

Alan Bollard: Could we be better off than we think?

Speech by Dr Alan Bollard, Governor of the Reserve Bank of New Zealand, and Ms Rochelle Barrow, to the Trans-Tasman Business Circle, Auckland, 17 February 2012.

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Executive Summary

Quality macroeconomic statistics help us understand developments in our economy, and especially about the way economic activity and related measures are changing over time. Time series data play a critical role for us in monetary policy. However, macroeconomic statistics also play another important role; they are used by analysts and the media to judge how well New Zealand is doing relative to other countries, and they also play a part in how positive we feel about ourselves.

International comparisons of macroeconomic statistics can be fraught with difficulties. Differing definitions, measurement, currencies and price levels are just some of the factors that can cloud the picture.

Our view is that in New Zealand, some conservative statistical interpretations and particular characteristics of our economy have resulted in the understatement of New Zealand's economic performance. In international league tables New Zealand is in some ways better off than is often thought. Though better, more comparable statistics, do not make any individual New Zealanders any better off in an absolute sense, they do affect the interpretation of New Zealand's relative economic performance over the decades and they impact individual decisions.

In this paper we discuss some of these statistical issues and provide some rough estimates of their possible impact on GDP per capita – which is the most widely quoted, if not always the most useful, indicator of an economy's performance. Our list is not exhaustive, but surprisingly all of the treatments covered result in an underestimation of New Zealand's GDP. Could New Zealand's GDP be higher relative to other OECD countries? Could it be around 10 percent higher relative to Australia? And what might that mean for thinking about the New Zealand economy and its changing fortunes?

As this paper outlines, Statistics New Zealand, like other countries including Australia, regularly changes its measurements. A number of examples of change Statistics NZ has made and the difference to the resulting statistics is provided in my paper. Statistics New Zealand was given additional funding in last year's budget to undertake a major multi-year change programme. This enables it to accelerate its ability to change statistics to keep up with the evolving requirements.

Why statistics matter

At a central bank, macroeconomic data and statistics play a crucial role in policy deliberations. Our analysts consume a vast quantity of data looking for insights into the performance of New Zealand's economy and financial sector. These analysts become familiar with data sources, their strengths and weaknesses, and the methodologies employed to produce statistics. Knowing how a statistic is compiled is an essential part of ensuring that it is interpreted correctly.

Of particular interest to the Reserve Bank are macroeconomic statistics. They summarise a significant volume of detailed and sophisticated interactions that occur in an economy, often

in one headline number like gross domestic product (GDP), the unemployment rate, and the consumers price index (CPI).

In New Zealand, we have adequate, but certainly improvable, official and private macroeconomic statistics and indicators for the purposes of monetary policy formulation – where the focus is mostly on cyclical developments; the shorter-term swings in how economic activity is performing.

However, statistics on economic performance also play a role in shaping national conversations about how our economy has performed over time, and especially relative to economic performance in other advanced economies. As far as possible, policymakers and private analysts need good comparable national and international data to enable those comparisons, and the consequent policy recommendations and debate to be as well-founded as possible.

Even if there are weaknesses in the data, analysts and journalists will use whatever is available. Even when caveats are given that information may be overlooked. In recent decades, a large emphasis has been placed on developing internationally comparable statistics – not just so that the same things are measured the same way in different countries, but also to enable useful cross-country comparisons of levels of economic activity, in the face of things like big swings in market exchange rates. Organisations like the UN and IMF produce conceptual frameworks, like the system of national accounts (SNA), to aid statisticians when producing macroeconomic statistics. However, while these frameworks provide guidance, they are not completely formulaic.

How a country implements framework recommendations depends on a number of factors, including the nature of their economy, what data sources are available, and the level of resource they have. Given how complex and large some of these frameworks are, and that they are often updated, countries may also be at different stages of adopting the latest version of the framework.

There are many different ways of estimating statistics and the measurement decisions taken by statisticians make a difference. Different data and methods can deliver different results. We believe that some of the statistical methods used to measure the New Zealand economy currently result in an understatement of New Zealand's economic performance when compared to other countries.

This paper discusses some of these statistical methods and attempts to estimate the possible impact on New Zealand's GDP. This paper is not intended as a criticism of Statistics NZ with its statistical challenges and limited resources. Its purpose is to raise awareness of these factors, increase the priority placed on improving the quality of New Zealand's macroeconomic statistics and to make people aware of the issues regarding international comparisons. In some cases, plans are already in place to remedy statistical weaknesses.

What is required for successful comparisons?

