The Changing Size of the State in New Zealand, 1900-2015

Norman Gemmell, Derek Gill and Loc Nguyen

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ABSTRACT

This paper presents some evidence on the size and scope of the government sector in New Zealand over several decades, and in some cases since around the beginning of the 20th century. It uses various 'lenses' or metrics by which to measure changes in government size including its role as spender and taxer; as producer, consumer and investor; as employer (public employment share); and as steward (macro-fiscal manager). With the exception of employment, all measures presented are relative to GDP. These data reveal that both the relative size of government, and changes over time, depend importantly on which aspects of government are the focus of interest. As a result, assessing how far the major reforms to government in the late 1980s were associated with reductions in the size of the state appears to depend on which particular lens is used. There is clear evidence that the state's role as a producer of market outputs has shrunk since the late 1980s and with that its role as employer, but for a range of other measures the state's relative role has stayed the same. The overall Crown Balance Sheet shows the greatest variation with a rapid deterioration until 1991/2 and then strengthening remarkably thereafter. The overall size of state's role as producer of non-market outputs has been remarkably stable since the 1980s.

I.   Introduction

This paper examines historical data on how the size of the state has changed in New Zealand, focusing mainly on the period since the early 1970s, but going back over a century where data allow. There is, of course, no one simple overall measure of the size of the state; much depends on which aspects of the state's activities are the focus of interest and the question that it is desired to answer. The data described here consider 'general' government and its two components: central and local. We also adopt several 'lenses' with which to explore the issue of government size: for example, government as spender and taxer; as producer, consumer or investor; as employer; and as 'fiscal steward' (macro-fiscal manager).

Finding suitable metrics for 'the size of government' is an important input into debates among economists, political scientists and others regarding whether the state is becoming more, or less, important in aspects of economic life over time. Such measures are also often used to comment on various political or economic hypotheses, for example whether particular reforms aimed at reducing the size of the state, or changing the nature of its activities, have been effective. In a subsequent paper we will address some of those questions; such as: abstracting from other influences, how big were the effects of the major New Zealand reform episode in the mid-1980s on government size? How persistent were they and which dimensions of government were most affected? The present paper is restricted to documenting numerous government size/scope metrics for which suitable historical time-series data are available.

All the measures presented in the paper (with the exception of public employment) are presented as percentages of nominal gross domestic product (GDP). Nominal fiscal and GDP data are used as the basis for assessing whether the overall share of the economy going to the state has changed. Recognising that the price deflators for some measures of the state sector display different patterns over time compared to the non-state sector, an alternative approach would be to use specific price indices (e.g. government consumption or production deflators) to examine *real* trends in taxation or *real* expenditure on government services relative to *real* GDP.

For our purposes, and given difficulties measuring and choosing suitable state sector deflators, nominal GDP suffices as a base to review the long-term trends of various measures of government within the overall economy. However, it should be borne in mind that the relative size of the state in terms of real resource use, may be somewhat different from those revealed by nominal ratios.

A major role of the state that we are unable to explore is the state *as regulator* – either in general or specifically with respect to the economy. This omission reflects the limited data

available on this aspect of government[1] but it undoubtedly represents an important element of the government's role in New Zealand. Notwithstanding the limited data available, it is also likely that this regulatory role has changed over time, though 'how much' and 'when' are interesting, but difficult to answer, questions. Though we report on the flow of government borrowing and stock of financial debt, we do not examine the stocks of assets and liabilities over time which would identify the changing size of government as 'owner' of net assets.[2] This omission reflects the limited time-series available on both state assets/liabilities, and comparable 'non-state' values.

In presenting various measures of the size and scope of the state, we have a number of simple objectives. Firstly, we aim to provide a more extensive and updated discussion of the historical record, some aspects of which were previously examined by Gill (2008), Rea (2009), Gill et al (2010), and Bandyopadhyay et al (2012).[3]

Secondly, a key objective of the major fiscal and other reforms during the 1980s was 'to get the government out of activities it was inherently poor at managing and to improve those functions which remained the core responsibilities of government' (Scott *et al*, 1997, p.358). While we do not attempt a detailed analysis of these issues here, the data do allow some preliminary comments on the timing and persistence of observed changes in government size.

We begin in section II by considering the size of government as 'spender and taxer': how have various ratios of tax revenue and public expenditure to GDP varied over time? Section III then focuses on governments' contribution to, and use of, *real resources* – as output producer, consumer and investor. Sections IV and V then look at government as 'employer' and as 'fiscal steward' respectively. The former focuses on the share of employment in the public sector while the latter addresses issues of macro-fiscal management. Finally, sections VI and VII provide a summary and draw some broad conclusions.

II. Government as spender and taxer

The size of government expenditures, E, and revenues, R, are perhaps the most commonly cited indicators of government size, typically presented as ratios to GDP. It is important to bear in mind, however, that such ratios are not *shares* of GDP; in particular they do not represent the government's share of total real or nominal resources in the economy. This reflects the familiar

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[1] The time series that are available on the size of the regulatory state in New Zealand (OECD product market regulation indices) have only partial coverage as it is limited to the services sectors (transport utilities etc.) http://www.oecd-ilibrary.org/content/workingpaper/362886816127.

[2] Treasury (2014) provide a recent evaluation of the size of government assets and liabilities (in $ and as a percent of GDP) including financial, commercial and social assets. A conceptually better measure would be as shares of total (private plus state sector) assets and liabilities, but data limitations make this difficult in practice.

[3] We are grateful to David Rea for making available to us the data from Rea (2009).

property of the E/GDP ratio that it is not bounded by zero and one, because the numerator includes transfer payments that are not included in GDP. Similarly, tax revenues are transfers from taxpayers to the state and are not a component (or '*share*') of GDP.

II.1   *Government as spender*

Combining a number of data series, Figures 1A and 1B show tends in the Public Expenditure/GDP ratio to 2015 from 1876 and 1972 respectively. Figure 2 shows the functional composition of spending, 1972-2015. These data relate to central government spending, which includes the use of real resources plus subsidies, transfer payments, debt servicing, and other expenditures. It is important to note that there are concerns about the quality of the government expenditure series before 1972[4] and two breaks in the series with potential inconsistencies between them. The series used are: the 'consolidated series' of central government expenditure from Statistics New Zealand's (SNZ) long-term data series (1876-1972); expenditure on a 'net financial' basis (1972–1993); and for 'Crown expenses' (1994 – 2015).[5] The 1994-2015 series is shown for both 'Core' and 'Total' Crown, where the latter includes the former plus Crown Entities and state-owned enterprises (SOEs).

Figure 1A illustrates that, relative to nominal GDP, overall central government expenditure remained relatively constant around 15% between the 1870s and the end of World War II (WW2), with temporarily higher values during the 1920s and '30s recessions, and during WW2. The discrete jump from 15% to 24% in 1948 however marked the beginning of a longer period of general expansion to reach 39% of GDP by 1990, albeit with several periodic fluctuations.
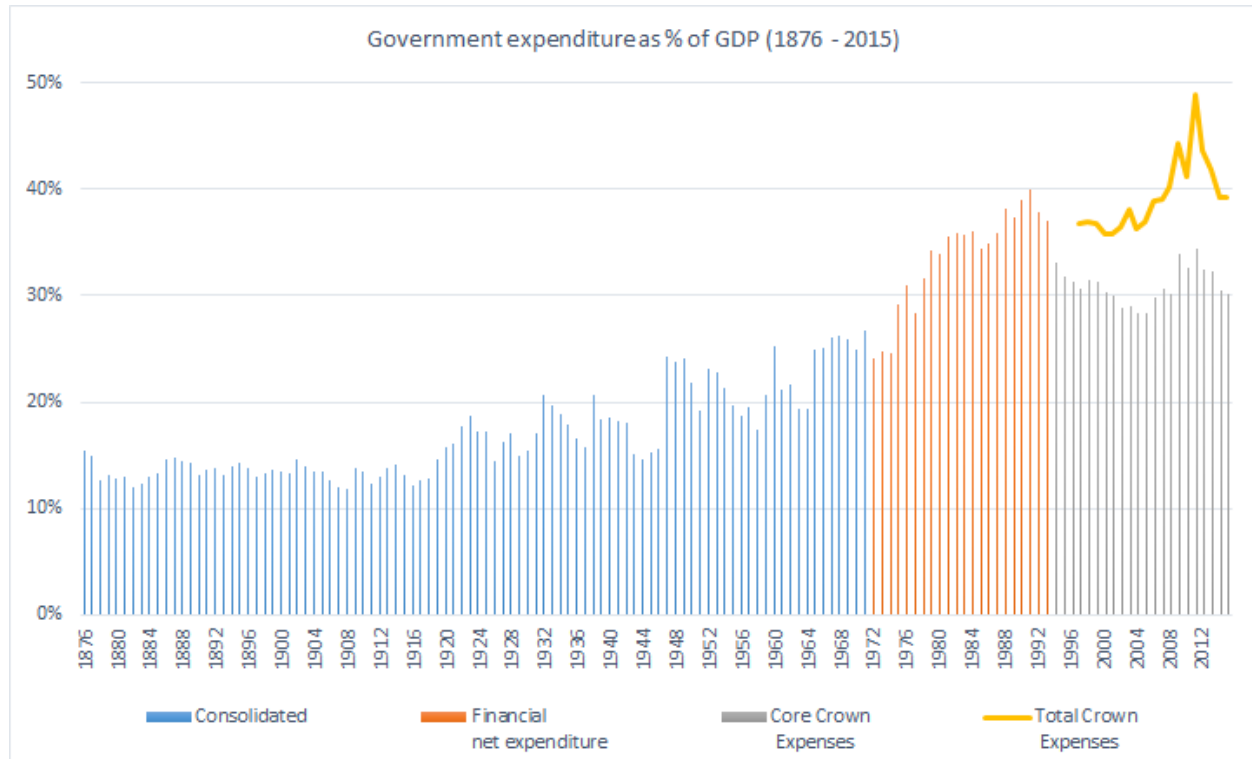
Figure 1B confirms that spending consistently averaged around 30% from the mid-1990s, but on a downward trend till the mid-2000s and with a distinct temporary increase in association with the global financial crisis (GFC) and subsequent recession from 2009-11. Total Crown Expenditure, at least over the period for which we have data (from 1997), reveals some similarities to Core Crown Expenditure. However, there is no discernible downward trend to the mid-2000s, and an even more pronounced increase during the GFC appears to be preceded by a longer period of increasing spending from at least 2004.
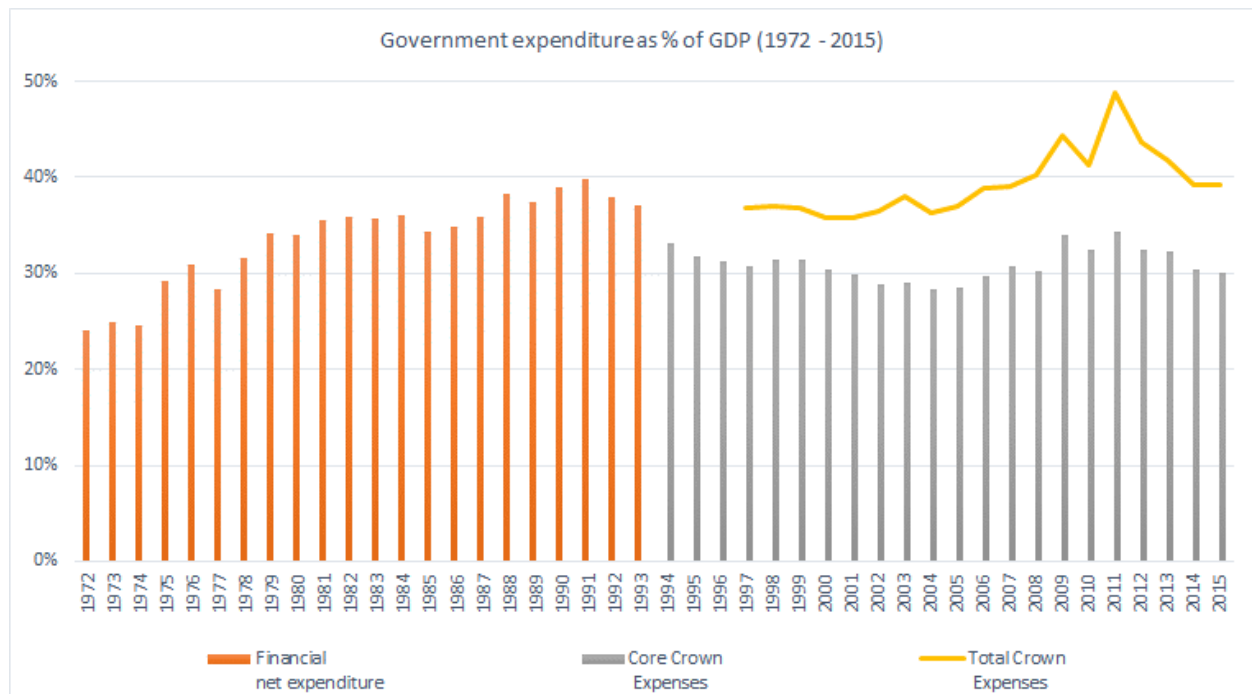
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[4] See the discussion by Matthew Gibbons (2015) about the data omitted from the consolidated fiscal series before 1972 which suggests that peacetime central government expenditure was higher in the 1930s, 1940s and 1950s

