



Gross Domestic Product: June 2014 quarter

Embargoed until 10:45am - 18 September 2014

Key facts

Gross domestic product (GDP):

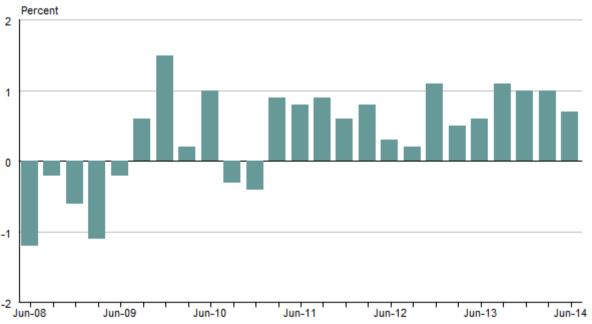
- Economic activity grew 0.7 percent in the June 2014 quarter.
- Business services (up 4.2 percent) was the main driver of the growth.
- Agriculture, forestry and fishing (down 2.8 percent) partly offset the growth.
- Economic activity for the year ended June 2014 was up 3.5 percent.

Expenditure on gross domestic product:

- The expenditure measure of GDP was up 0.5 percent in the June 2014 quarter.
- Investment was up 1.5 percent and household consumption expenditure was up 1.3 percent.
- Inventories built up \$650 million, due to distribution inventories.
- Exports of goods and services fell 2.9 percent, driven by food, beverages, and tobacco.
- Imports of goods and services rose 2.9 percent, mainly due to capital goods.

A diagrammatic overview of the main movements is available from the 'Downloads' box.

Gross domestic product Quarterly change



Source: Statistics New Zealand

Note: Seasonally adjusted chain-volume series expressed in 1995/96 prices.

Liz MacPherson, Government Statistician ISSN 1178-0290, 18 September 2014



Commentary

- New Zealand economy grows 0.7 percent
- Expenditure on GDP main movements
- Real gross national disposable income falls
- Services lead the way
- Goods exports fall
- Imports rise driven by capital goods
- Infrastructure boosts construction

The next Gross Domestic Product release, to be published on 18 December 2014, will be the first under new international standards. The release will also update the base year that we use to express our volume series, from 1996 to 2010.

Preview of 2014 national accounts improvements has more information about the changes.

The <u>Balance of Payments and International Investment Position: June 2014 quarter</u> has already moved to new international standards.

See data quality for more detail.

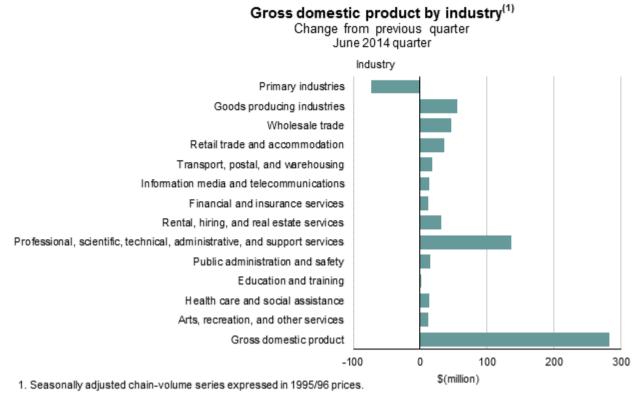
New Zealand economy grows 0.7 percent

Gross domestic product (GDP) was up 0.7 percent in the June 2014 quarter. This follows a 1.0 percent rise in the March 2014 quarter.

The main movements by industry were:

- business services was up 4.2 percent, with all sub-industries increasing
- construction was up 2.2 percent, due to heavy and civil engineering construction
- retail trade and accommodation was **up** 1.4 percent, due to increased accommodation and food services, and retail trade
- wholesale trade was up 2.2 percent due to machinery and equipment wholesaling

agriculture was down 2.2 percent due to lower dairy production.



Source: Statistics New Zealand

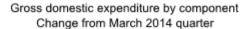
Expenditure on GDP - main movements

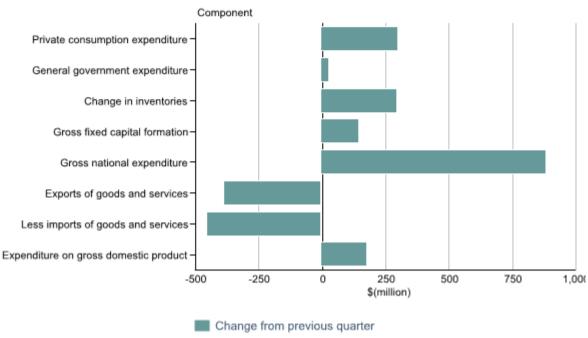
The expenditure measure of GDP rose 0.5 percent in the June 2014 quarter, following a revised 1.4 percent in the March 2014 quarter.