Most people when assessing whether the New Zealand economy is performing well will ask, relative to what? One way of posing the question is to ask how the economy is performing relative to its own past history. For those sorts of comparisons, consistently compiled (or revised) data through time is important. Another important way of posing the question is to look at how New Zealand is doing relative to other advanced economies. In New Zealand we often compare ourselves with Australia, our nearest neighbour, and a labour market to which New Zealanders have quite ready access.

However, comparing statistics can be fraught with difficulties unless certain conditions are met¹:

- The *definition* is the same; conceptually are the statistics covering the same things.
- The *measurement* is the same or similar; are the methods used to estimate consistent.
- Appropriate adjustment is made for the influence of exchange rates, price levels and consumption tastes across countries.

When these conditions are not met, those performing the comparison may attempt to “standardise” the data themselves. The nature of these adjustments and their levels of transparency can add further confusion to international comparisons². For example, New Zealand does not currently produce all of the key macroeconomic statistics that most other advanced economies do³. As a result organisations such as the OECD sometimes attempt to estimate these in order to include New Zealand in international comparisons.

1. Definitions

Over the last 30 years there has been a large push towards the development of integrated international conceptual frameworks for producing statistics to aid international comparisons. These frameworks help to ensure the quality and integrity of statistics by providing a theoretical background to what is being measured and definitions. For example the SNA mentioned earlier defines what is included and what is excluded from GDP. There is no entirely right or wrong answer as to what should be included in GDP – what really matters is consistent transparent treatment, including where possible consistency across countries.

The frameworks are reviewed and updated periodically as the economy evolves. This can result in new definitions of concepts such as GDP, investment and consumption, often involving a significant amount of work in backdating data to ensure consistency through time.

2. Measurement

Statistical frameworks are often accompanied by compilation guides, which guide statisticians in how best to measure the theoretical concepts. They often present a best practice method, and if data sources and resources are not available to implement that method, other less desirable measurement options are presented. The measurement decisions made by statisticians can have a significant impact on the end result.

3. Currency unit and price level

Statistics must be expressed in a common unit for comparison. A simple way to achieve this is to convert individual currencies to a base currency using exchange rates. However, this type of conversion can distort comparisons because of the impact of such things as short-term currency fluctuations on exchange rates. This is why a lot of international comparisons are now performed using purchasing power parity (PPP). PPP conversions are currency conversion rates that both convert to a common currency and equalise the purchasing power of different currencies.

¹ OECD (2006).

² While not stated as an explicit condition for international comparisons, the statistics themselves must have integrity in order to compare with other countries. The past statistical issues in Greece are a well documented example of statistics which lacked integrity and which made it difficult to draw meaningful comparisons with other countries.

³ See Barrow (2010) and RBNZ (2007).

The income gaps between countries are typically smaller on a PPP basis than they are if simply converted into a common currency as over time, prices of tradable goods tend to be much the same across countries, but the real cost of labour-intensive services tends to be much lower in poor countries than in rich ones.

However, PPP adjustments have their limitations. Probably the most significant is the representativeness of the products used in the calculation. PPP comparisons are most accurate in comparing incomes or consumption in pairs of very similar countries, where similar products and consumption tastes exist. The more the differences between countries the more important it is to do the corrections, but the more approximate the comparisons are.

Thoughtful observers typically caution against putting much weight on differences in PPP income measures of less than perhaps 5–10 percent, even if all the countries recorded their GDP data in exactly the same way.

What is the impact of statistical treatments on our GDP?

This next section explores in more detail some of the differences in measurement in New Zealand relative to the rest of the world, in particular Australia. We attempt to quantify the impact of these measurement differences on estimates of the level of New Zealand's GDP. For the 2010 year, net national income per capita PPP league tables produced by the OECD currently have Australia 35 percent higher than New Zealand.

Statisticians around the world use the SNA to guide measurement of their economies⁴. The SNA is a comprehensive and systematic set of accounts, similar to a business accounting framework, but for a nation. The framework captures a considerable amount of detail about how an economy works and how economic agents behave.

As noted earlier, statisticians can choose to implement the SNA in a variety of ways, bearing in mind the constraints (both on data and resources) that they face. It is these constraints and decisions taken which need to be recognised and understood when comparing macroeconomic statistics across countries.

1. *Measuring the unobserved economy*

In order to produce a comprehensive consistent estimate of GDP, all economic production (defined by the SNA production boundary) in an economy should be measured, whether that production is “observable” or not. The unobserved, or not directly measurable, economy includes some activities that are illegal, underground (cash jobs), or undertaken by households for their final use (growing their own vegetables).