[5] "Financial net expenditure is included for the years 1972-1993 and equals the sum of cash payments less net lending. Cash payments include current and capital outlays and are net of revenue from sales and user charges" New Zealand Treasury (NZT, 2015). See also NZT (2008) and Rea (2009) for further details. Core Crown expenses are an accruals-based measure of "day-to-day spending (e.g., public servants' salaries, welfare benefit payments, finance costs and maintaining national defence etc.) that does not build or purchase physical assets by the core Crown". (NZT, 2015a, p.131).

Figure 1A: Central government as spender (as a percentage of GDP) 1876–2008

Government expenditure as % of GDP (1876 - 2015)

Legend: Consolidated | Financial net expenditure | Core Crown Expenses | Total Crown Expenses

Figure 1B: Central government as spender (as a percentage of GDP) 1972–2008

Government expenditure as % of GDP (1972 - 2015)

Legend: Financial net expenditure | Core Crown Expenses | Total Crown Expenses

Figure 1C: Components of government spending (as percent GDP) 1972-2015
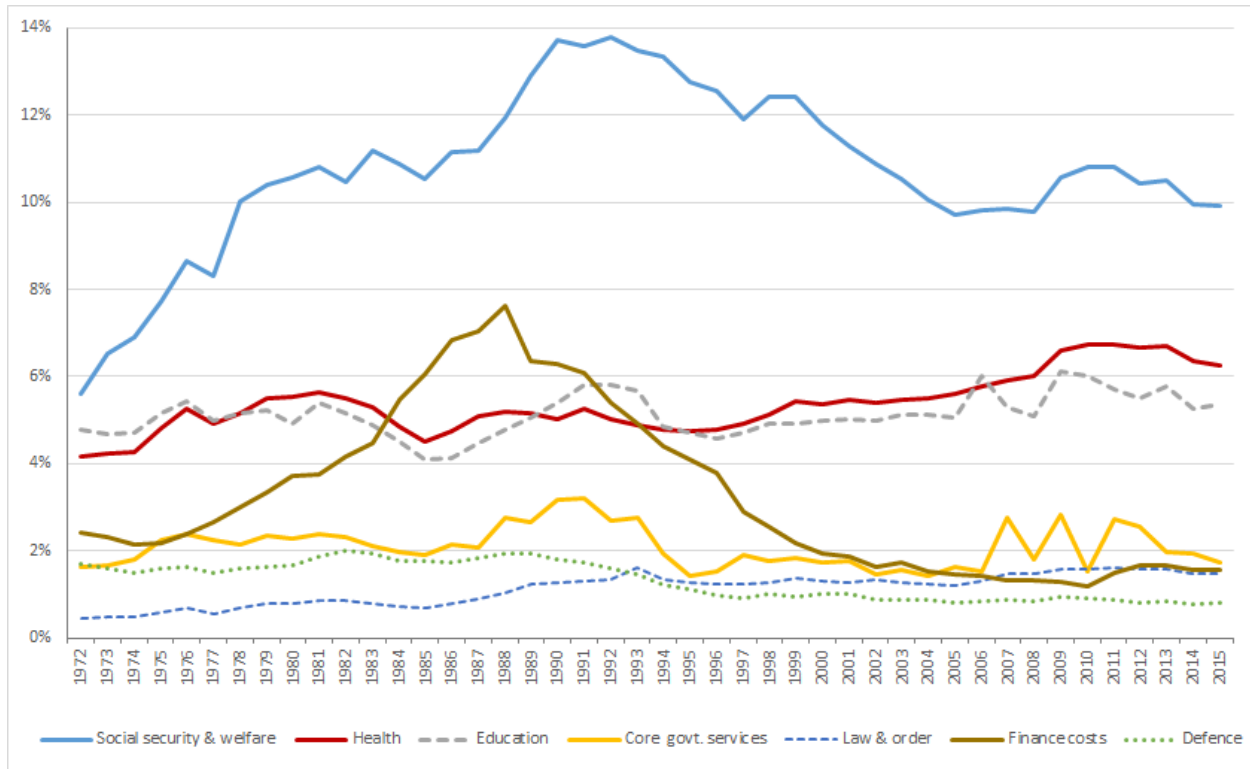
Turning to the *components* of public spending, Figure 1C shows the main functional categories of aggregate core crown spending, as percentages of GDP since 1972. For clarity we have omitted those categories that accounted for less than 2% of GDP over the 1972-2015 period, except for Law & Order and Defence which (unlike the small omitted categories) demonstrate persistent trends for much of the period. The trends for these two small categories tend to compensate for each other.

The Figure demonstrates clearly that the rise in total expenditure to the early 1990s was associated mainly with growth in Social Security & Welfare (SSW) spending until around 1992, and Finance Costs (debt servicing) to 1988. Thereafter, both these spending categories drop significantly as percentages of GDP (from 14% to 10% in the case of SSW and from almost 8% to less than 1% for Finance Costs). Health spending, on the other hand, begins to increase steadily from the mid-1990s. Long-term fiscal modelling by New Zealand Treasury (NZT; 2013) projects this trend to continue, and perhaps accelerate, over the next 2-3 decades due to demographic ageing. Other spending categories in Figure 1C remain relatively stable throughout.

II.2   *Government as taxer*

This subsection considers a number of measures of the government's intervention in the economy via taxation.

Figure 2A provides some evidence on central government tax revenue as a percentage of GDP. This reveals a number of features in common with expenditure/GDP ratios, such as a relatively flat profile from the 1880s to WW1, averaging 10-15% to 1916 and 15-20% from 1917 to WW2.

Comparable data for the WW2 years are unreliable or missing but it can be seen that elevated levels of tax revenue to GDP to around 30% during the war are only slowly scaled back to around 25% by the early-1970s. Noticeable trends thereafter are a general increase in the ratio from 1973 to 1991 (with a short-term dip from 1983 to 1985), a decrease during most of the 1990s followed by a rise to 2006. Interestingly the major fall in the ratio thereafter, which might be thought to be GFC-related, does not occur till 2010 and is in part likely related to the 2010 tax reforms (that aimed to be approximately revenue-neutral over several subsequent years but not for 2010-11). By contrast the decline in the revenue/GDP ratio in 2009 is quite modest, perhaps reflecting the limited initial impact of the GFC in New Zealand.