Note: The expenditure and production measures of GDP are conceptually the same, but use different data sources, so can differ in practice. The production measure of GDP measures the volume of goods and services produced in the economy, while the expenditure measure shows how these goods and services were used. While the production-based and expenditure-based measures are both official series, the production-based measure historically shows less volatility and is the preferred series for the quarter-on-quarter changes.

The main movements in the expenditure measure of GDP this quarter were:

- household consumption expenditure was up 1.3 percent due to accommodation services, telecommunications services, used motor vehicles, and audio-visual equipment
- inventories **built up** \$650 million, due to distribution inventories
- investment in fixed assets was up 1.5 percent, due to increases in other construction, transport equipment and intangibles, which were partly offset by a decline in plant, machinery, and equipment
- exports of goods and services was down 2.9 percent due to decreases in food, beverages and tobacco, and meat products
- imports of goods and services was **up** 2.9 percent due to imports of machinery and plant and transport equipment.





Source: Statistics New Zealand

Note: Seasonally adjusted chain-volume series expressed in 1995/96 prices.

Real gross national disposable income falls

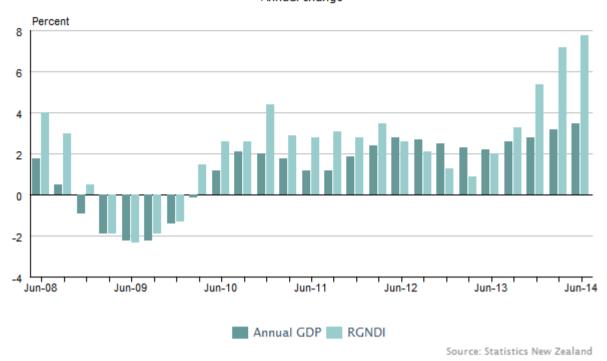
Real gross national disposable income (RGNDI), which measures the real purchasing power of New Zealand's disposable income, fell 0.5 percent in the June 2014 quarter. This is the first fall since the June 2012 quarter. The decrease is due to the terms of trade effect. A decrease in the terms of trade means less imports can be purchased with a fixed quantity of exports. The merchandise terms of trade increased 0.3 percent, while the services terms of trade fell 1.7 percent.

See Overseas Trade Indexes (Prices): June 2014 quarter (provisional) for more information.

RGNDI increased 7.8 percent for the June 2014 year, compared with an increase in GDP of 3.5 percent over the same period. This is the largest annual increase in RGNDI since the series began in the June 1987 quarter.

See definitions for more information about RGNDI.

Gross domestic product and real gross national disposable income Annual change

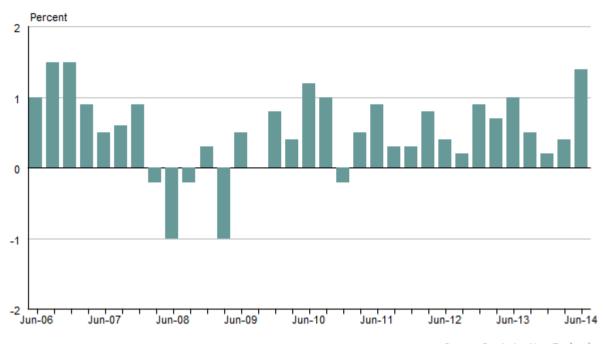


Note: Actual chain-volume series expressed in 1995/96 prices.

Services lead the way

Overall, activity in service industries increased 1.4 percent in the June 2014 quarter. This is the biggest quarterly increase since the December 2006 quarter. The increase was broad-based, as all service industries grew in the latest quarter.

Total service industries Quarterly change



Source: Statistics New Zealand

Note: Seasonally adjusted chain-volume series expressed in 1995/96 prices.

Business services biggest driver

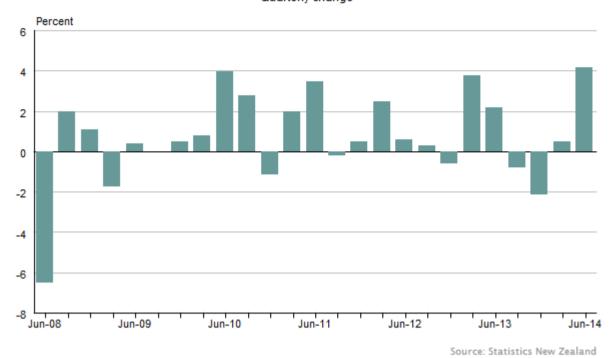
Business services increased 4.2 percent in the June 2014 quarter, the biggest increase since the December 2001 quarter.