While the inclusion of estimates for illegal activities such as drug dealing are not common, almost all countries that prepare GDP statistics include estimates for some other unobserved activity. A 2008 UN report suggests that for most countries, tax-based measures of income, like those used in New Zealand, tend to understate actual levels of income. This tends to affect initial estimates of the income measure of GDP; and in most countries these are adjusted up.

⁴ The SNA defines key macroeconomic statistics like GDP, saving, investment, consumption and wealth. It enables the analysis of incomes generated by production, and the redistribution of income within the economy (via tax and welfare payments). The system also identifies capital and financial flows, and provides information about the level of an economy's productive assets and the wealth of its inhabitants.

According to the report and a survey of country practices, of the 45 countries surveyed, New Zealand and Japan were the only countries that made no explicit estimates of unobserved activities in the estimation of GDP⁵.

The importance of the unobserved economy is of course quite different across countries, so under reporting will vary for this reason. However, the issue for international comparison is that New Zealand does not currently include any estimate of this production in its GDP.

Taking Australia as a benchmark, where explicit estimates are not made for illegal activity, but are made for the underground economy and household backyard production, we believe GDP in New Zealand could be underestimated by 2 percent⁶. Given it is the household sector which is mainly engaged in this activity, household income and therefore saving could also be underreported.

Of course, it is worth noting that most estimates are that the underground economy in New Zealand is somewhat small. As with other countries, our comprehensive GST system reduces opportunities for tax avoidance, as does our relatively comprehensive broad-based income tax system. We encourage further research in this area.

2. *Measuring the value of financial services*

Banks and other financial intermediaries earn income not only through explicit fees and charges but also on the margin between the interest they pay to depositors and the interest they charge borrowers. Because of the margin, the financial services that we consume do not necessarily have an explicit price, unlike most goods and services in an economy. For the purposes of the SNA the services provided, through the use of the margin, are known as Financial Intermediation Services Indirectly Measured or FISIM.

Calculating the value of a service without a price is complex⁷. However, the SNA provides guidelines on how this can be achieved through the use of a relevant reference rate. In addition to how the value of FISIM is calculated, what is important for GDP estimates is how those financial services are allocated to their end users.

Within the SNA framework, goods and services consumed by businesses in order to produce other goods and services, are treated as intermediate consumption (or an expense) and subtracted from GDP. However, the use of goods and services by household, government and the foreign sector are treated as final demand and these add to GDP.

Most countries treat FISIM in a way that increases GDP by allocating the service to the sector that uses or consumes it⁸. In New Zealand all financial services are assumed to be used by businesses in the production of other goods and services.

There is considerable international debate on the measurement of FISIM as a result of volatility during the Global Financial Crisis⁹. However, it is the allocation method which

⁵ UN (2008).

⁶ In Australia a 1.3 percent adjustment to GDP is made for the underground economy and a 2.0 percent adjustment is made to household income.

⁷ For more information see IMF et al (2008).

⁸ The method used in New Zealand is the SNA 1968 recommendation, which is presented as an option in SNA 1993, when data sources available do not allow the best practice alternative. The method is to allocate all of FISIM to a notional industry in the production measure of GDP (often referred to as the bank service charge). This ignores any consumption of services by households, government and foreigners. Best practice is to estimate each industry's expenditure on financial services and subtract it from the value added of that industry (rather than simply off total GDP). Then household, government and foreign consumption of financial services is estimated and this is added to final consumption estimates. The impact of this allocation method is an increase in GDP, because less is subtracted from the production based measure of GDP and more is added to the expenditure based measure of GDP.

impacts negatively on New Zealand in international comparisons. We estimate the impact of this at approximately 2 percent of GDP, although we acknowledge there are other estimates. The failure to allocate some of FISIM to the household sector has resulted in a growing understatement of income measures over the last 20 years, a period when the household sector has borrowed more, and hence consumed more financial services.

