Structural Change in the New Zealand Economy 1974-2012

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1 Introduction

1.1 Motivation

The New Zealand economy of 2012 is very different from the economy of 1992, 1972 and 1952. Many of the changes are obvious such as new and changing export destinations and import sources; the increasing use of ICT in workplaces, increasing education levels of the workforce, and changing and rising employment patterns of women. Many of the changes are less obvious, but potentially equally important, such as the gradual process of structural change and productivity improvement in primary production, manufacturing and in services. It would be unrealistic to suggest that the New Zealand economy will not continue to be fundamentally transformed between 2012 and 2052.

The aim of this synthesis is to provide a discussion of the broader economic challenges that New Zealand has faced, is facing and may continue to face alongside the fiscal challenges outlined in the remainder of the long-term fiscal statement. It explores at a high level some of the (temporary and permanent) structural changes that occurred in the New Zealand economy between 1972 and 2012 and draws implications for the long-term economic outlook. The changes that it specifically looks at are the fluctuations in New Zealand’s terms of trade in the 1970s, and the broad economic and labour market changes during 1990s and 2000s, which occurred at the same time as the rise of Asian economies, technological change and changing workforce characteristics. In an accompanying paper, we look at some of the key expected external trends and their implications for economic outcomes.
This paper is deliberately not a complete history of New Zealand’s economic performance\(^1\), nor a comprehensive discussion of the drivers of economic growth.\(^2\) This paper takes a high level view of some major (temporary and permanent) changes that New Zealand faced over the past 40 years. Many of the debates about the interpretation of these trends and challenges remain live. This paper should be read as an attempt to make reasonable judgements about New Zealand’s economic performance, but other judgements are possible.

1.2 The context for the long-term fiscal statement

If we aspire to have high material living standards in the future then we need to have policies and institutions that support strong economic growth. In recent times there has been an increasing awareness amongst economists that there is no one set of policies for higher economic growth, but that there are a range of institutions that are important.\(^3\) However, there are some economic settings that seem to be systematically associated with higher growth than others – macro-economic stability; competitive and flexible microeconomic settings; institutions that provide strong incentives for economic participation and higher productivity; and the level and composition of Government expenditure and taxation.\(^4\)

The long-term fiscal statement reports on the emerging pressures for the size and composition of Government expenditure and taxation over the next 40 years. One of the key focuses of the statement is in understanding whether current policy settings will lead to a systematic deterioration in the fiscal balance (and associated risks to levels of public debt and debt servicing costs) and a changing composition of expenditure in light of known trends, such as increasing longevity and rising health costs. This is an important component of ensuring policy settings are supportive of improved living standards over the long-term and that trade-offs between policy choices are made explicitly, rather than being accepted passively.\(^5\) These issues will be considered in more detail in papers that will be presented to the external reference group at later sessions.

Nevertheless, it is important to recognise that over the next 40 years the New Zealand economy will face a broad range of challenges and opportunities that will require changes in individual, household, business and Government behaviour. For many of the structural changes that we may face, the New Zealand economy is well positioned to respond through a stable macro-economy and a competitive and flexible micro-economy. In some instances, such as through the Global Financial Crisis, we will learn lessons about the strengths and weaknesses of our policy settings in light of pressures, and changes will made. There is still more that can be done (including in our fiscal policy settings) to lift economic performance and we need to maintain a focus on getting the fundamentals right for economic growth.

\(^1\) A significant number of authors have written about New Zealand’s economic performance, including Gould (1982), Hawke (1985), Easton (1997) and more recently Lattimore and Eaqub (2011).

\(^2\) For those interested in a discussion of the drivers of economic growth from a New Zealand perspective, see Treasury (2004) and Conway and Orr (2000).

\(^3\) See Rodrik (2003) and Acemoglu, Johnson and Robinson (2005).


\(^5\) The primary focus of the living standards in this note is on the drivers of GDP per capita growth in New Zealand. This is one dimension of living standards. The Treasury (2012) presents a living standards framework that transparently highlights the broad dimensions of living standards.
A framework for the consideration of structural change

There are a variety of different economic tools for thinking about how changes will influence economic outcomes. Growth accounting approaches typically decompose drivers into their impacts on [multi-factor] productivity and levels of labour and capital input. General equilibrium approaches typically consider the impacts of changes in prices or inputs on firm and household behaviour based on a range of assumptions about the way in which households and firms respond to incentives. Historians typically consider the underlying drivers of longer terms patterns and structural change.

At a very simple level, we can think of supply-side, demand-side, market and framework drivers of Gross Domestic Product (GDP) per capita (see Figure 1). On the supply-side, drawing on Treasury (2008) we have skills and employment, enterprise and innovation, investment, natural advantages and technological change. On the demand-side, the terms of trade, external demand and preferences of consumers are important determinants of the level and composition of GDP. Markets are important in determining wages and prices and leading to allocative efficiency. Underlying economic frameworks can be thought of as influencing and supporting the supply-side and demand-side and the functioning of markets. The framework is clearly a simplification given that there are many cross-cutting influences, for example, changing consumer preferences/demand will have a strong influence on supply through the mechanism of prices, wages and quantities demanded.