For local taxation, local government revenues from the property rating system ('rates') are available from 1993 to 2015. These are shown in Figure 2B and can be seen to have varied within a fairly limited range, around 1.8–2.1% of GDP. Within that range there is a noticeable decline to the about 2002 and a strong rise from 2005 to 2010. The latter in particular may partly reflect the rapid rise in house prices in this period that has a delayed and smoothed knock-on effect to rates via the three-yearly re-assessments of property rateable values.
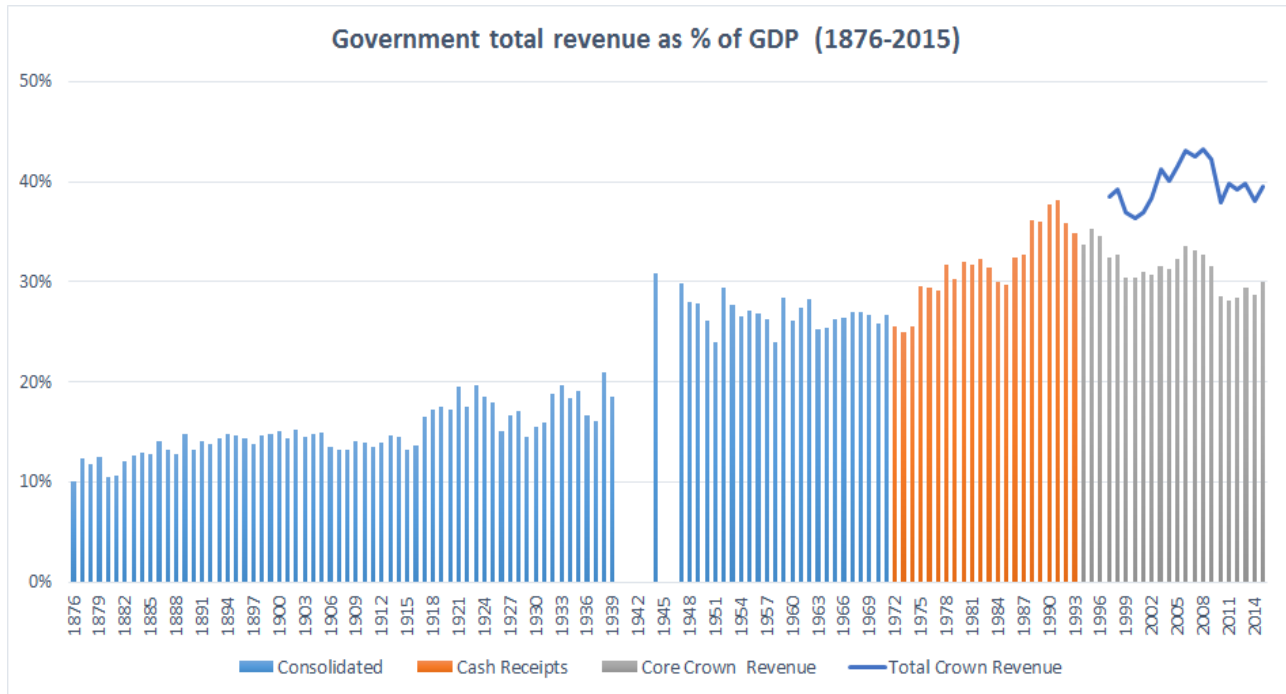
Changes in *total* tax revenue obscure some quite dramatic changes in tax composition over the last century or so. This composition can have important wider implications since governments tend to collect revenues from different taxes for different purposes, including providing revenue for public or merit good provision, income or wealth redistribution, and encouraging or discouraging particular behaviours such as those involving externalities.

We have updated tax share data collected from a variety of sources for Bandyopadhyay et al (2012) and these are shown in Figure 2C for 1903-2015. This decomposes taxes into personal income taxes, corporate income taxes, sales taxes/GST, customs & excise taxes (excl. GST collected via Customs), and the mostly minor categories of land taxes and estate/gift duties.[6]

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[6] To avoid cluttering the chart, 'other taxes' are shown in Figure 2C up to 1950, but omitted thereafter (when they become a small revenue share ~5%). Prior to 1950, some sources show separate categories for 'social security taxes' (SS) and 'other taxes' which are both classified as 'other taxes' in Figure 2B. After 1950, SS taxes, which remained in place until 1967, appear to have been added to the new 'corporate income tax' category in the source data series.

Figure 2A: Central government as taxer (as a percent of GDP) 1876-2015

Government total revenue as % of GDP (1876-2015)

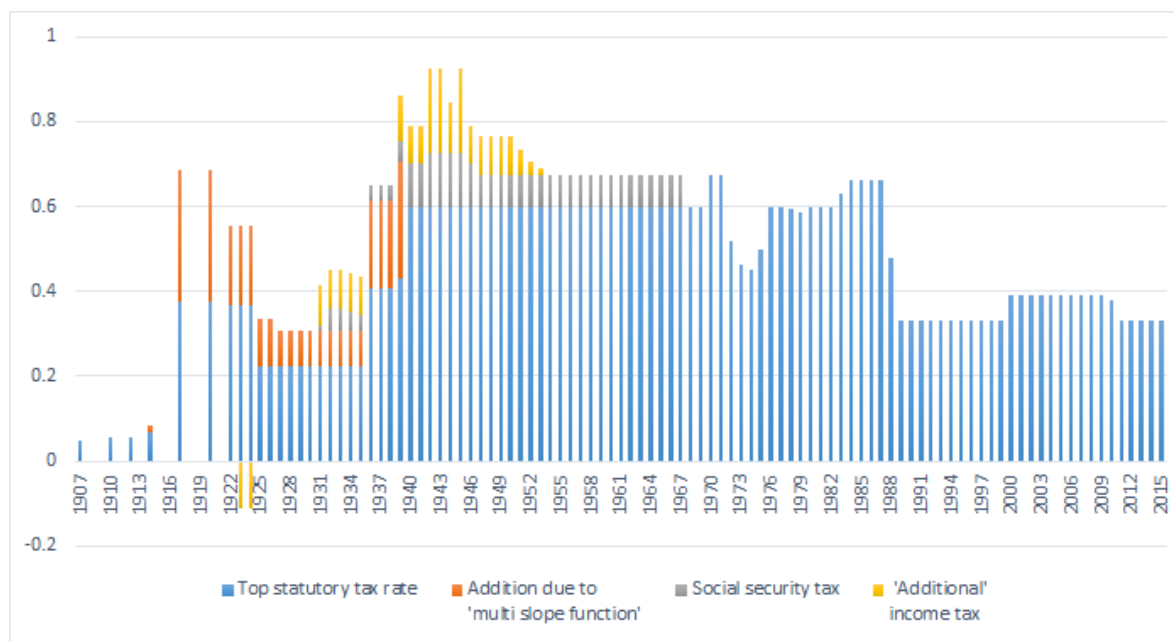Legend: Consolidated | Cash Receipts | Core Crown Revenue | Total Crown Revenue

Figure 2B: Local authority rate revenues (as percent of GDP), 1993-2015
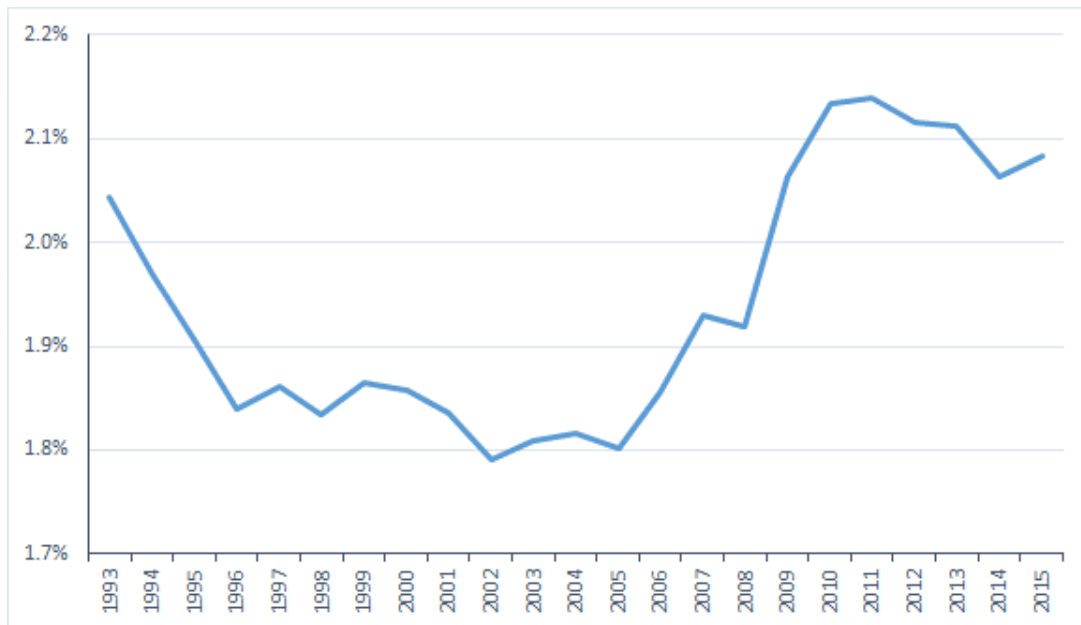
Figure 2C: Components of government taxation (as percent of total revenue), 1903-2015

Government tax revenue by sources (1903-2015)

Legend: Customs and excise duties · Land tax · Personal income tax · Estate and gift duties · Company income tax · Sales tax/GST · Other taxes
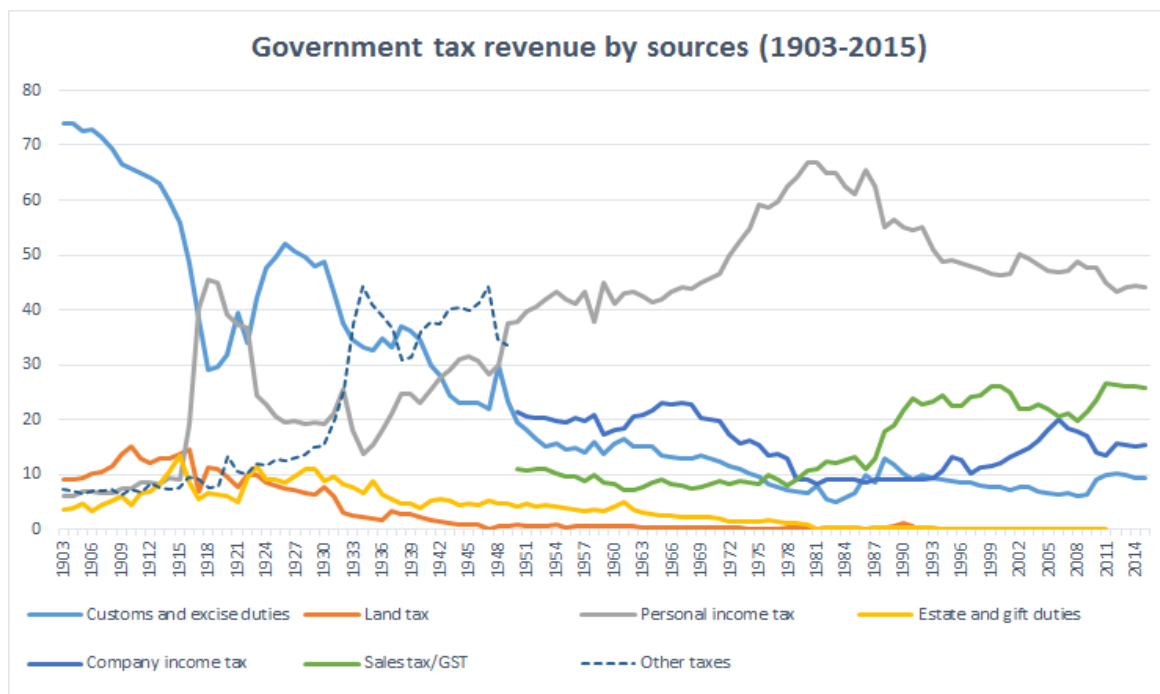
Figure 2D: Top marginal personal income tax rate 1907-2015[7]

Legend: Top statutory tax rate · Addition due to 'multi slope function' · Social security tax · 'Additional' income tax

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[7] The 'multi-slope' tax function refers to the 1914-39 tax schedules where the effective marginal rate rose with every additional £ of income between some tax thresholds, rather than as a step-wise ('multi-step') function of tax rates and thresholds. The rates used in Fig. 2E for AMTR calculations are based on assuming individuals were at the mid-point of the relevant income ranges; see Bandyopadhyay et al. (2012) for details.