Box – Case study – Household saving rate¹⁰

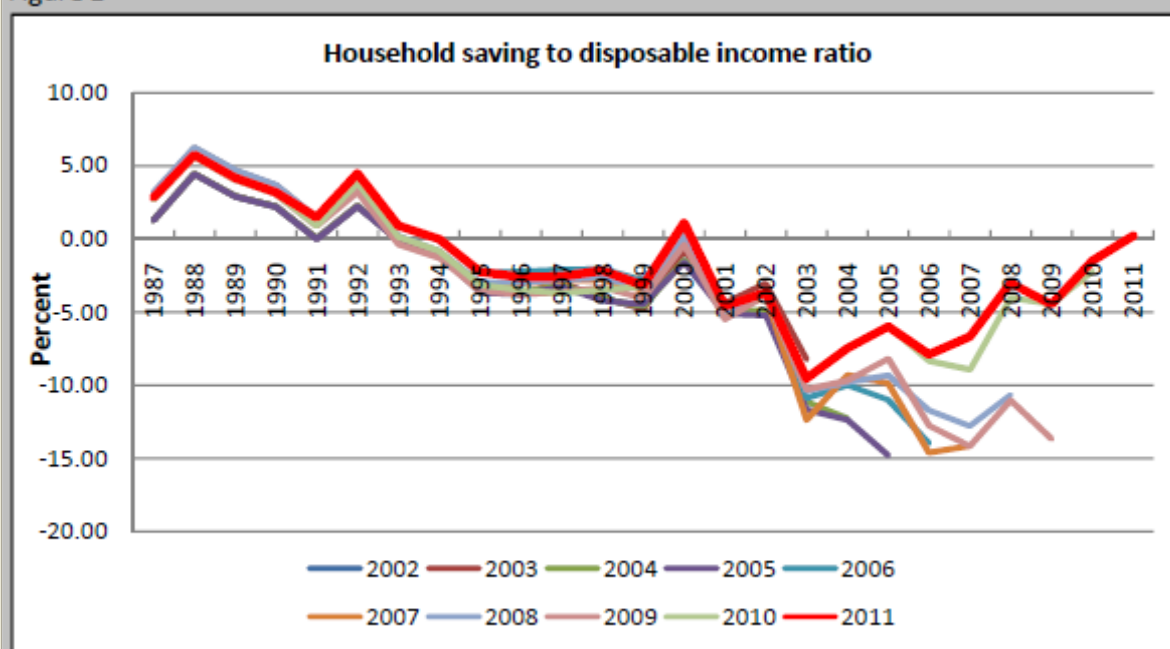
Measurement is difficult in times of change. In the early 2000s there was a rapid increase in the number of New Zealand households using trusts to manage household finances. The use of trusts impacted quite significantly on the data sources used to estimate New Zealand's household saving rate.

In the mid 2000s New Zealand's household saving rate was considered an outlier relative to other countries. At the time, unlike other countries, New Zealand did not produce other sectoral saving estimates (other than government) that could be used to validate the household saving rate either.

Due to the concerns raised about the quality of the estimates and the important policy decisions being made at the time, Statistics NZ reviewed the measurement of the household saving rate and in 2010 a number of methodological improvements were made.

In 2005 the household saving rate was first estimated at –15 percent. The current estimate for 2005 is now –6 percent.

Figure 1



⁹ There is a considerable amount of debate internationally regarding how value added is calculated for the Finance industry. At present measures do not adjust for the level of risk taken on by the industry. Some statisticians argue that value added should be risk adjusted and that this would significantly reduce the contribution of the finance industry to GDP in some countries. Given the nature of the financial sector in New Zealand, we do not believe risk adjusting value added estimates would result in significant change.

¹⁰ Note that revisions made to the household saving rate did not result in corresponding major revisions to the national saving rate. At the time New Zealand did not produce a full set of sectoral income and outlay accounts, so the household sector rate could not be validated. Quality adjustment is also common practice in other countries.

3. *Other Services*

The increasing importance of service industries could also be influencing our GDP estimates. In particular, government administration, health and education services are particularly difficult to measure. Of course these measurement difficulties are experienced by many countries. A number of different estimation techniques are used overseas.

In the absence of good output measures in New Zealand, the output of some service industries, particularly in the government sector where prices may not exist, is assumed to be directly proportional to industry inputs. This measurement assumes no productivity growth in the industry, and will likely result in an understatement of GDP and productivity.

This will have had a reducing impact on GDP levels, though we cannot estimate by exactly how much.

4. *Measuring the value provided by residential buildings*

In an economy, residential buildings provide services to those who inhabit them and are included in the calculation of a country's GDP. An imputed rental derived from occupying your home is included in the calculation so that GDP is not affected by home ownership rates over time, or across countries.

The contribution of residential building, whether they are occupied by the owner or rented, to GDP is significant. In New Zealand and Australia different methods are used to estimate this contribution. The most significant difference for comparability is that in Australia the output of residential buildings is quality adjusted; that is the measurement method used allows for an increase in the quality of properties over time¹¹. The types of quality improvement allowed for includes size and location. In New Zealand the measurement method assumes no quality improvement. Output purely reflects the number of properties. We note there are some complex issues around the use of constant or current prices here.