Figure 1: Organising framework for this paper

It is beyond the scope of the paper to consider in detail all of the influences on the supply and demand-side and their interaction. Instead in this paper, we focus on some of the structural changes that have had an enduring impact on New Zealand’s economic performance. These are important for both understanding the nature of the major changes that New Zealand faced and the capacity of the economy to respond to these changes.
1974 - 1992: The terms of trade shocks and medium-term consequences (see Section 2)

1992 – 2007: Changing export and import markets, changing industrial and occupational structure (brought about through changing patterns of trade, technological and organisational change and changing consumer preferences) and changing workforce characteristics (see Section 3).

The focus on these high level structural changes therefore means that a number of other changes are not discussed. These include: increasing demand for services by households, the changing nature of New Zealand firms and their innovative activity, the evolution of New Zealand’s approach to agricultural production and the changing nature of capital investment. Importantly even within the same industry and occupation the nature of work changed fundamentally with the increasing use of ICT, new and different working arrangements and rapidly evolving products and services in response to changing consumer demand.

The paper concludes in section 4 with the overall messages from this review and the policy implications for the long-term fiscal statement.

1.4 Overview

The stylised facts of New Zealand’s overall economic performance since the 1950s are well explained by Lattimore and Eaqub (2011). In the 1950s New Zealand GDP per capita was one of the highest (6th) in the world.\(^6\)

\[\text{\textsuperscript{6} Easton (1997), page 27.}\]
Between 1955 and 1974 economic growth was strong (albeit weaker than comparator countries) supported by of a high terms of trade and strong global growth. Real GDP per capita grew at 2.1 percent per year over this period (see Figure 2). Nevertheless there were some early warning signs (such as relatively low labour productivity growth and an economy reliant on a narrow range of commodity exports to a single market).

Between 1974 and 1992 the economy went through a prolonged period of weak economic growth and New Zealand’s relative GDP per capita fell to 19th in the OECD by 1990. This weak economic performance was triggered by external shocks; but then compounded by inflexibility of the economy and the labour market to respond to these shocks (particularly wage and price setting). Weak growth continued during a period of macro-stabilisation and micro-reform. Real GDP per capita grew at 0.5 percent per year through this period.

Between 1992 and 2011 there were positive external conditions, a more stable macro economy and a more flexible micro-economy that led to the economy growing at a similar rate to the ‘average’ OECD country. Real GDP per capita grew at around 1.8 percent per year through this period.

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7 The starting point of the 1974-92 period was chosen because 1974 was the year that the terms of trade fell steeply due to the oil price shock and commodity prices declined. The period 1992 was chosen because by this year the inflation rate had been stabilised, the unemployment rate had peaked and there was evidence the underlying economic growth rate increased in the early 1990s (see Treasury et al (2004)). There is an argument using on-trend measures that quarter 1, 1993 would be the preferred starting point (see Downing et al (2003) and Buckle et al (2002)). However, Figure 2 is based on annualised, rather than quarterly GDP per capita data. In addition, changing the start point of the later period to 1993 does not significantly change the percentage estimates provided in Figure 2.

8 Easton (1997), page 27.
New Zealand’s short-term economic prospects are closely related to global economic developments. However, domestic policy settings have been critical in explaining how the New Zealand economy responded to external conditions between 1974 and 2012. Between 1974 and 1992 the terms of trade shock (including the oil shock), which would be expected to be short lasting, had long-term impacts because it led to a prolonged period of inflation and macro-instability. Between 1992 and 2011 the New Zealand economy faced structural changes nearly as significant as those experienced through the early period, through the rise of Asian economies (and the associated changes in our patterns of trade), technological change (including information and communications technology) and changing workforce characteristics (changing gender patterns of workforce and education participation).

Given the right conditions, the economy was able to adapt to structural change given a more stable macro-economy and a more flexible micro-economy. These changes will continue to require large scale economic adjustment into the future, but the nature and timing of this adjustment is uncertain. Some of these changes are discussed in the accompanying paper on future external trends.

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10 See for example: Berman, Bound and Machin (1998)
11 See Grant Johnston’s review of Women’s participation in the labour force: http://www.treasury.govt.nz/publications/research-policy/wp/2005/05-06/
Section 2: the enduring impact of the 1970s terms of trade shocks

2.1 Introduction

This section reviews the impacts of the big change in New Zealand’s terms of trade in the 1970s. The terms of trade was initially very high in the early 1970s as a result of a decline in supply and increase in demand for agricultural products, but then subsequently there was a major spike in the price of oil and a decline in agricultural prices and a consequent steep decline in the terms of trade (see Figure 3 and Lattimore and Eaqub (2011)).

Figure 3: Terms of trade

![Figure 3: Terms of trade](image)

Source: Treasury Briefing to the Incoming Minister (2011) drawing on Statistics New Zealand.

