

GROSS DOMESTIC PRODUCT

Introduction

The gross domestic product (GDP) is often used as a measure of the size of a nation's economy, with nominal GDP being expressed in current dollar prices, and real GDP being expressed in constant dollar prices (i.e. the dollar value of a particular year, after adjustment for inflation). Changes in real GDP are often used as a measure of economic growth, or the strength of the economy [15] with a recession typically being defined as two consecutive quarters of negative growth [16].

The following section briefly reviews quarterly changes in New Zealand's GDP since March 2006 before considering the share of economic growth that has been passed on to workers from 1975–2014.

Data Source and Methods

Indicator

1. *Gross Domestic Product (GDP): Percent change from previous quarter*
2. *Real per capita gross domestic product (RPC-GDP)*
3. *Real ordinary time average hourly earnings (ROT-AHE)*

Data Sources

1. *Gross Domestic Product (GDP): Percent change from previous quarter*

Source: Statistics New Zealand: The New Zealand System of National Accounts (produced quarterly)

GDP is the total market value of all final goods and services produced in a country in a given year equal to total consumer, investment and government spending, plus the value of exports, minus the value of imports. Three approaches can be used to calculate GDP. Short term-quarter on quarter monitoring traditionally uses the production approach which calculates what each separate producer adds to the value of final output by deducting intermediate consumption from gross output. Value-added is summed for all producers. Expenditure based approaches can also be used but they have historically shown more quarterly volatility and are more likely to be subject to timing and valuation problems [17]

2. *Real per capita gross domestic product (RPC-GDP)*

Real GDP is adjusted for changing prices and reflects the extent to which growth in the value of goods and services is due to increased production rather than an increase in the absolute value of the goods and services produced [18]. Per capita real GDP divides the national GDP by the population.

Numerator:

Base series 1975–1987Q1 from [19] and supporting web page <https://sites.google.com/site/eaqubs/> NZ Economy tables and graphs (27th July 2014). The authors sourced the GDP data from the following: 1975–1977: Hall and McDermott (2009) [20]; 1977–1987: Statistics NZ, SNBQ.S2SZT. Base series 1987Q2–current: Statistics NZ SND103AA. All these GDP data were re-expressed in March 2014 prices using a constant ratio based on the ratio of the nominal and real values in the March 2014 quarter.

Denominator:

Population series from [19] and supporting web page <https://sites.google.com/site/eaqubs/> NZ Economy tables and graphs (27th July 2014). The authors sourced the population data from the following: 1934–1991: Statistics NZ, de facto population, DPEQ.SBEC; 1991–current: Statistics NZ, resident population DPEQ.SDAC.

3. *Real ordinary time average hourly earnings (ROT-AHE)*

ROT-AHE represent the number of hours usually worked and the usual income in a reference week. Average hourly earnings data are available split by ordinary time, overtime and total (ordinary time plus overtime). As with real GDP, real average hourly earnings are adjusted for changing prices. Average hourly earnings are calculated from the Quarterly Employment Survey (QES) which is a sample of approximately 18,000 business locations selected from a population of economically significant enterprises in surveyed industries, weighted to represent the number of employees in each industry sourced from the Business Register. Certain industries, including agriculture and aquaculture are not included in the QES [21,22].

An ordinary time average hourly earnings series was compiled from the following Statistics NZ sources:

1987–2014—Average hourly earnings QEX001AA

1980–1986—Average hourly rates, all sectors EMP013AA

1975–1979—Average hourly earnings index ERN001AA was used to calculate back from EMP013AA data.

While the different data series used to develop a composite AHE data set may have had different underlying methodologies, this is not likely to have a significant effect on the overall pattern of quarterly change in AHE.

The composite AHE data set was adjusted for changing prices using the Statistics NZ Consumer Price Index quarterly data rebased to March 2014 prices.



Notes on Interpretation

The important comparison in the section on RPC-GDP and ROT-AHE is the quarterly percentage change in each variable rather than the absolute monetary value. The graph axes have been scaled to make it easier to compare the relative changes in each variable over time.