The lack of quality adjustment leads to an understatement of GDP. If we assume a similar growth path to Australia for New Zealand, we estimate the approximate ballpark for GDP could be 1.5 percent higher.

5. *New standards for measuring the economy*

Statistical frameworks, like the SNA, must be updated and revised to ensure that the statistics produced remain relevant and fit for use by policy and decision makers. However, with change comes a comparison issue, as countries progressively move to new standards.

The international standard for SNA was revised in 2008 and a number of conceptual changes were introduced. One of these changes was the move to capitalise research and development, which had previously been treated as an expense. This change means that research and development activity now counts as investment and adds to GDP, rather than subtracts from it.

¹¹ Quality adjustment is also common practice in other countries.

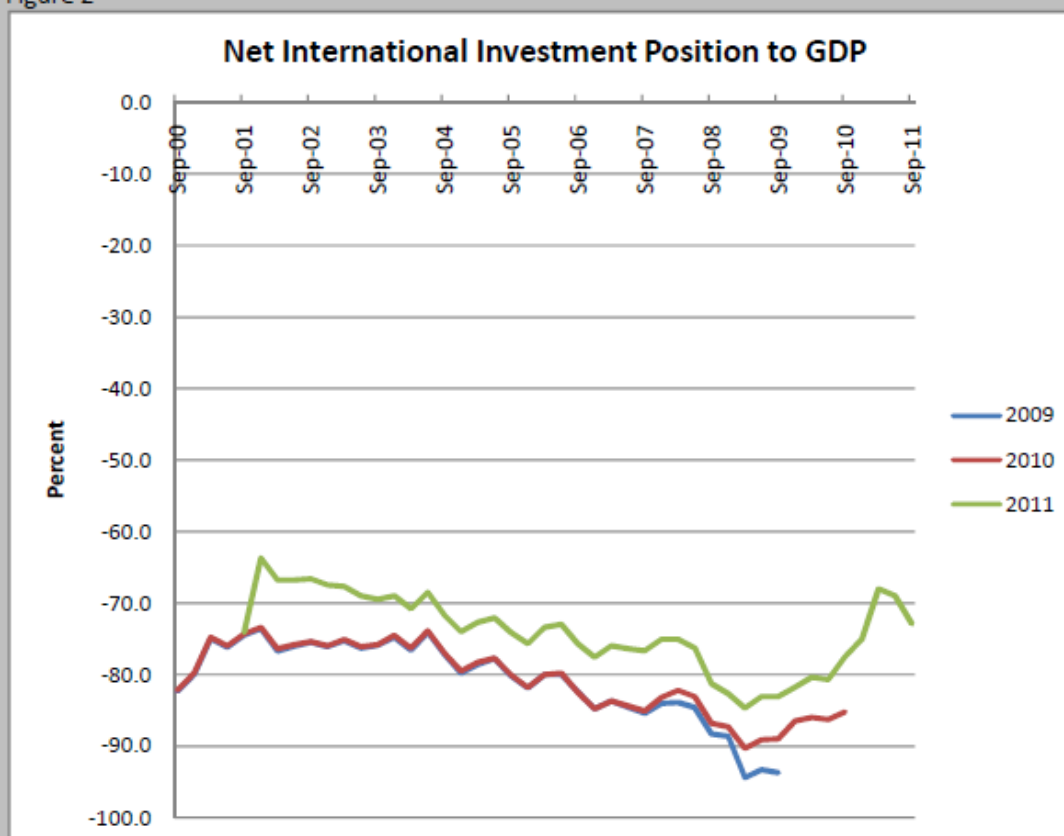
Box – Case study – International Investment Position

In 2011 measurement improvements were made to New Zealand's International Investment Position statistics, which resulted in an average 6 percentage point improvement in the IIP to GDP ratio over recent years.

These revisions were the result of the inclusion of assets held overseas by small fund managers, an estimate for New Zealand's portfolio equity investment in Australian-listed companies and a change in the treatment of student loans for those New Zealand students who are now based overseas.

Revisions to official statistics can frustrate users. They are often seen as errors or mistakes that should have been avoided. However, these types of revisions need to be endured, even encouraged, so long as good historical backdated data are provided, in order to ensure future estimates are of higher quality.

Figure 2



In 2009 Australia implemented a number of new standards and classifications into its production of macroeconomic statistics, including the 2008 version of SNA. In this, Australia made changes earlier than any other country did. These changes resulted in significant revisions to national accounts and balance of payments statistics. The table below quantifies the revisions made to nominal GDP estimates. In the year ended June 2008 GDP estimated using the new version of SNA (and making adjustments to employment income) was 4.4 percent, or \$50b AUD higher, than the older version.