This is a particularly interesting shock to look at for a variety of reasons. Firstly, large fluctuations in New Zealand’s terms of trade have been a common feature of our recent past and we can reasonably expect that they will continue to occur going forward. Secondly, movements in New Zealand’s terms of trade are an important driver of New Zealand GDP through time. Indeed, Grimes (2006) finds that approximately half of the variance of New Zealand’s annual GDP growth over 45 years can be explained by the level and volatility of the terms of trade. Finally, the terms of trade shock and subsequent domestic response provides a number of important lessons about both the New Zealand economy and policy responses.

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12 This section draws heavily on Treasury (2004).
2.1 Early warning signs in the lead-up to the terms of trade shocks

One of the interesting features of the 1955-74 period, leading up to the terms of trade shocks, is that it appears to be a time of transition in part because of what occurred before and in part because of what was about to occur. Through this period New Zealand continued to have strong economic growth relative to the growth in subsequent periods. Growth was supported by strong economic growth in the United Kingdom (particularly), Western Europe, the USA, Australia and Canada (see Figures 4a and 4b), which in turn led to a high terms of trade (see Figure 3), and strong demand for volumes. The strong growth over this period is also consistent with spillovers from global technological and productivity improvements in the strong growing Western countries being transferred to New Zealand.

Figure 4a: Western Europe growth Figure 4b: Western off-shoots

While the strong economic growth pre-1974 is notable, Treasury (2008) and Easton (1997) highlight that there were a number of early warning signs in the period. New Zealand’s economic growth was below those of comparator countries, such as Australia and the US, and New Zealand’s relative ranking began to fall. In addition, labour productivity in New Zealand was starting its long relative decline compared to comparator countries (see Treasury (2008)). Lattimore and Eaqub (2011) argue that this was due to the development of international supply chains based on economies of scale and specialisation that for a range of policy and size reasons New Zealand was not able to benefit from. Others have noted New Zealand’s strong reliance on a narrow range of mostly agricultural exports made it vulnerable to later shocks that were to hit the economy.

It is perhaps not surprising that there was less focus on the terms of trade, oil prices, wage and price inflation and unemployment in the 1960s, given the relatively stable nature of these measures during the period and the more pressing concern about the United Kingdom’s impending entry into the common market. However, these issues were to become the most significant issues of the 1974-92 period. That is not to say that changing trade patterns with the United Kingdom were not important, but more to emphasise that the 1970s terms of trade shocks and domestic policy settings had some particularly long-lasting effects.

13 See Rose and Stevens (2004) for a discussion of technology transfer and technology spillovers.
The institutional and policy settings New Zealand had in place in the early 1970s largely reflected the economic environment that it had been operated in for the previous 100 years. The New Zealand economy had recorded solid or stronger economic growth for a long period (combined with low unemployment), but was reliant on agricultural exports to the British economy to maintain its balance of payments and domestic firms were not exposed to a high level of competition. These factors meant that wage and price setting was done in a centralised way, that the domestic economy was relatively slow to respond to changing external circumstances, and it was reliant on a narrow range of products to a single economic market.

2.3 The terms of trade shock itself

Following a large increase in New Zealand’s terms of trade in the early 1970s, there was a large increase in the price of oil in late 1973 and another significant real increase in 1979 with a corresponding decline in the terms of trade (see Figure 4 and for example Lattimore and Eaqub (2011)). As Borkin (2006) notes the implied decrease in the real purchasing power of domestic production from a terms of trade decline is equivalent to a transfer of income to the rest of the world and can have large impacts on consumption, savings and investment.

Higher oil prices particularly in the mid-1970s impacted on New Zealand’s growth in several ways (see Treasury (2004)). First, this resulted in a slow-down in industrialised countries’ growth, owing to a redistribution of world income from oil importing to oil exporting countries. This initially impacted on the growth and distribution of demand for New Zealand’s exports. Second, higher oil prices increased the real cost of intermediate inputs (with limited opportunities for substitution away from oil), which was equivalent to a fall in productivity levels (Bruno and Sachs (1985)).

2.4 The longer lasting impacts of the shock (and subsequent response)

The immediate response to the decline in the terms of trade was an increase in foreign borrowing to attempt to buffer the economy from the shocks. Then over time as effective national income fell, there was increasing competition from different groups to retain their share of national income (see for example Conway and Orr (2000)).

More specifically the institutional wage, price and monetary policy settings made it difficult to maintain macroeconomic stability in the 1970s. Stagflation (the combination of high unemployment and high inflation) was accentuated by the indexation based wage-price

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14 See for example Gould (1982).
15 In relation to the effects of terms of trade changes on the New Zealand economy, Karagedikli, and Price (2012) show that the short-term impacts on aggregate demand and GDP will depend on the nature of the driver of the underlying driver of the terms of trade shock (for example, global supply or global demand shock).
16 Macro-stability here refers to the rate and volatility of inflation and GDP growth; and the levels of public debt and the fiscal balance. Notably in the 1970s and 1980s inflation tended to be higher and more volatile, GDP growth lower and more volatile and the fiscal balance was more likely to be in deficit than in the 1990s (see Treasury (2004)).
inflation process that prevailed in New Zealand during the 1970s and early 1980s (see Treasury (2004) and references therein). Overall, this meant that the increase in the price of oil lead to a wage price spiral. In turn this meant that except for a short time around the time of the price freeze, inflation was above 10% per year for nearly 15 years (see Figure 5).