Figure 2E: Average marginal personal income tax rate 1907-2013
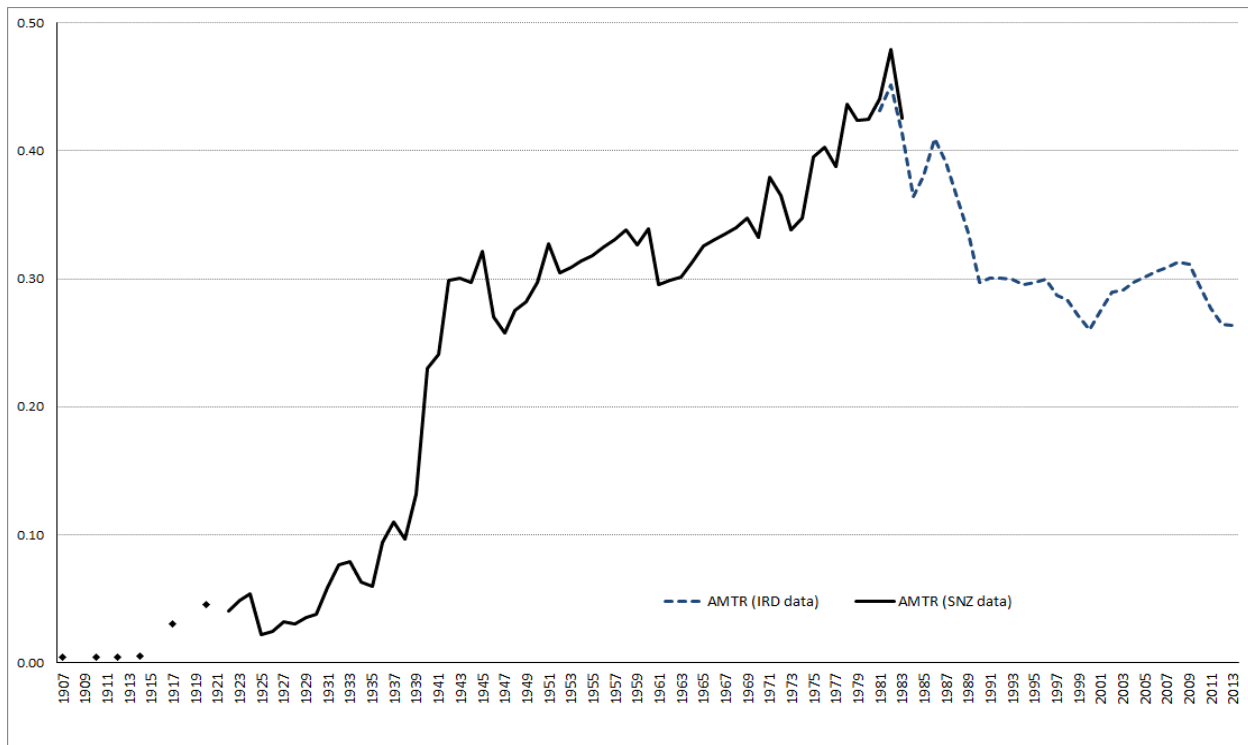
Some clear changes in tax structure over the last century are evident in Figure 2C. In particular, in the early 20th century customs and excise duties and to a lesser extent land taxes dominate the early tax structure. The former decline steadily to WW1, being replaced by increasing use of personal income taxes, especially during WW1. Land taxes are relatively stable till after WW1 but begin a steady decline thereafter.

Perhaps the clearest pattern in Figure 2C is the large rise in personal income taxes during both World Wars, while the reduction in personal income taxes after WW1 (though not to previous share levels) is not repeated after WW2. Rather the personal income tax share begins a steady rise from the 1930s that continues to a peak of 67% in 1980. Thereafter the revenue share falls (that is, even before the much discussed 1986 tax reforms), except for a one-year rise in 1986. Figure 2C also reveals the substantial rise in the share of 'other', mainly social security, tax revenues, in the 1930s and '40s. This tended to counteract the decline in other 'traditional' tax bases such as customs & excise duties, land taxes and estate/gift duties.

Figure 2C also shows the substantial boost to indirect tax revenue shares associated with the introduction of GST in 1986, and in 2010-11 when the GST rate was raised in conjunction with reduced income tax rates. Customs and excise duties generally remain stable or decline in the 6-10% range. The other major trends in Figure 2C concern corporate income taxes. After their introduction in 1950 their revenue share declines from 1966 till 1981, remains steady till around 1993 before rising steadily to the onset of the GFC period in 2008. These trends are not especially

associated with the large fall in the statutory corporate rate in 1988-90 (from 48% to 33%) and lesser falls in 2006 and 2011 (to 30% and 28% respectively).

Given the evidence in Figure 2C of substantial increasing, then decreasing, trends in the personal income tax share, and its important role in redistribution, it is interesting to focus on how the structure of this tax has changed over time. Figures 2D & 2E respectively plot the top personal marginal income tax rate since 1907 (and continuously from the 1920s), and the 'weighted' average marginal tax rate (AMTR). The AMTR is an annual taxpayer-income-weighted average of all the marginal tax rates (MTRs) in the income tax schedule for each year.[8]

Figure 2D shows that the 'effective' top rate of personal income tax (when including additional income-related taxes like social security taxes) reached a peak of around 90% during WW2, with a statutory income tax rate of 60% at that time. That is, special 'war taxes' and social security (SS) taxes added another 30 percentage points to the top statutory MTR. After WW2 those top rates fell to the 60-66% range till the 1986 reforms, apart from a temporary reduction to 45-50% in the early 1970s. Since 1989 the top rate has been 33% or 39% (and 38% for one year, 2009).

These top rate tends obviously influence the AMTR in Figure 2E, but less than half of income tax revenue is raised from top MTR payers. For example, according to NZ Treasury (2014a), taxpayers liable to the top MTR represented only 17% of personal income taxpayers in 2014, and 40% of personal income tax revenues. The data in Figure 2E up to 1981 should be treated cautiously as they are based on approximations of income shares by tax bracket from Statistics New Zealand Yearbook data. From 1981-2013 the data source is IRD's individual personal taxpayer microdata and hence is more reliable.

Figure 2E also shows the substantial discrete jump in tax rates in association with WW2, but unlike the top MTR case, this upward trends continues to the early 1980s reflecting both the general rise in real incomes pushing more taxpayers into higher income tax brackets and a tendency for the reduced top rates of tax to be balanced by higher rates lower down the schedule. The substantial decline in the AMTR beginning with the '80s reforms can be seen to continue to around 2001, when the increased top rate to 39%, and non-indexation of thresholds for the subsequent decade, generated additional revenues. This is reversed by the 2010 income tax reforms, so that in 2013 the personal income tax AMTR was approximately the same as it had been just after WW2 (1946-47).

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[8] See Bandypadhyay et al (2012) for details. Barro and Sahasakul (1983) argue that the AMTR is a convenient proxy for the 'ideal' consumption-weighted MTR when assessing welfare effects based on standard utility functions.

III.   Government as producer, consumer and investor

III.1   *Government as producer*

Government production includes two components – market and non-market production. Market production refers to the value added of government-owned organisations that sell their output through third-party transactions such as electricity or coal sales. Value added is the difference between the sales revenue received and the inputs used to produce the revenues (e.g. labour, other inputs, and capital services). Non-market production refers to the services government produces (e.g. law and order, external defence, and regulations) that consume real inputs (labour, capital services, other materials) but for which there is no market price or arm's length sales transaction for the outputs.

A key distinction between the total government spending considered above and government production or output is that the latter excludes transfer payments such as pensions and welfare benefits, and the ratio of government output to total output (GDP) is bounded between 0 and 1.