Table 1

GDP, current prices, \$m AUD under SNA93 and SNA08

	1995-96	1999-2000	2003-04	2006-07	2007-08
GDP (SNA93)	518,144	645,058	841,351	1,045,674	1,132,172
GDP (SNA08)	532,025	663,867	864,955	1,091,327	1,181,750
Difference	2.7%	2.9%	2.8%	4.4%	4.4%

The revision upwards of Australian GDP results in an even wider gap between New Zealand and Australia GDP per capita measures. However, New Zealand and Australia, while still producing GDP estimates, are now producing these statistics on a different conceptual basis. They are no longer directly comparable.

Statistics NZ plan to introduce SNA 2008 in 2013–14. This is similar timing to other countries around the world. It is difficult to estimate the impact that new international standards will have on New Zealand’s national accounts and GDP. We estimate approximately a 3 percent increase in GDP.

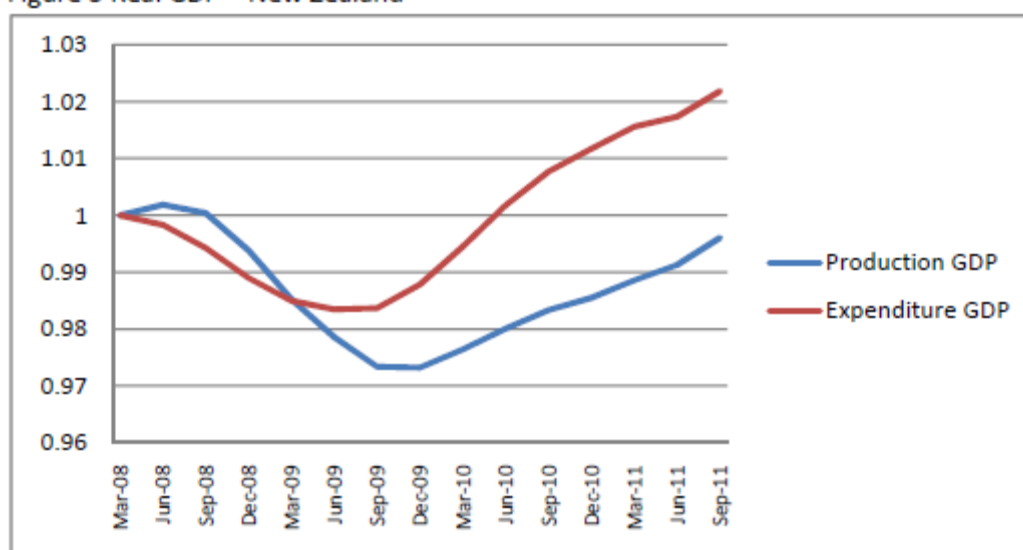
6. Reconciling different measures of GDP

A country’s GDP can be estimated three ways, using the production method, the income method, or the expenditure method. Conceptually the three measures provide equal results. However, in practice, due to differing data sources and imperfect methodologies, this is rarely the case.

Statisticians use a process called supply and use balancing to make the three measures equal. This essentially forces all goods and services produced in an economy to be used by an economic agent. In New Zealand supply and use balancing is performed annually and only in nominal terms, or current prices. These estimates are released with approximately a two year lag.

Many analysts are more interested in timelier, more frequent (quarterly) and price adjusted (real) GDP estimates. However, for this a trade-off is made. Timely, quarterly estimates of real GDP are derived using incomplete data sources and in New Zealand, the two measures of GDP produced – production and expenditure – are not forced to equal. Given that current price GDP estimates are balanced, the discrepancy in real GDP estimates is the result of an error in either estimating volume growth (real GDP) or prices.