**Figure 5: New Zealand inflation (1955-2011)**

![Inflation Chart](source: Statistics New Zealand)

What followed between 1984 and 1992 was a range of measures to address the underlying weaknesses that lead to poor economic performance in the 1970s and early 1980s (see Evans, Grimes, Wilkinson and Teece (1996)). These included macro-economic stabilisation measures (including the establishment of an independent central bank and a focus on inflation targeting), opening up of the economy (including reducing tariffs and industry assistance), financial market deregulation (including floating the exchange rate), state sector reform, tax reform (changes to income and indirect taxes that favoured broad based, low rate taxes) and labour market reform (the Labour Relations Act and then the Employment Contracts Act and changes to benefit levels).

Change was required to the New Zealand economy in 1984, given a decade of poor economic growth, persistently high inflation, rising unemployment and a worsening fiscal balance. Macro-economic stabilisation and micro-economic reform process - combined with the presence of continued low terms of trade and weak global growth through the later part of the period - was associated with weaker growth in New Zealand through the period of 1984-92 and a rising and high unemployment rate (see Figure 6).
2.5 The lessons from the 1970s terms of trade shocks and subsequent impacts

There is little doubt that the oil price shocks and the associated decline in New Zealand’s terms of trade in the 1970s was a negative economic shock and it is not surprising there was weakness in GDP growth in the time immediately after the shock (for the reasons given above). This highlights that given New Zealand’s reliance on a relatively narrow export basket and on key imported goods that its GDP growth can be vulnerable to external shocks. Another lesson is, with hindsight, it was not surprising given New Zealand’s institutional settings at the time of the shock that it experienced generalised inflation and macro-instability, which had long-lasting impacts on New Zealand GDP prospects. Perhaps the surprising feature is how costly it was to address the underlying causes and consequences of this macro-instability.
Section 3: Structural change in the 1990s and 2000s – technological, global and workforce changes

3.1 Introduction

It is easy to argue when looking at aggregate GDP growth rates, inflation and unemployment in New Zealand data (and many other economies) that the period of 1992-2007 was a period of moderation. Indeed the unemployment rate fell from historic highs, the inflation rate settled into the 1-3% range over the business cycle and volatility in GDP growth fell (see figures above and Buckle et al (2001) for a discussion of GDP volatility).

Between 1992 and 2007 there were a number of favourable developments that supported the New Zealand economy. The terms of trade rebounded from the low levels observed between 1974 and 1992 and continued to rise through-out the period (see Figure 3 above). This was driven by increased demand for New Zealand’s commodities (relative to those products and services imported). In addition, while there were periods of weaker growth (for example, through the 1998-99 drought and the Asian Financial Crisis) these tended to be relatively short-lived.

Nevertheless, against this backdrop, this section argues that below these headline macroeconomic indicators a number of major structural and composition changes were occurring in the economy. Indeed this section argues that for a variety of reasons the economy was able to adjust to these relatively large structural changes.

3.2 Changing import and export markets

One major structural change that continued in New Zealand in the post-1992 period was a change in the composition of markets for its imports and exports (changing composition of imports and exports has been a feature of the economy for nearly 50 years). In this period, there was initially strong growth in the Asian Tigers and then more recently by the strong growth in China and India. This in turn led to subsequently strong growth in Australia. So, for example, in Figure 7, we see strong growth in the value of exports to Australia through the whole period, and particularly strong growth in exports to China towards the end of the period. At the same time changing relative prices between commodities (oil, minerals, agricultural products) compared to manufactured goods also played a significant role in the composition of our import values. We see from Figure 8 that the value of imports grew strongly from OPEC countries and Australia, as well as the sustained increases in imports from China through-out the period (with particularly strong growth since 2000).
**Figure 7: New Zealand’s value of exports (by destination)**

Source: Treasury Briefing to the Incoming Minister, based on Statistics New Zealand.

**Figure 8: New Zealand’s value of imports (by source country)**

Source: Statistics New Zealand (infoshare table: IMP037AA)
3.3 The changing industry composition

Partly in response to changing global demand and supply for New Zealand’s products (in relative and absolute terms), as well as in response to changing consumer demand, technological changes and general productivity improvements, we see that between 1989 and 2012 there were large differences in employment growth across New Zealand’s industries.

Firstly, we see that there were contractions in employment in Manufacturing; Electricity, gas, water and waste; and Financial and Insurance services. Weak employment growth in these industries in part reflected ongoing structural adjustment in response to declining competitiveness for some industries and sectors, in part it reflected technological and organisation change that have improved productivity (and lead to some services, such as legal services, no longer being undertaken by firms in these industries) and in part it reflected changed consumer preferences (see Productivity Commission (1998) for a discussion of similar trends in Australia).