Figure 3A: General government production (as percent of GDP), 1972-2013
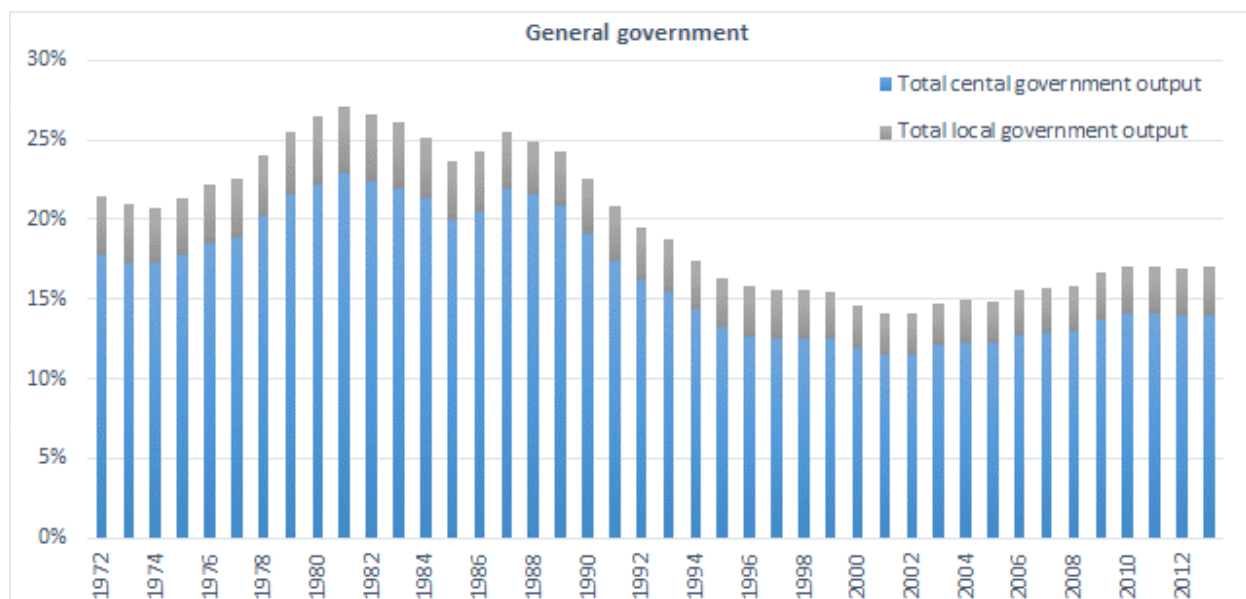
Fig. 3B: Central government market & non-market production (as percent of GDP) 1972-2013
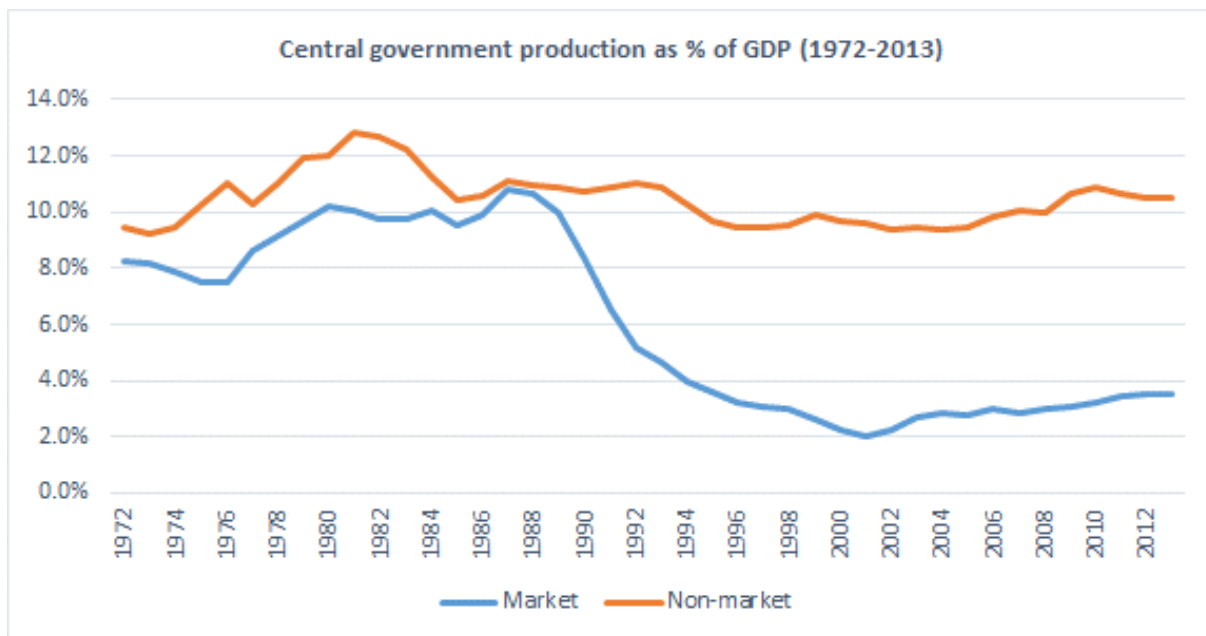
Fig. 3C: Local government market & non-market production (as percent of GDP) 1972-2013
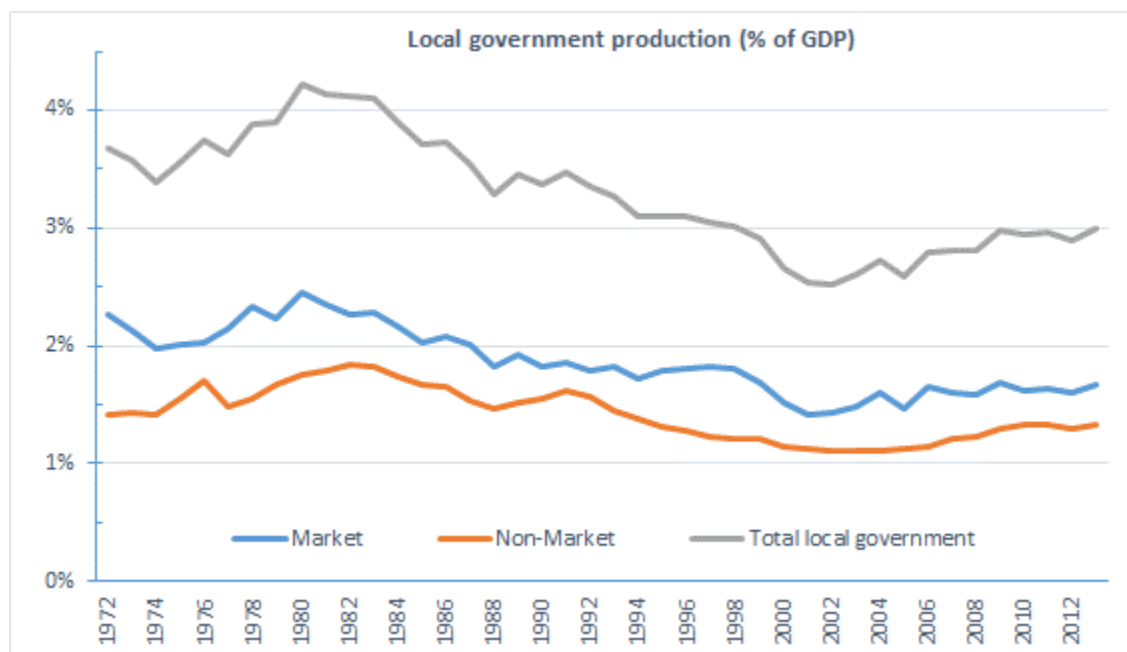
Figure 3A shows the share of general (central and local) government in economy-wide GDP from 1972-2013, while Figures 3B & 3C show the breakdown into market and non-market components for each level of government, 1972-2013.

The contribution to GDP by central and general government (Fig. 3A) peaked in 1981 and, apart from 1984 to 1986, decreased steadily over the period through to 2001, before rising again to 2010. Both these trends are especially evidenced by the significant reduction in central government's *market* production in Fig. 3B. Central government's non-market production as a contribution to GDP has not experienced such significant changes. It appears rather to have undergone two more discrete reductions, from 1981 to 1985 and from 1993 to 1997. Overall, the fall in central government production reflects the fall in market outputs associated with the wave of privatisations between 1987 and 1999.

Local government's contribution to GDP through production (Fig. 3C) has been relatively modest, especially compared with the contribution of central government. The data clearly show that the local government contribution peaked in 1980 and then began a downward trend with only isolated instances of an increase (1985, 1988, and 2002–2004). These trends are generally experienced by both market and non-market elements within local government.

III.2   *Government as consumer*

Government final consumption refers to services that government produces (e.g. law and order, external defence, and regulations) that consume real inputs (labour, capital services, and other materials) to produce non-market outputs, less any fees or charges levied. The term 'consumption' refers to the consumption of real resources – hence excluding both transfer payments and capital spending.[9]

Most government consumption spending occurs at the central government level. Local government's role as consumer relative to the overall economy has changed little over the entire period from 1972 to 2013 and has consistently fallen within 2–3% of total GDP (see Fig. 4). Unlike central government production in Fig. 3A, central government consumption moves around a relatively stable level, with no clear trend; at least not the large downward, and modest subsequent upward, tends observed with production. If there is such a switch in trend in consumption, arguably the low point occurs around 1995, with high points in 1981 and 2008 (see Fig. 4).

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[9] For further definitions see the *System of National Accounts Manual* (United Nations, 2009).

Figure 4: Government final consumption expenditure (as a percent of GDP) 1972–2015
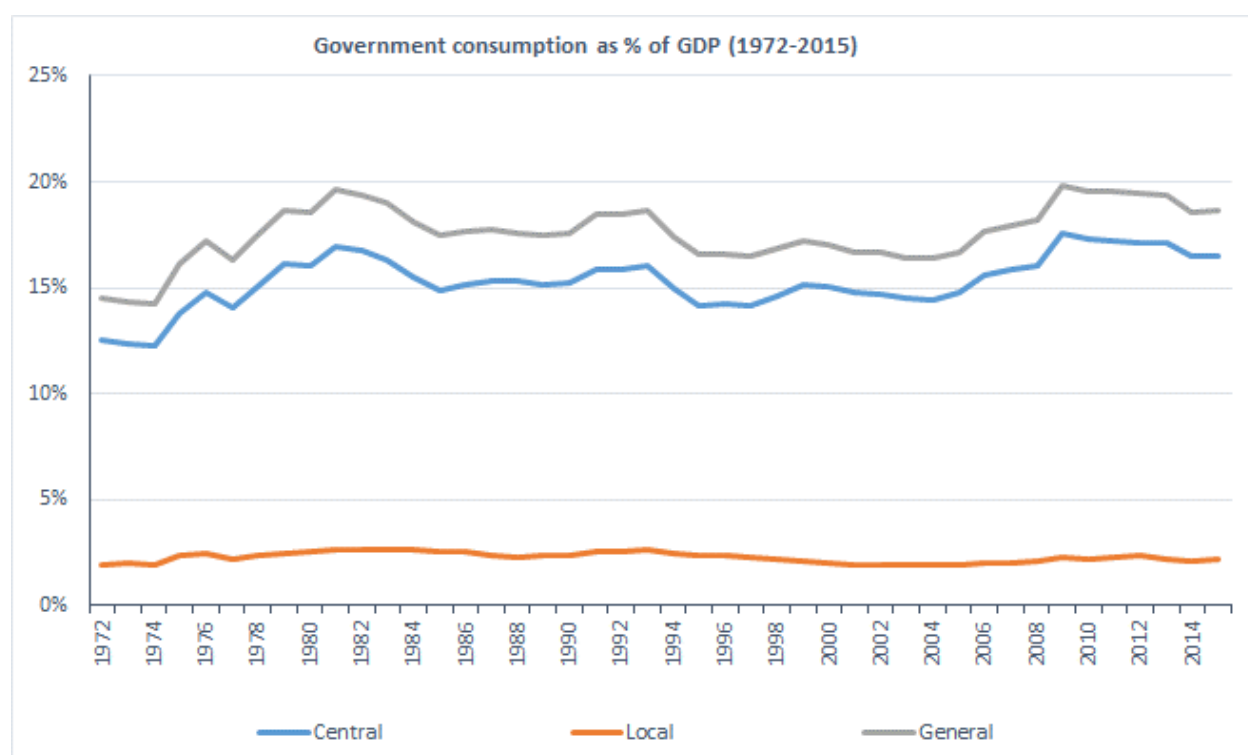

III.2   *Government as investor*

It is often argued that some investments in an economy, such as infrastructure, require government participation, for example, due to their large scale or riskiness. The public good nature of some investments (such as those in public health services) also provide a *prima face* case for government involvement. Governments however are often tempted to invest in activities for which none of those arguments necessarily apply, such that their share in total public-plus-private investment can be quite high.