Figure 3 Real GDP – New Zealand



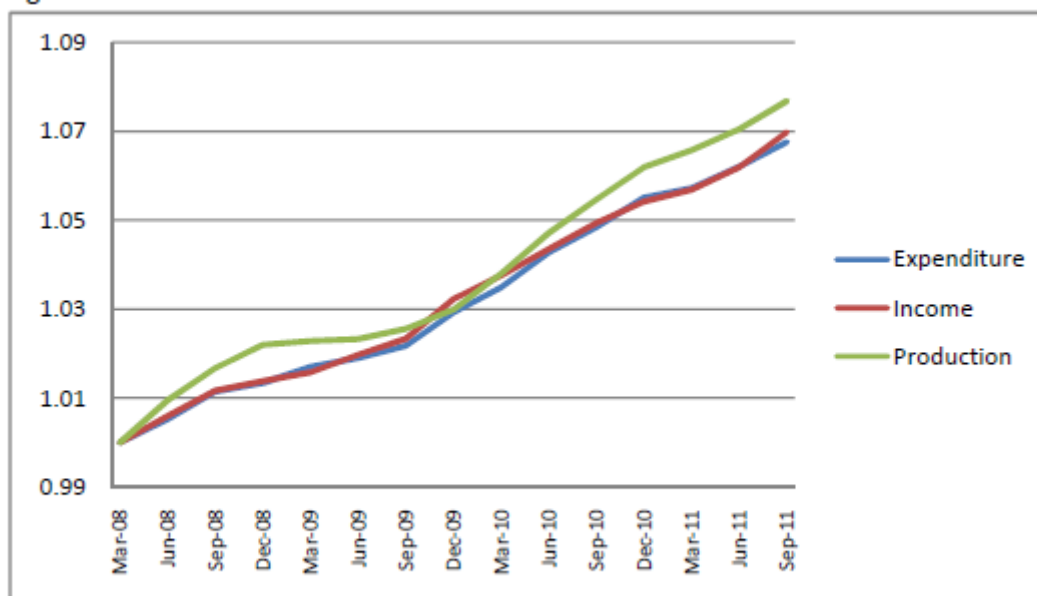
In recent years the quarterly measures of real GDP have presented quite different views and diverging on the New Zealand economy. The headline measure preferred by Statistics NZ is the production measure, primarily because it exhibits less volatility than the expenditure measure on a quarterly basis. This measure implies that the recession in New Zealand was deeper and more prolonged than the expenditure measure.

However, since 2007 a relatively large gap between annual real GDP estimates has opened up. Production GDP estimates have undershot expenditure GDP estimates for five years running. When expressed in 1995/96 dollars the gap in the March 2011 year is \$5.9b or 4.3 percent of GDP¹².

Given that the discrepancy will likely be revised away in future years, which is most reliable measure of New Zealand's economic growth? Will production based estimates be revised upwards or expenditure based estimates be revised downwards? Will these revisions have implications for the level of New Zealand's GDP?

In Australia, all three GDP measures are available on a quarterly basis, and instead of elevating one measure over another, the quarterly GDP movement is calculated by averaging the movements of the three measures. This by nature decreases volatility in the headline GDP estimate. Using the average measure of Australian GDP, Australia avoided a technical recession, apparently the only OECD country to do so. However, based on the production measure of GDP, the headline measure in New Zealand, Australia experienced a technical recession in the March 2009 quarter.

Figure 4 Real GDP - Australia



¹² These discrepancies can be expected to decrease in size in June 2012 when Statistics NZ update annual constant price national accounts estimates. This process will result in significant revisions to New Zealand's real GDP. However it is not known which measure will be revised and to what extent.

Alternative national accounts series

Much of this discussion has focused on GDP comparisons, since GDP is the most widely-cited national accounts measure of aggregate economic performance. But there is a wide variety of other national accounts measures. For example, Gross National Income (GNI) adjusts the value of output in New Zealand for the income generated here that accrues to foreigners, and income generated abroad accruing to New Zealanders. For most advanced economies the difference is not large, but in New Zealand GNI is about 7 per cent lower than GDP.

In addition, GDP measures the value-added in New Zealand. However, in drawing cross-country comparisons it might not be the value-added here that matters, but the level of household consumption (whether of things purchased directly by households, or services provided to households directly by the government).

In a similar vein, comparisons of income per head can usefully take account of how much depreciation takes place each year: GDP and GNI are **gross** measures, while Net DP and NNI adjust for depreciation, to give a sense of how much of the economy's production is left available for consumption. The difference affects New Zealand and Australia comparisons quite materially: Australian GDP per capita is significantly higher than that in New Zealand, no matter what adjustments one does, but because the Australian resources sector is very capital intensive, much of the income is needed simply to cover the depreciation on the capital stock. In purchasing power parity terms, even with current national accounts measurement, actual individual consumption per capita is only about 20 percent higher in Australia than in New Zealand. This incidentally supports our view that New Zealand's GDP is currently being understated.

It is also worth noting that common living standard comparisons use GDP or GNI per head of population. Those comparisons are useful for some purposes, but they do not shed much light on the productivity performance of the economy. For example, although New Zealand's GDP per capita lags much of the OECD, that performance is achieved only with relatively high working hours per capita.