Figure 9: Changes in industry employment (1989-2012)

Over the same period we also observe very strong growth in Accommodation and Food services, Health care and social assistance and Professional and associated services. Some of these changes reflect changing consumer preferences; increasing demand for services with income; and the increasing trend of professional services being delivered by specialist firms, rather than being sourced in-house (see Productivity Commission (1998)).
3.4 The changing occupational profile

One of the interesting features of the New Zealand labour market (consistent with those of other labour markets) is that there has been strong employment growth in high wage occupations (Managers, Professionals and Associate Professionals) and in lower wage service and sales occupations. While at the same time growth has been more modest in Plant and Machinery occupations, Clerks and Trades occupations (see Figure 10). This pattern in large part reflects the changes in industrial structure, observed in Figure 9 above, with Manufacturing employment contracting and strong growth in Professional, Social assistance and Accommodation and Food.

Figure 10a: Male occupational profile  Figure 10b: Female occupational profile


3.5 Strong growth in the numbers of people with high qualifications

One of the biggest changes that occurred in the New Zealand economy over the past 25 years has been the rapid growth in the qualifications of the working age population. We see from Figure 11 below that there has been particularly strong growth in the number of people with Bachelor’s degrees or higher, moderate growth in the number of people with school or non-degree tertiary qualifications and a big decline in the numbers without qualifications. This big change in the qualifications of the working age population has not been associated with a big decline in the skilled wage premia suggesting that demand for skilled labour is rising as fast as the supply is increasing (i.e. that there is skill biased technological change). Moreover, interestingly the unemployment rate for people without qualifications remains considerably higher than that for people with qualifications.
3.6 Changing male and female employment patterns

The large industrial and occupational changes (discussed above) have both been influenced by and influenced the employment patterns of men and women. Male employment has tended to decrease at earlier ages as more young men participate in education and training and increase at later ages as more older men delay retirement (see Figure 12a). We see from Figure 12b that female employment rates at younger ages have declined as more young women participate in education and training. The figure is consistent with changing patterns of employment for mothers working with younger children and better employment opportunities (as their levels of qualifications have increased) leading to more prime aged women being employed (and as with men, we see more older women are retiring at later ages).  


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17 See, for example, Gorman, Scobie and Towers (2012) for a discussion of the drivers of employment of older New Zealanders.
3.7 The ageing of the workforce

A major focus of the long-term fiscal statement is the impact of an ageing population on the fiscal position. However, as we see above, there are big differences in labour force participation across ages. We see from Figure 13 below that there has been a drop in the percentage of the working age population below the age of 40, and a particularly strong increase in the percentage aged over 65 years. The combination of higher employment rates of older people and more older people means that older workers are becoming an increasingly important part of the workforce.

Figure 13: The changing age composition of the workforce

Source: Statistics New Zealand – Household Labour Force Survey
Given the different labour force participation and productivity of people at different ages, we would expect that the continued ageing of the workforce (in the absence of other change) will have impacts on New Zealand’s aggregate labour force participation and productivity going forward.\(^{18}\)

### 3.8 The increase in the foreign born population

Another significant change that we observed between 1991 and 2012 was the rapid rise in the proportion of the population born overseas. This was driven both by a range of incremental policy changes over the period (along with changes to the framework instituted at the start of the period), as well as changes in patterns of migration of the New Zealand born population. While the foreign born population ranged between 13.5% and 16% between 1946 and 1991, the proportion of the population born overseas rose from 15.8% in 1991 to 23% in 2006 and 26% by 2012 (see Figure 14). At the same time, economic growth continued and there was a gradual fall in the unemployment rate. This is consistent with the economy being able to adapt to this shock and there being small aggregate economic and labour market effects from the change to migration stocks and flows.\(^{19}\)

**Figure 14: Percentage of the New Zealand population born overseas (1936-2012)**

Source: Statistics New Zealand – 1946-2006 estimates from Census; 2012 estimate is calculated by the author based on Permanent and Long Term migration and population (births and deaths) estimates.

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\(^{18}\) See Bell et al (2012) for a discussion of the productivity implications of an ageing population and see Rodway (2012) for a discussion of the outlook for labour force participation in light of the ageing population.

\(^{19}\) This is consistent with Productivity Commission (2006) and Treasury (2009).
3.9 The impact of the economic and policy framework

While external conditions were supportive of stable and strong economic growth over the period 1992-2007, this is probably only half of the story. For most of the period 1955-92, while New Zealand’s economy did respond to external conditions, it consistently performed below other OECD countries and particularly below Australia, the UK and the US (annual GDP per capita growth was 1.5 percentage points below the OECD average for the period 1974-92). However, since 1992 New Zealand’s annual real GDP per capita growth rate has been close to Australia’s and above the OECD average (see Figure 15). New Zealand’s economic performance over the period is consistent with macro-economic and micro-economic settings supporting higher GDP growth than was observed in the earlier period.