The most commonly cited measure of this investment activity is gross fixed capital formation (GFCF) which captures all investment in physical fixed capital assets (including new investment replacing worn out or depreciated capital stock). Using the national accounts data on GFCF, Figure 5A shows changes in the ratio of government GFCF to aggregate GDP.

However, since government often competes with the private sector for investable funds, and many investment projects can in principle be undertaken by either sector, it is useful to consider the government share in total GFCF (Fig. 5B). Finally, Figure 5C then decomposes these GFCF totals into market and non-market sector components.

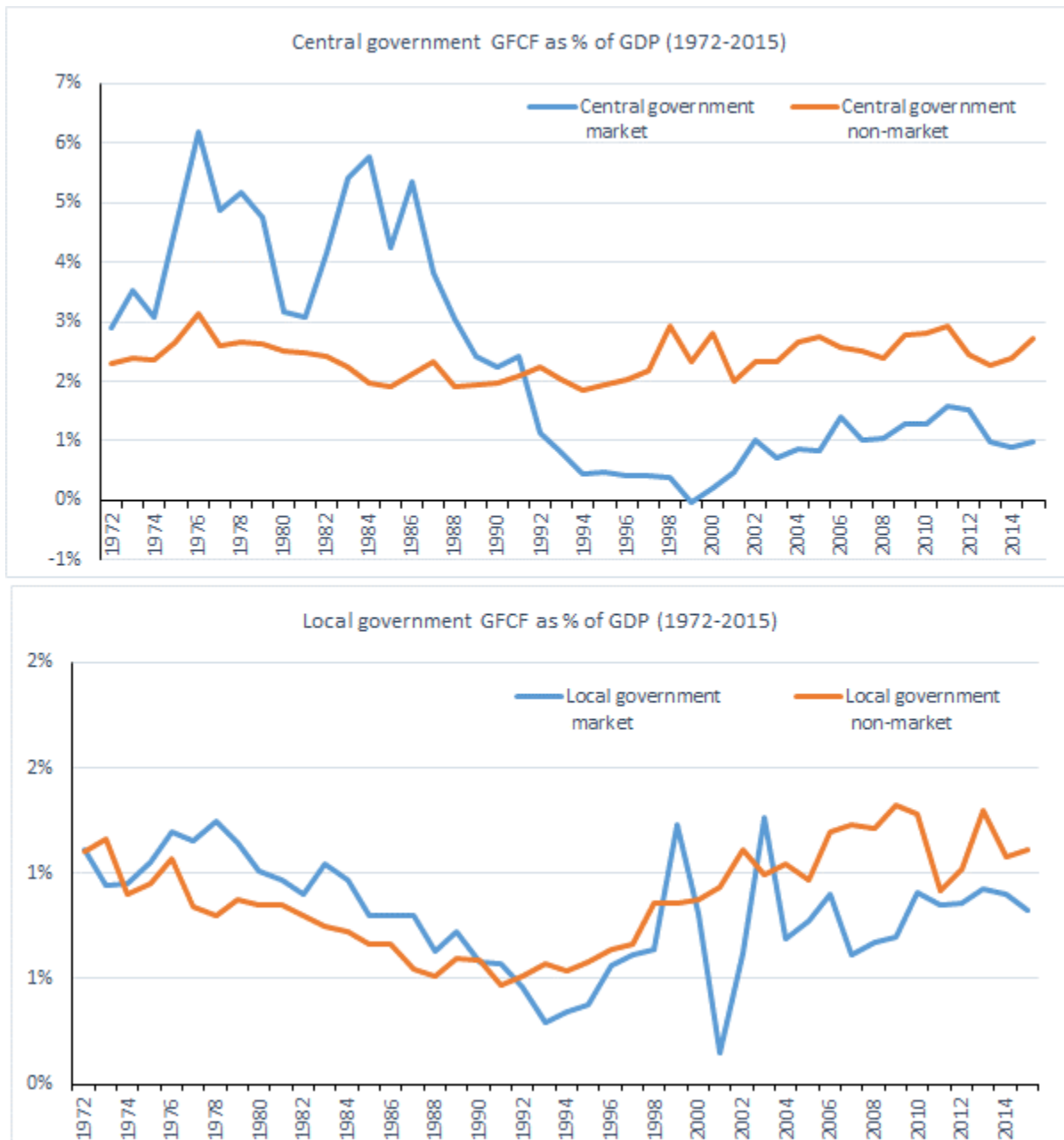**Figure 5A: Government as an investor (measured by GFCF as percent of GDP) 1972–2015**

Government GFCF as % of GDP (1972-2015)
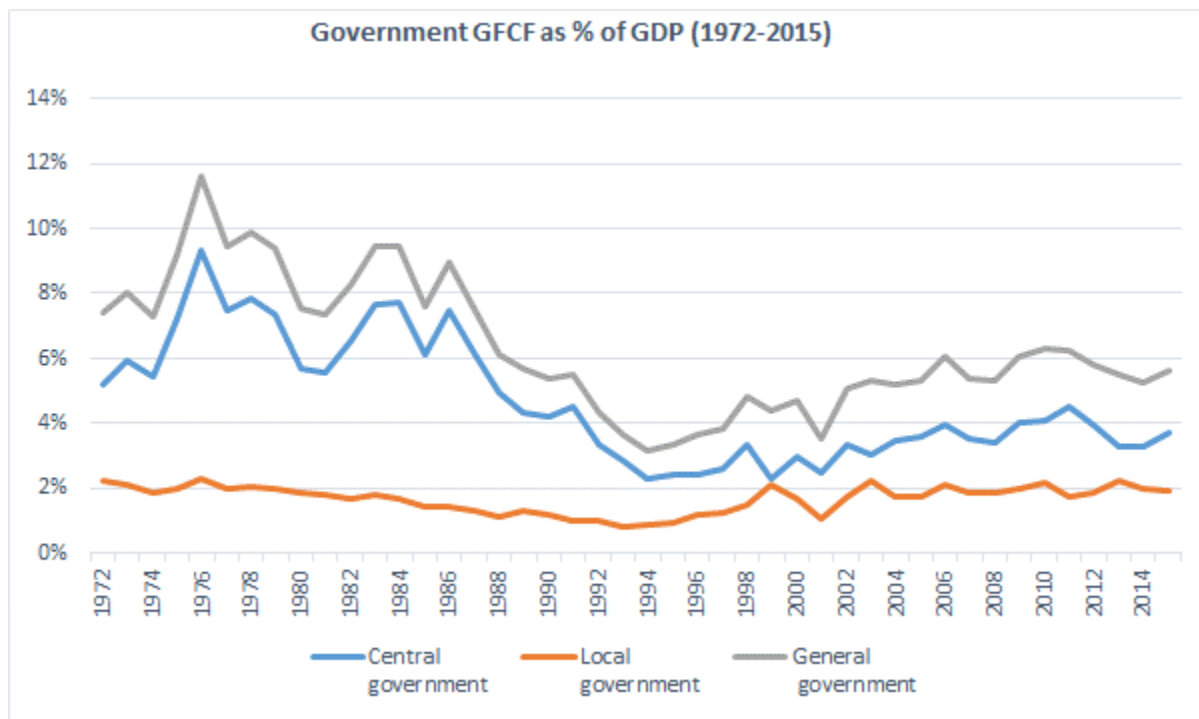
Figure 5B: Government GFCF (as a percent of total GFCF) 1972–2015

Percentage of total GFCF (1972-2015)
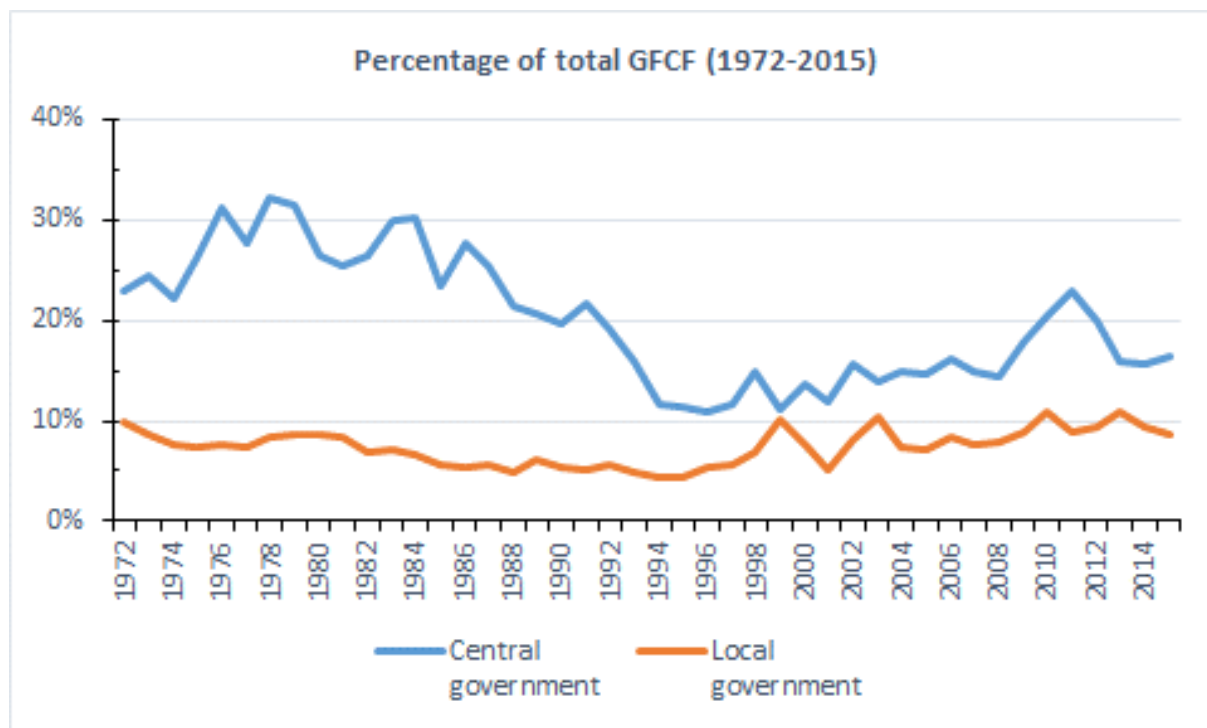
Figure 5C: Government GFCF – market & non-market (as percent of GDP), 1972–2015

As Figure 5A shows, central government investment dominates local government investment in New Zealand. Total government investment, relative both to New Zealand's GDP (in Fig. 5A) and as a share of economy-wide investment (in Fig. 5B) reveal downward trends from the late 1970s or early 1980s until an upturn in the early 1990s as a ratio of GDP, but not until after 2001 as a share of total GFCF (see Figs. 5A & B.)