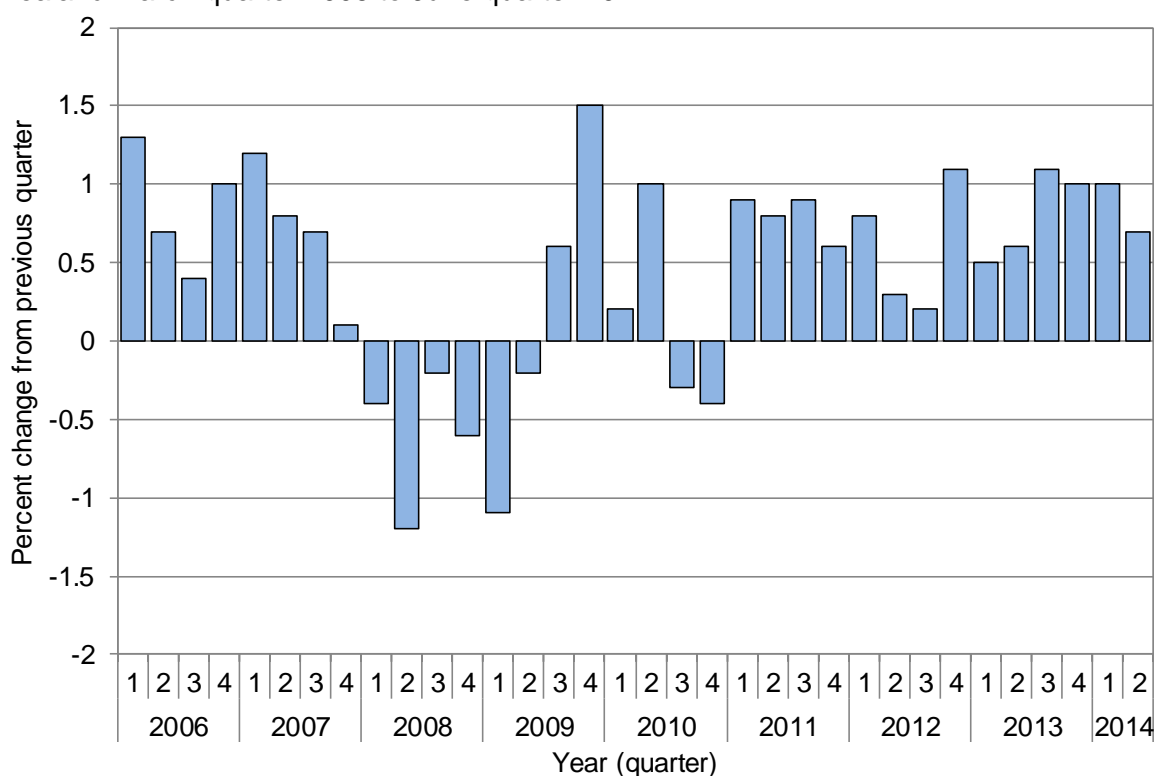
New Zealand Trends

Quarterly Changes in Production-Based Measure of GDP

In New Zealand, GDP decreased for six consecutive quarters from March 2008 to June 2009, before increasing again, for four consecutive quarters, from September 2009 to June 2010. GDP then decreased for two quarters, before increasing again, for 14 consecutive quarters from March 2011 to June 2014. GDP grew by 0.7% in the June quarter of 2014 (Figure 1). Economic activity for the year ending June 2014 increased by 3.5%, when compared to the year ending June 2013 [23].

During the June 2014 quarter, business services (up 4.2%) was the main driver of growth. Agriculture, forestry and fishing (down 2.8%) partly offset the growth [23].

Figure 1. Gross Domestic Product (GDP): percentage change from previous quarter, New Zealand March quarter 2006 to June quarter 2014

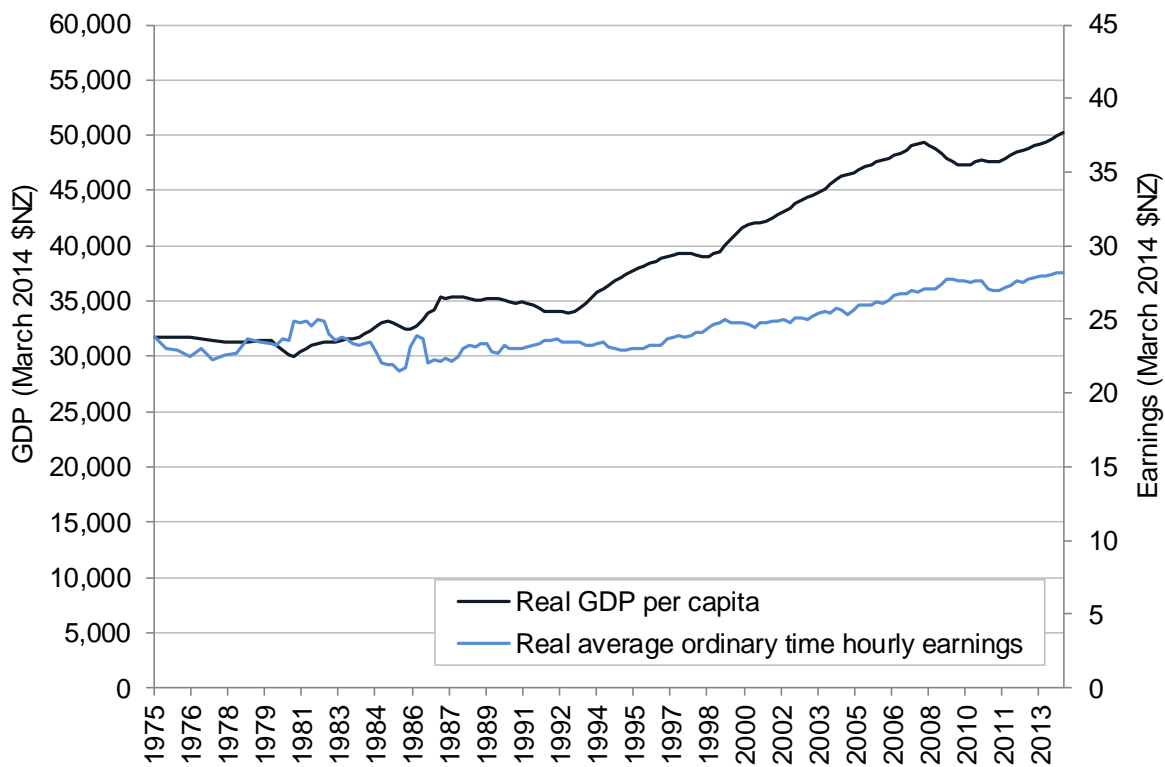


Source: Statistics New Zealand; Note: Seasonally adjusted chain volume series expressed in 1995/96 prices

Trends in real GDP and average hourly earnings

In New Zealand real GDP per capita increased 60% from \$31,426 in the March quarter of 1975, to \$50,261 in the March quarter of 2014, while real average ordinary time hourly earnings only increased 18% from \$23.81 to \$28.18 during the same period (Figure 2).

Figure 2. Real Gross Domestic Product (GDP) per capita and real average ordinary time hourly earnings, New Zealand March quarter 1975 to March quarter 2014



Source: Lattimore and Equb 2011 [19] and Statistics New Zealand; Note: Figures are expressed in March 2014 \$NZ