Figure 15: New Zealand growth in real GDP per capita relative to the OECD (1974-2010)


A question remains as to why our economic settings did not result in some further convergence to OECD GDP per capita levels over the period (New Zealand’s real GDP per capita remains around 12% below the OECD average). Typical growth regressions (see, for example, Barnes et al (2011)) consistently suggest that New Zealand should have higher GDP per capita, given its policy settings and the scope for convergence with those economies with the highest GDP per capita.

It is beyond the scope of this paper to estimate the underlying rate of GDP per capita growth of the New Zealand economy. A range of different judgements are possible on the underlying estimate, depending on which starting point is chosen, and the degree to which we put weight on the stronger growth observed post-1992 as being structural, rather than as a recovery from the weak growth in the period 1974-92. Nevertheless, Figure 15 above does suggest that over the past 20 years that the New Zealand economy has been growing at a rate similar to the OECD average, rather than the considerably slower rate that was observed in the 20 years prior.
3.10 Macro-economic stability, policy frameworks and structural change

Consistent with the above discussion, when there was a stable macro-economy, competitive and flexible micro-settings in the 1992 - 2007 period then the economy was more resilient to external shocks and New Zealand’s growth rate was close to the OECD average. For example, over the period 1992 and 2007 there was large scale structural change in manufacturing (and some other industries) – around a 1% decline in manufacturing employment per year (see Figure 9 above) - brought about through technological change and strong growth in productive capacity in emerging economies. However, GDP per capita continued to grow by 1.8% per year and the unemployment rate fell from 11% to 4%.

Many commentators have noted that the period 1974-92 was a period of significant structural adjustment in the economy (particularly post 1984). This is demonstrated in Figure 16, which shows that most manufacturing industries contracted between 1974 and 1992, as well as declines in transport and storage and primary production employment. Indeed, even between 1960 and 1974 there was significant structural change. However, a key point in the 1960-74 period was that all industries had stable or expanding employment, and employment growth was relatively broad based, which made structural adjustment less challenging.

More recently between 1999 and 2009 there were 29,000 jobs lost from contracting industries (such as Clothing and Footwear Manufacturing and Electrical Equipment Manufacturing), but this was more than made up by an additional 406,000 jobs from expanding industries (see Figure 17). The net result was an expansion in the number of jobs by 377,000 jobs. More generally, according to Statistics New Zealand’s Linked Employer-Employee Dataset around 500,000 jobs per year are created by firms expanding in size and an equivalent number are destroyed by firms contracting in size.

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Structural change in the economy, within and across industries and within firms, is a major and ongoing feature of the economy, and it is the result of broad economy-wide changes (discussed through this paper), as well as changing consumer demand (for example, observe the rapid increase in employment in Cafe and Restaurants between 1999 and 2009) and firm-specific capacities and opportunities.\(^{21}\)

The key point to take from this discussion is that there have been major shifts in the structure of the New Zealand economy in the period since 1974 and that this structural change continued after 1992. However, once macro-economic stability and a wave of micro-economic reform had been achieved by 1992, the economy was able to go through a prolonged period of solid economic growth, falling aggregate unemployment during a period of structural change.

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\(^{21}\) See Law and McIlein (2005) for a discussion of the role of firm dynamics within industries.
3.11 Economic imbalances, financial market instability and weaker global growth

As in many other developed countries, the long period of stability and stronger economic performance between 1992 and 2007 was associated with a range of imbalances in the New Zealand economy. As the economy started to reach full capacity, there was rapid house price inflation, continued low household saving, rising household debt, a continued high current account deficit, pressure on underlying inflation, pressures on external competitiveness for some sectors and industries, and economic growth became increasingly internally driven through the mid-2000s.

The pressures that were being felt in New Zealand by late 2007 and 2008 were also being felt across much of the developed world. It is beyond the scope of this paper to explain the determinants of the Global Financial Crisis. However, what is clear is that since 2007 GDP per capita growth has been modest. Some of this is probably the result of the unwinding of some of the domestic imbalances (for example deleveraging) built up during the 1992-2007 period and part of it is probably the result of more difficult international trading conditions. This external story is consistent with Reddell and Sleeman (2008) in that material global slowdowns almost always lead to slowdowns in New Zealand.

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Source: Statistics New Zealand – Linked Employer-Employee Dataset. Size of bubble reflects employment levels in 2009. Red = primary and secondary industries with falls in employment, yellow = primary and secondary industries with increases in employment, grey/green = private sector dominated services, orange = Government dominated services (either in funding, delivery or regulation), blue = industries with small changes in employment.