These differences do not matter very much from year to year but need to be borne in mind in assessing the overall performance of the economy and resources available for consumption, both now and in the future.

Alternative measures of well being

GDP per capita (and the other associated national accounts measures) has often been criticised as an incomplete statistic of economic well being. Over recent years a number of new indicators have been developed which usually supplement GDP estimates with other characteristics of an economy, such as the level of educational attainment or long term unemployment rate. The OECD better life indicator is an example, and New Zealand rates very highly on this comparison. (The UN's Human Development Index, another attempt at a composite measure of living standards, also scores New Zealand consistently highly, although still a little lower than either Australia or the United States).

Based on 11 topics the OECD has identified as essential, in the areas of material living conditions and quality of life, New Zealand ranks fourth in the OECD¹³. The graph below, sourced from *The Economist*, illustrates the point well. New Zealand appears as an outlier.

¹³ The 11 topics are housing, income, jobs, community, education, environment, governance, health, life satisfaction, safety and work-life balance.

Figure 5



What does this mean for international comparisons?

International comparison of macroeconomic statistics is fraught with difficulties. Differing methodologies and data sources means that, in some cases, statistics are not directly comparable, despite data being labelled the same. Analysts and policymakers are wise not to make much of smallish differences – and short-term changes in differences in incomes across countries, which can be substantially affected by the different shocks each country faces in the short-term.

This paper has given some insight into the impact measurement can have on macroeconomic statistics. We estimate that measurement of parts of the unobserved economy could add 2 percent to New Zealand’s GDP and the allocation of FISIM another 2 percent. Quality adjusting for residential buildings in New Zealand could add a further 1.5 percent. Improving the estimation of value-added by service industries could also improve New Zealand’s GDP. While more difficult to estimate due to its complex nature, the move to SNA2008 could add an additional 3 percent to GDP (and reduce the gap to Australia to that extent).

It is almost certain that consistent measurement conventions used in New Zealand and Australia would narrow the reported income gap with Australia (differences would be smaller with some other OECD countries). We cannot be precise about this, but the (mainly Australian) conventions noted above could add something very approximately in the broad ball-park of 10 percent to New Zealand’s official GDP. These are not definitive, we accept there are counter-arguments to these numbers.

Figure 6

Net national income per capita – selected OECD countries
(2010 US\$ PPP current prices)



Source : OECD

But what does this mean for New Zealanders? Of course, revising GDP does not lift the actual incomes (wages and salaries) and purchasing power of individual New Zealanders, and does not raise the tax base for the government either. We cannot make ourselves better off directly just by measuring things differently. And the steady outflow of New Zealanders to live in Australia – one of the largest relative outflows of a country’s citizens seen anywhere in the OECD – will not principally be because of GDP statistics, but because of individuals’ actual and perceived sense of the opportunities for themselves and their families.

But reducing measurement differences is important for many other reasons:

- Households may not make optimal decisions regarding employment, training, migration, saving and investment if they believe that our GDP per capita is significantly lower than it actually is, and that they might be better off elsewhere.
- Financial markets need accurate measures of New Zealand’s ability to borrow and repay debt. This impacts our financial institutions and our sovereign borrowing. Measuring New Zealand’s GDP properly is a key concern of credit rating agencies.
- We need well-focused informed economic and social policy. Clearly it is more difficult to know whether these are working if there are doubts about the level of GDP per capita, and whether our measure is truly comparable with that of other countries, including that of our large trans-Tasman neighbour.

New Zealanders rightly worry about the extent to which New Zealand incomes have drifted below the world’s highest in the last 40 years, but how large is that drift, and how have the gaps changed in more recent times? For helping answer those questions, good and economically comparable data are vital. This paper does not answer the question “are we closing the trans-Tasman gap”? However it does argue that the gap is not as wide as most people think.

At the 2012 annual leader's meeting, the Prime Ministers of Australia and New Zealand agreed that, to promote further reform and economic integration, the Productivity Commissions of each country would conduct a joint study on the options for further reforms that would enhance increased economic integration and improve economic outcomes. Given this aim, a useful contribution could be to improve harmonisation of statistical measurement in Australia and New Zealand, where appropriate, to improve data comparability.

While this has not been an exhaustive exploration of the issues we hope that the information presented here helps people to better understand some of the pitfalls of international comparisons and perhaps why New Zealand is often seen as an outlier.

In the meantime we observe that where there is scope for technical interpretations to differ, Australia has tended to take the optimistic alternative and New Zealand the conservative one. Could this be a reflection on our national characters?

As usual, the devil is in the detail. Compare with care.

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