Figure 5C provides a breakdown of government investment into market and non-market spending, again as ratios of GDP. As with central government production, the chart reveals the dramatic decline in central government market sector investment from 1984-99 with no similar

pattern for non-market investment which fluctuates around a relatively constant 2-3% range. For local government, the figure (lower half) shows strong growth since 2001 in both market and non-market investment. Perhaps surprisingly, a similar pattern after 2001 is evident for non-market central government investment, though at up to 2% the ratio remains low.

IV.   Government as employer

Following Baumol (1967) and Baumol et al. (1985) it is often claimed that the kinds of service activities that dominate public sector production suffer from especially slow labour productivity growth due to limited technical progress opportunities in these services.[10] As a result, public sector employment trends can look quite different to public sector output trends. Figure 6 shows absolute employee numbers in different parts of general government – local government, the public service (the departments that make up the core of central government), the state services beyond the public service (i.e. the wider non-trading central government services, including schools, tertiary education institutions, and government-controlled health organisations), plus trading enterprises.

Note the employment data covers a shorter period (1989–2007) than the other time series because comparable data is available only from 1989. The absolute numbers of total public sector employees, across the entire general government sector, decreased from 1989 to 2001, with a slight resurgence of the *absolute* level of employment under the Labour government from 2001 to 2007.

Table 1: Public sector employment change (in percentage of start year), 1989-2015

	Public Service	Health Sector	Education Sector	State owned Enterprises	Other Crown Entities	Local Government	Public Sector
1989-2015	80%	115%	149%	40%	185%	115%	103%
1989-2001	60%	87%	133%	36%	117%	67%	83%
2001-2015	150%	134%	104%	140%	137%	164%	129%

Table 1 reveals the growth in employment across the public sector, showing the growth of employment to 2015 and 2001 as percentages of earlier values – in 1989 and 2001. Most public sector components, and the total, show employment falling over the period to the low point in 2001. Especially large declines are recorded in state-owner enterprises, (unsurprisingly), the public service, and local government. The overall decline of the public sector to 83% of its 1989 value in 2001, is essentially reversed with an almost unchanged total in 2015 compared to 1989 (103% of 1989 levels). However, the composition has differed across the sector with health and

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[10] Gemmell (1987) shows that similar results emerge if public service production involves relatively low capital-labour ratios, even in the absence of slower rates of technical innovation in services.

education services respectively 15% and 49% larger in 2015 than in 1989; Crown Entities almost double in employment size; and the public service (government departments) is modestly lower (80%). In the 2001-15 period local government has expanded especially – from around 31,000 to 51,000 employees.

Figure 6: Government as an employer by category type (full-time equivalent), 1989–2007
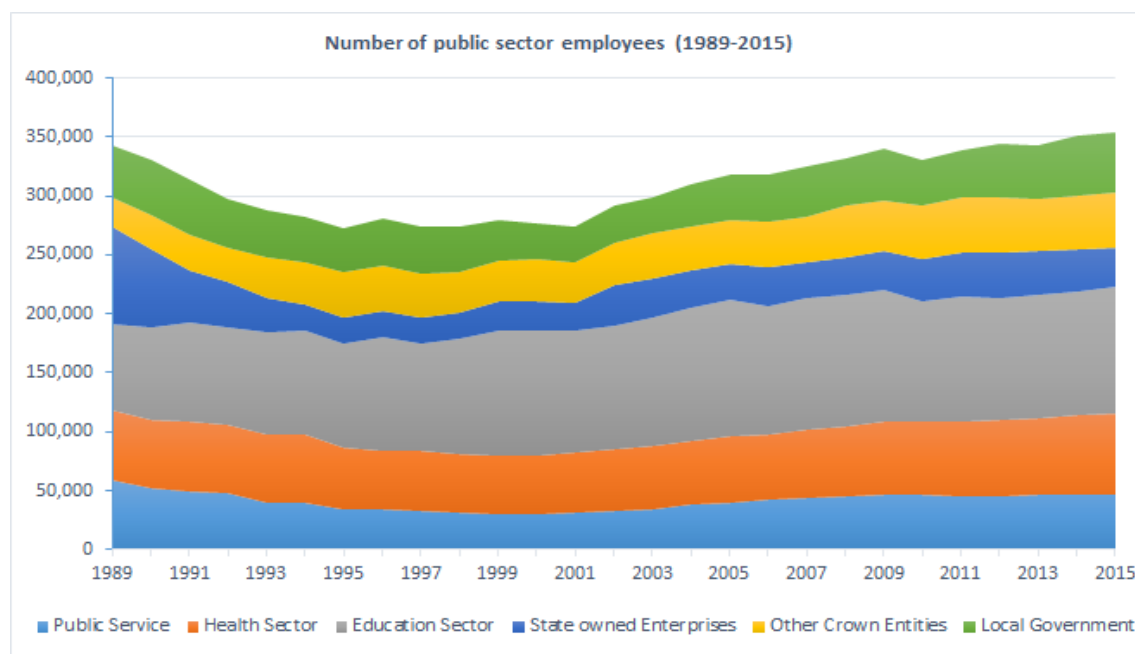
Source: State Services Commission

Figure 7: Government as an employer (as a percent of total employment) 1989–20015
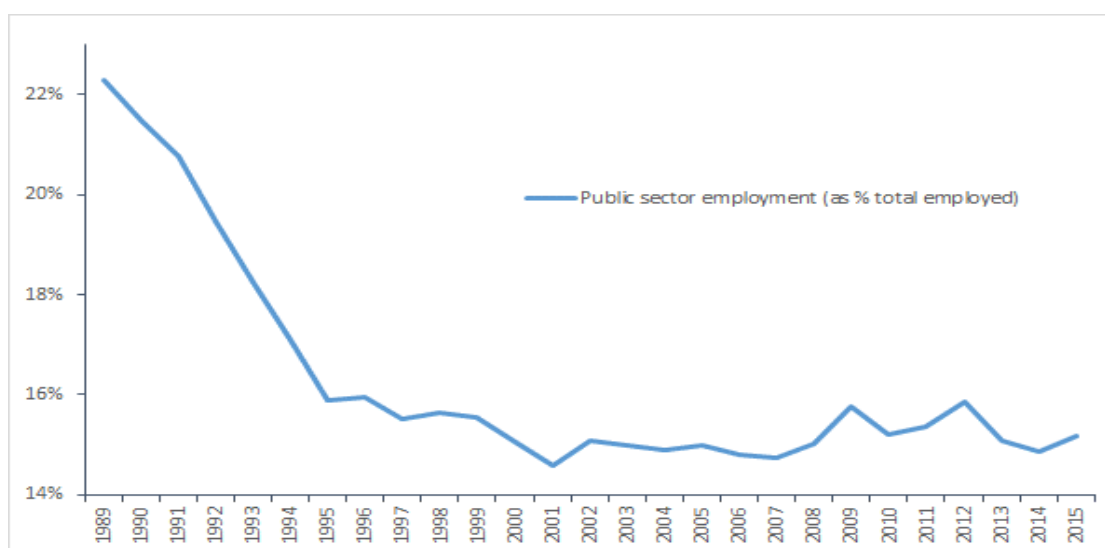
Source: State Services Commission and Statistics New Zealand

Figure 7 shows that *relative* to the total employed labour force, the percentage of public employees followed a generally decreasing trend at least to 2001and has remained relatively

constant thereafter, but with elevated levels in the GFC, and immediate post-GFC, years, when private sector employment was more constrained.

V. Central government as fiscal steward

There are various definitions of government budget deficits and debt, and at various times different definitions have been used for government reporting or to set government borrowing or indebtedness targets; see, for example, Buckle and Cruickshank (2014, p.116).

Figures 8 and 9 explore the role of government as steward (and, via its deficits, as 'macro stabiliser') using as indicators, two definitions of crown net debt (('old' and 'new' – from 1992; see Fig. 8), and the Crown's annual financial balance or 'budget deficit'. Figure 8 shows the clear build-up of Crown net debt from 5% in 1975, peaking at 50% in 1992, and subsequently reducing steadily to around zero by 2008. Percentages are around 5% higher using the 'new' net debt definition.[11] This reflects the success of sizeable fiscal surpluses that central government ran over that period. As Figure 9 shows, from 1993 to 2008, New Zealand has run a series of structural surpluses averaging around 5% of GDP. The subsequent increases in net debt, and associated budget deficits, from 2008-13 reflect the well-known combined impacts of the New Zealand-specific and global recessions from 2008, and the fiscal consequences of the Christchurch earthquakes in 2009.

Comparable data are not readily available for local government, but the governance arrangements applying to local government severely restrict the scope for fiscal imbalances at the local level.

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[11] The new Crown net debt definition excludes 'advances' (e.g. student loans). Both definitions exclude the New Zealand Super Fund (NZSF) financial assets.