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22 See Treasury (2011)
One of the notable features of the current weakness is that it has been relatively long lasting. This is consistent with analysis from the IMF that recessions associated with financial crises tend to be deeper and longer lasting. It remains difficult to determine how long the current weakness will last, but the BEFU forecasts a return to trend growth by 2013/14. The accompanying paper by Mario Di Maio discusses the medium term outlook for global growth and its implications for New Zealand.
4. Conclusions and Implications

4.1 Taking stock

The New Zealand economy changed fundamentally between 1972 and 2012. At the aggregate level GDP growth was initially weak, before a long growth cycle between 1992 and 2007. At a policy level, since 1984 there has been a continued focus on macro-economic stabilisation and micro-economic reform. There have been fundamental changes to export and import prices and export and import destinations. There has been rising educational participation and increasing female labour force participation. All of these influences have fundamentally changed the nature of economic activity and work. At a more obvious level, the use and application of ICT has changed and become more imbedded in day-day activities, including economic activities.

One important lesson that we can learn from the last 40 years is that structural change will continue to occur both at a system-wide level (through for example, technological change and changes to global growth), but also through widespread incremental economic and social change (see for example Figure 17). Another lesson that we can learn from the 1974-2007 period is that domestic settings are critical in enabling the economy to adjust to external and internal influences. So, for example, between 1974-92 when there was macro-economic instability, centralised wage setting institutions that embedded inflationary pressures, and firms and industries were not initially exposed to international competition, the impact of a negative terms of trade shock was relatively long lasting and economic growth was weak for a long period.

Beyond structural changes in the New Zealand economy, when we look back over the past 40 years, we also see that a range of shocks and trends were unforeseen (such as large changes in the terms of trade) and these had a material impact on the performance of the economy, particularly over the short and medium term. This impact of external events has continued to be demonstrated since 2007 when external conditions have had a significant influence on domestic economic performance. Nevertheless domestic drivers are important and there are reasons to be generally positive about the capacity of the domestic economy to grow at reasonable levels when global growth returns to more normal levels.

Looking further ahead, a wide range of economic changes are possible over the next 40 years. We explore some of the implications of these changes in Mario Di Maio’s accompanying paper. Some of the most likely changes are ongoing technological change, increasing global integration and changing economic capacity in developing countries changing relative prices and increased focus on environmental sustainability.

While other outcomes are possible (and probably likely), it is not unreasonable to use the past as a guide to the future, particularly where projections provide important insights into the strengths and weaknesses of existing settings and the trade-offs of less uncertain changes (such as demographic change). An example of how apparently benign macro economic assumptions can be consistent with major economic and social changes, is that between 1992 and 2007 through a period of major structural change in New Zealand’s industrial and
occupational composition, an Asian Financial Crisis and major security threats and challenges, New Zealand’s real GDP per capita grew by around 1.8% per year and labour productivity grew at up to 1.5% per year (depending on the start and end points chosen).

We know that a broad range of long-term economic outcomes are possible, but based on past experience, material living standards are expected to be substantially higher in the future than they are now, for plausible levels of productivity growth. Indeed the underlying estimate in the long-term fiscal projections is that real GDP per capita will be nearly 80% higher in 2051/52 than in 2011/12. In addition, if history is a guide, then below the aggregate measure of GDP the composition and nature of economic activity will also be significantly different. Importantly, an ageing population will put some downward pressure on material living standards through lower employment levels (and hence lower tax rates and lower household incomes) than otherwise. Guest et al (2003) show that consumption could be around 12% lower than it would be otherwise if there is no decline in employment participation.

4.2 Policy implications

So, where does this all leave us?

The global environment will undoubtedly change significantly over the next 40 years. These changes will be particularly important for a small open economy reliant on a relatively narrow range of agricultural and processing manufacturing like New Zealand. However, there will also be social and economic changes (at a national as well as individual level) within New Zealand that will be equally important.

More generally, technological change, ongoing global economic and financial instability, risks in international relations, rising economic capacity in emerging economies, and changing competitive advantages of advanced economies will mean that change and dynamism will continue to be part of the status quo. Many of these structural changes are not new and have been part of our economic landscape for 20 years or longer. In light of the pressures outlined in this paper, some broad policy principles remain important:

Generally, institutions will need to provide strong incentives for economic participation and higher productivity. A stable macroeconomy and a flexible, competitive economy is critical if New Zealand is going to be able to take the opportunities offered and manage risks into the future. Resources and activity will need to flow from less productive parts of the economy to more. Regulatory quality needs to be high.

There remains considerable policy and academic interest in the relationship between income inequality and economic growth. In New Zealand, household income inequality rose in the late 1980s and early 1990s and has stabilised since. The Treasury (2011c) notes that: “while empirical evidence of causation remains inconclusive, both historical and contemporary events demonstrate that societies in which the benefits of growth are captured by a minority can face considerable social, economic and political upheaval. This suggests that relative inequality, where combined with high absolute levels of poverty and a lack of political transparency and democracy, should be a concern”.

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Industries and sectors exposed to global competition will need to be increasingly competitive in light of increased capacity from a growing number of developing countries (and the consequent competitive pressures this will put on businesses in other advanced economies).

