there is a negative spike in *ΔPaX a→g1* (change in position of *a*'s exchange issue

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[130] Exchange equations can be found in Chapter Seven, Section 7.2.7.

when *a* exchanges with *g* over issue 1) and positive spike in *ΔPg1 a→g1* (change in position of *g* over issue 1 when *a* exchanges with *g* over issue 1).

In summary, at t=1, the LDP reform group approaches the 'Kamei' group and initiates an exchange between the unit separation and minimum network issues. The 'Kamei' group accepts, leading to an increase in *separation* (MVL1). The LDP reform group reciprocates, decreasing *minimum network* (MVL7). This explains the leftward movement of the LDP reform group over the minimum network issue in Figure 8-12. Its upward movement, however, is the result of salience lobbying.

Following the LDP reform group's change in position they find themselves the recipient of salience lobbying from the LDP opposition group, the 'Kamei' group, and finally the business community (who make an exchange on issue seven at t=3). See Figure 8-50.

Figure 8-50 Changes in LDP reform group salience over MVL7
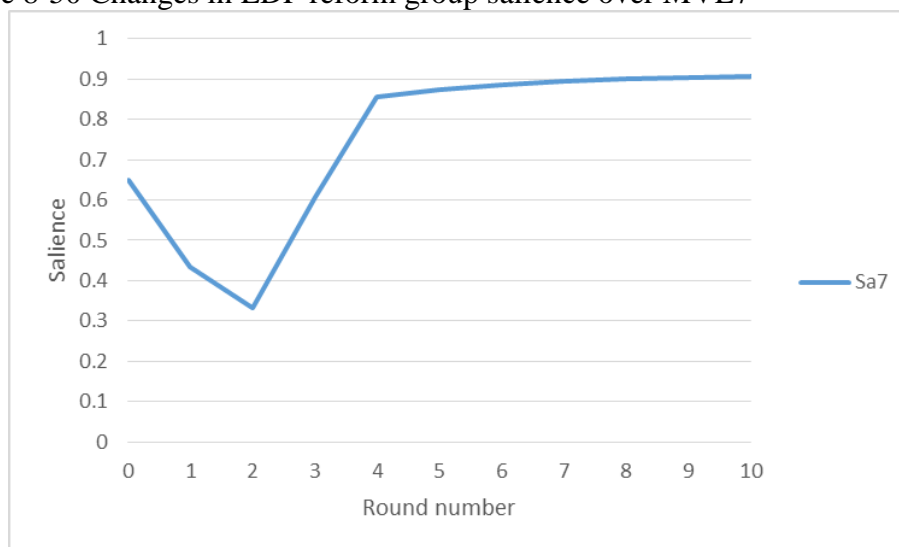
Salience decreases from t=0 to t=2, caused by concessions from salience lobbying. The LDP reform group lobbies the Ministry of Internal Affairs and Communications over *asset management* (MVL6) and in exchange for greater commitment has to offer a concession of lower salience over *minimum network* (MVL7): the Ministry of Internal Affairs and Communications' position over *minimum network* (MVL7) is negative, which requires a positive player to reduce salience in order to achieve a more favourable result for the candidate. Table 8-11 displays the concessions made by the LDP reform group to the Ministry of Internal Affairs and Communications.

Table 8-11 Concessions from LDP reform group to Ministry of Internal Affairs and Communications over MVL7

Round	Concessions from LDP reform group to Ministry of Internal Affairs and Communications over primary issue	Ministry of Internal Affairs and Communications primary
0	-0.217	7
1	-0.09946	7
2	0.0114	7
3	0.00522	7
4	0	7
5	0	7
6	0	7
7	0	7
8	0	7
9	0	7
10	0	7

Initially, interactions from salience lobbying result in the LDP reform group reducing their salience over the minimum network issue as they are at odds. Once the exchange with the 'Kamei' group is made and the LDP reform group takes a negative position, any further concessions to the Ministry of Internal Affairs and Communications must now be positive. In simple terms, pressing the Ministry of Internal Affairs and Communications for gains elsewhere initially requires the LDP reform group to be less vocal about a minimum network presence for as long as they are opposed with the Ministry of Internal Affairs and Communications. Once they find themselves on the same side of the position continuum, gains elsewhere must be met by increased commitment to maintaining a minimum network.

Figure 8-51 is directly drawn from the Vensim build window where calculations are embedded in the variable names. It is the structural sketch of player *a*'s strong ally lobby action algorithm where player *a* gathers the offers for changes to salience together and decides which player's offer to accept in a given round. The central 'column' of variables represents the influence other players have over player *a*'s salience and the effect as negotiations progress is captured by the blue lines within them. Observe that the influence lines of players *b, d, e,* and *h* are horizontal, indicating that these players have no effect on player *a*'s salience.

Players *c, f,* and *g* do, and attention is directed to the spikes present on the left hand side of the variables highlighted by red callouts.

Figure 8-51 LDP reform group's strong ally action algorithm from LOS7
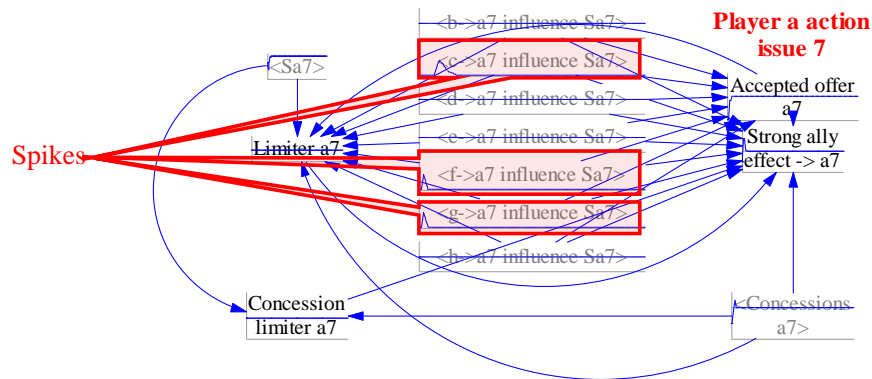
Whilst the LDP reform group takes a positive position over the minimum network issue, the relationship between the LDP reform group and both the LDP opposition group (*f*) and 'Kamei' group (*g*) is adversarial, hence strong ally lobbying impossible. Recall however that at t=1 an exchange is conducted, meaning that from t=2 interests are aligned, allowing for salience lobbying. Recall also that the LDP reform group initially reduces salience over the minimum network issue, and given the power of the group, this presents a good opportunity for the LDP opposition and 'Kamei' group to extract gains through higher salience. Between these two players, they are able to convince the LDP reform group to raise salience. Later on, the business community (*c*) also makes an exchange over issue seven and pressures the LDP reform group to raise salience further although the changes are only marginal at this point (less than a tenth of a percent). Causal changes from the political landscape illustrated by Figure 8-13 can therefore be explained by tracking the spikes in the negotiation elements of the LOS. It is possible to explain a player's movement, in overall terms, by strategy type and by individual interaction. Coaxial movements in position across two issues are the result of exchanges. Other movements in the position axis are caused by weak ally lobbying. Movements across the vertical axis depict salience lobbying and can be accompanied by concessions over primary issues, which may be positive or negative.

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