Figure 8: Government as a steward – Crown net debt (as percent of GDP), 1972–2015

Core Crown net debt as % of GDP (1972-2015)

(Former) Core Crown Net Debt — (New) Core Crown Net Debt
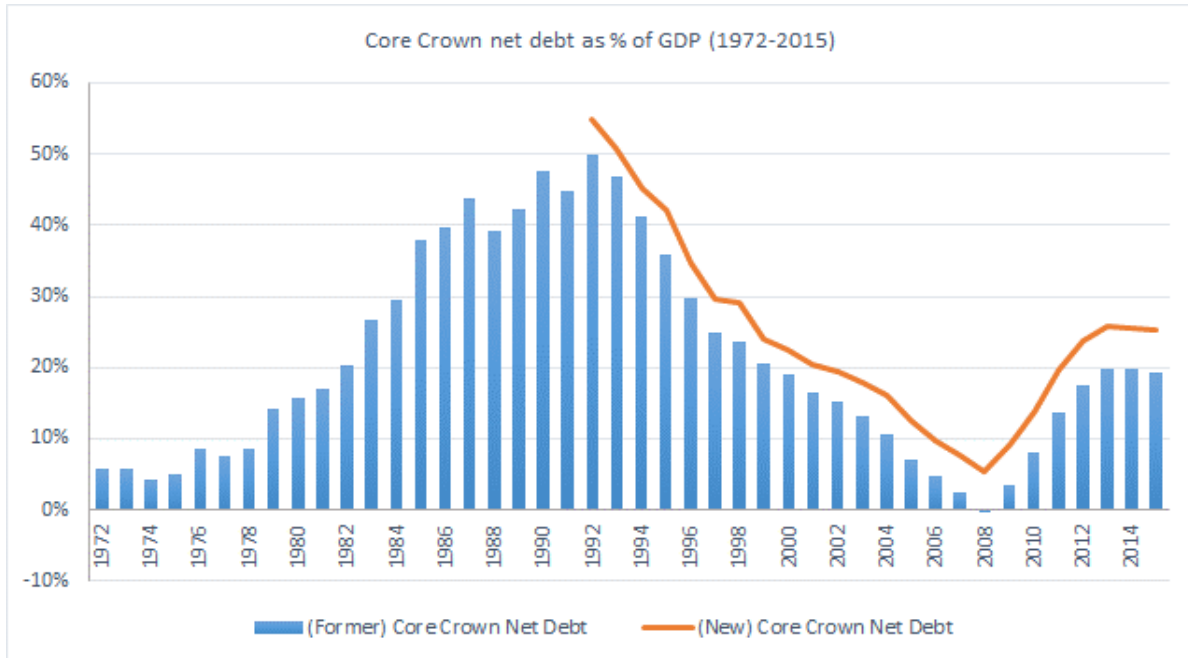
Figure 9: Central government financial balance (as percent of GDP), 1972 – 2015

Government operating balance as % of GDP (1972-2015)

Adjusted Financial Balance — Total Crown Operating Balance
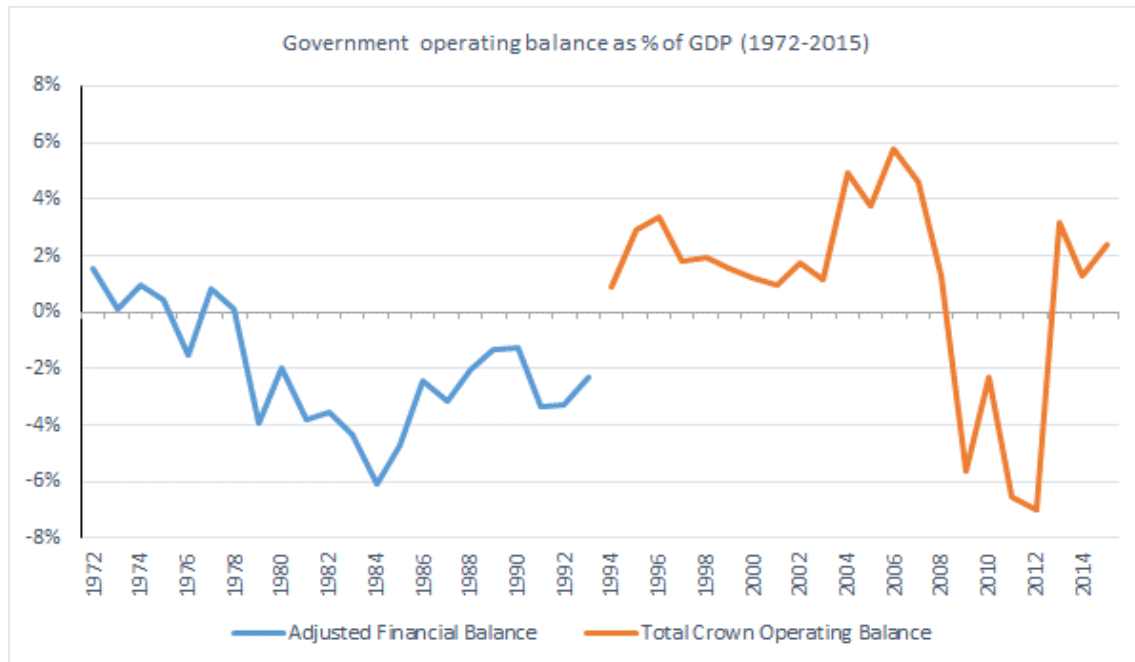
VI.   Summary

In order to summarise the trends in the different series in Figure 10 we bring together a stylised summary of the increases and decreases in various government size metrics or lenses over 1972-2015 (1972 is the first available year for several series). The figure is 'stylised' in the sense that we have selected the (approximate) years which represent turning points in each series and plotted straight lines between these for each lens shown. These include profiles for government debt, tax revenue, government market sector and non-market sector GDP, and the government investment/GDP ratio. A government consumption profile is omitted because it is almost flat throughout the period, peaking around 1982 and then fluctuating in the 15-20% of GDP range with no persistent upward or downward trends; see Figure 4.

Figure 10: Stylised Changes in Different Government 'Lenses', 1972-2015
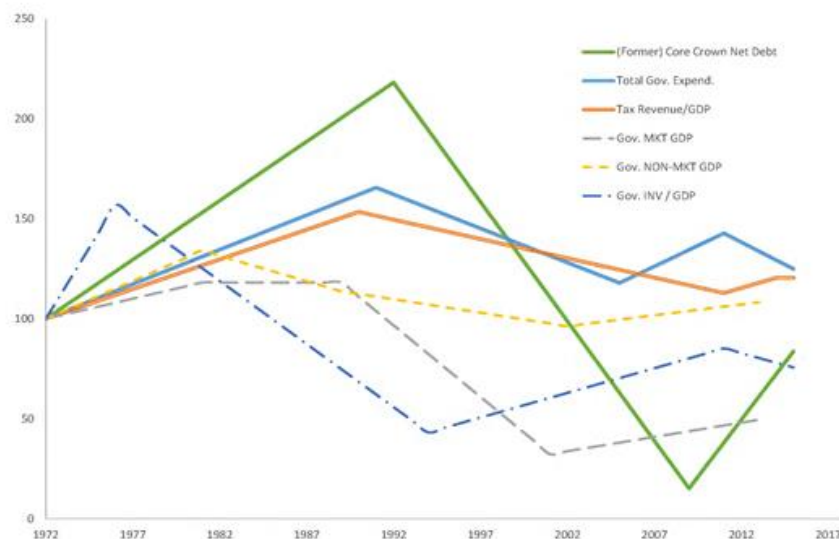
All the data series have been converted to indices based on 1972 = 100 so that the relative size of the movements in each indicator can be compared. Figure 10 tends to confirm that, while some government size metrics do reveal a clear change of direction around the time of the late 1980s reforms, for others there are various trend changes that occur at quite different times. The extent of the change in trend for different metrics is also very different. There is clear evidence that the state's role as a producer of market outputs has shrunk since the 1980s and likewise in its role as employer, but for a range of other measures the state's role has changed relatively little. Changes in Crown debt reveal the largest relative rise and fall over the period to 2008; and, of course, the omitted government consumption is at the opposite extreme with no major trend or changes in trend.

Overall there is little sign in the data of the hollowing out or shrinking of the state, though some changes following the 1980s reforms have persisted. Instead, what we found in the data were some significant changes in the shape of the state. Looking at the government as a spender, some of the components have proved very volatile. For example, the introduction of New Zealand Superannuation led to a significant increase in government spending after 1976, which was wound back in the 1990s but it is now increasing again. The level of social welfare spending is still above the level in 1975 although well below the peak in the mid-1990s.

VII.   Conclusions

The purpose of the New Zealand public sector reforms in the late 1980s was, according to Scott *et al* (1997), 'to get the government out of activities it was inherently poor at managing and to improve those functions which remained the core responsibilities of government' (p.358). Using various lenses, the data described above enables us to shed some light on trends in the size of the New Zealand government before, during, and after these reforms.

Government market production was significantly impacted by the reforms. The turning point for government production (as a percentage of GDP) was 1988, which began a downward trend largely achieved from the sale of government assets and government businesses.

Local government displayed a similar downward trend in terms of its contribution to production. Looking at the non-market activities of government as a consumer, the central government share of output has remained in a fairly consistent band of 14–18% of GDP, and local government between 2–3% of GDP, since the mid-1970s.

We also identified two basic linear trends for government consumption. Based on data for 1972–1983, government consumption would have been forecasted to increase (as a percentage of GDP) quite substantially into the future. Data from 1984, however, shows a very stable average trend that displays only a very slight decrease. It would appear, based on this evidence, that the reforms turned around the previous growth trend, and stabilised government consumption relative to GDP, but did not lead to any significant reduction in consumption.

Total government employment in 1989–2007 was consistent with the general trends. The absolute number of government employees trended downwards from 1989 to 2001 and began increasing thereafter. This increase was partly, though not primarily, associated with an increase in employees in the wider state sector. Despite the absolute number of government employees increasing after 2001, the proportion of people employed by the government out of the total employed workforce *decreased* in this period. Indeed, the longer term trend is for a decrease in employees (1989–2007).

Government investment, as measured by GFCF, appears to have been significantly affected by the reforms. Government GFCF to total GFCF fell from a high of almost 40% in 1978 to just above 20% in 2009. Annual figures from 1972 to 1985 were quite volatile, but from 1986 there was a substantial decline in government GFCF measured as a percentage of GDP. Although this trend was reversed from 1994, by 2007 public capital spending as a percentage of GDP was well below its level prior to 1984. This appears to reflect privatisation, resulting in the transfer of capital spending from government to private entities. Public non-market GFCF has increased markedly since the mid-2000s.

Total net Crown debt was very low in 2008 compared with 1992 and had the downward trend been sustained it could have resulted in the Crown being a net lender. However, the recession of 2008-09, and tax cuts, reversed the pattern of surpluses.

One key insight from the data presented in this paper is that overall – despite rhetoric about the New Zealand reforms of the late 1980s and early 1990s –the *size and scope of the state has been remarkably stable in New Zealand*. One notable exception to this statement was the state reducing its role as a producer of market goods and services, through privatisations.

The second key insight highlighted by Figure 10 is that the conclusion one reaches regarding trends, and changes in trends, in the government's economic size *depends* very much on which *measure of government size is the focus*.

The analysis presented in this paper has focused on looking at the broad trends in the data. In the next phase of the work we will be using econometric techniques to unpack the relative role of various factors suggested by the literature on the growth of government.

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