The workforce will need to have strong general skills to be able to transition between jobs, occupations and sectors as the economy restructures – this is critical for economic success and adaptability. Long-term investment in skills is important because it has a 20 year investment period with up to a 40 year period of return. While it is difficult to foresee the specific skills that are needed, we need to maintain a focus on ensuring that students have high level general skills that are required to work across numerous tasks and jobs and that the specific skills that are developed are those that businesses are seeking.

The labour market and the welfare system will need to actively support people to transition between jobs and sectors.

So, what is the role of the Government in supporting the economy to move towards the needs of the economy of the future? There are clearly important interventions required in areas, such as infrastructure, and there are sound policy approaches for making investment decisions in these areas. There may also be a role for some pragmatic choices around education, training and other areas to support the economy to take opportunities.

A critical part of preparing for the future is also to get the framework settings right. We observed a long period of relatively smooth response to structural change during the 1990s and early 2000s that suggests that given the right fundamentals households and businesses can adapt to many market challenges and opportunities. Moreover, uncertainty about specific future opportunities suggests that making some choices ahead of time are associated with risks. The medium term turnaround in the price of some of New Zealand’s key commodities, alongside the rapid fall in price of low and medium value manufacturing, highlights that there is not always a secular increase or decline in prices across industries.

If we have high ambitions for New Zealand’s living standards (in the presence of an ageing population) then we need to focus on getting the fundamentals right for economic growth. The evidence provides some guidance about generally what matters for economic growth – macroeconomic stability, microeconomic competitiveness and a skilled workforce. We need to maintain a focus on lifting economic performance as a mechanism to improve living standards. Specific advice on these was outlined in Treasury (2011a):

- Macro-economic resilience and stability
- Maintaining a focus on a stable macro-economy with low and stable inflation and without undue swings in GDP growth
- Returning to fiscal surplus, rebuilding fiscal buffers and keeping public debt low to protect against future adverse events (including downside risks to the economy over the short and medium term)
- Introducing further measures to improve the resilience of the wider financial system
- Micro-economic competitiveness
• A tax system that supports addressing savings/investment imbalances and promotes international competitiveness

• A smaller, more efficient and responsive state sector through a range of reforms

• A more skilled workforce for more skilled workplaces through lifting the quality of teaching

• A high employment and participation economy through reforms to the tax and welfare system

While we need to keep a focus on economic growth, we also know that composition (and size) of Government expenditure and taxation matters for economic growth and living standards. These will be discussed in later papers prepared for the external reference group. We also know that the current retirement and fiscal settings will be put increasing pressure on New Zealand fiscal’s position. Choices will need to be made between alternative tax and expenditure options, based on the trade-offs between social and economic objectives. Of course, while New Zealand’s long-term economic outcomes will be affected by a broad range of influences outside of the composition (and size) of Government expenditure, it remains an important area of focus because it is within control of Government, some of the influences are known ahead of time, and it has a systematic relationship with living standards. Nevertheless, more generally getting the other fundamentals right for higher living standards should remain a high priority for current and future Governments.
References

Acemoglu, D, S Johnson and J Robinson (2012); “Institutions as a fundamental cause of long-run growth”; Handbook of Economic Growth, volume 1a.

Australian Productivity Commission (1998); “Aspects of Structural Change in Australia”; staff research paper.


Bell, M, P Gardiner and P Rodway (2012); “New Zealand’s long-term fiscal projections under alternative labour force scenarios”, paper presented the Population Ageing and the Labour Market conference.


Conway, P and A Orr (2000); “The process of economic growth in New Zealand”; Reserve Bank of New Zealand: Bulletin Vol. 63 No. 1

Downing, R; Nathan McLellan, Kam Szeto and John Janssen (2003); "Trend Growth in New Zealand: An Exploration of Recent Developments and Prospects"; Paper presented to the 2003 NZAE conference.

Easton, B (1997); In Stormy Seas: The Post-War New Zealand economy, University of Otago Press


Gould, J (1982); The Rake’s Progress: The New Zealand Economy since 1945; Hodder and Stoughton.

Guest, R John Bryant & Grant Scobie (2003); “Population Ageing In New Zealand: Implications for Living Standards and the Optimal Rate of Saving”; Treasury Working Paper 03/10.

Grimes, A (2006); “A Smooth Ride: Terms of Trade, Volatility and GDP Growth”: MED Occasional paper 06/04

Hawke, G.R (1985); The Making of New Zealand; Cambridge University Press.

Karagedikli, O and G Price(2012); “Identifying Terms of Trade Shocks and Their Transmission to the New Zealand Economy”; paper presented to the 2012 New Zealand Association of Economist’s conference.

Lattimore, R and S Eaqub (2011); The New Zealand Economy: An introduction; NZIER.


Productivity Commission (2006); “Economic Impacts of Migration and Population Growth”.


Rodrik, D (2003); “Growth Strategies”; NBER Working paper 10050.


Skilling, D (2001); "Comparative disadvantage: New Zealand’s economic growth in historical perspective" Draft paper prepared for the Economic Transformation project.


The Treasury (2008); “Putting Productivity First”; New Zealand Treasury Productivity Paper 08/01.