- Administrative and support services was up 7.2 percent the biggest increase since the June 2010 quarter, and across all sub-industries.
- Professional, scientific, and technical services was up 3.3 percent and was across all sub-industries.
- In particular, there were increases in industries that include advertising, employment services and software development.

For the first time this quarter, we compared our results for several sub-industries in business services with a new data source based on GST data. The GST data showed similar increases in the sub-industries we compared.

Overall, activity in business services is at historically high levels, despite declines in the second half of 2013.

Business services Quarterly change



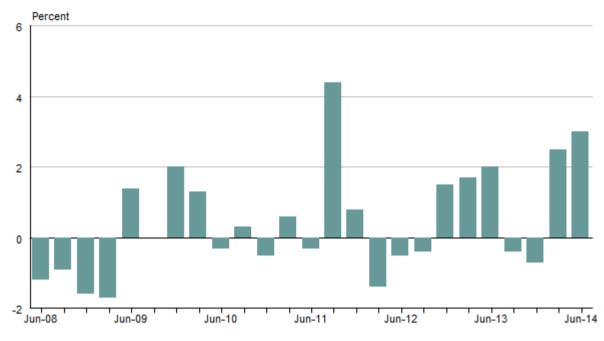
Note: Non-seasonally adjusted chain-volume series expressed in 1995/96 prices.

Retail trade and accommodation up

Retail trade and accommodation increased 1.4 percent in the June 2014 quarter. This was largely due to an increase in accommodation and food services, which was up 3.0 percent. Activity in retail trade also increased, up 0.7 percent.

The increase in accommodation and food services was the biggest since the September 2011 quarter. It was largely due to an increase in accommodation, as Easter, ANZAC day, and the school holidays all coincided in April 2014.

Accommodation and food services Quarterly change



Source: Statistics New Zealand

Note: Seasonally adjusted chain-volume series expressed in 1995/96 prices.

The <u>Accommodation Survey: April 2014</u> says that guest nights spent in short-term commercial accommodation rose 3.2 percent in April 2014. Guest nights continued to rise in May, although they fell in June.

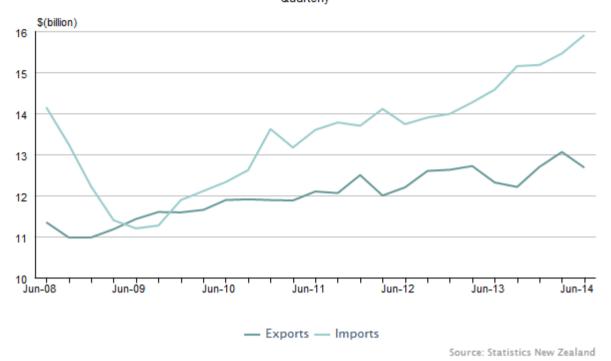
This increase in accommodation was also reflected in household consumption expenditure, where household spending on restaurants and hotels increased 4.1 percent in the June 2014 quarter.

Goods exports fall

Exports of goods declined 3.4 percent, driven by falls in meat products (down 8.3 percent), and other food, beverages, and tobacco (down 11.0 percent). Exports of goods and services fell 2.9 percent in the June 2014 quarter.

Agricultural production fell 2.2 percent in the June 2014 quarter. This was driven by a decrease in dairy, which was partly offset by an increase in sheep and beef farming. Food, beverage, and tobacco manufacturing fell 1.1 percent, and there was a build-up in food, beverage, and tobacco inventories.

Imports and exports of goods and services Quarterly



Note: Seasonally adjusted chain-volume series expressed 1995/96 prices.

Imports rise driven by capital goods

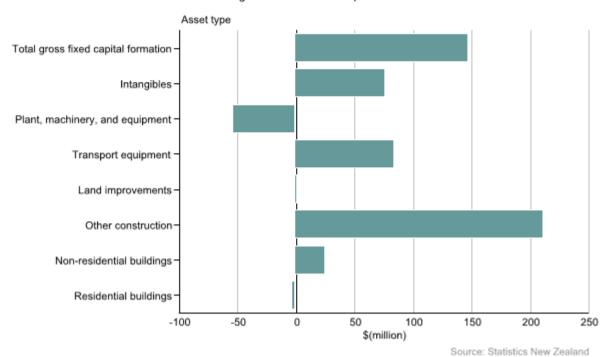
Imports increased 2.9 percent in the June 2014 quarter, due to an increase in goods imports (up 4.3 percent). Imports of capital goods were up 11 percent, due to increases in both machinery and plant, and transport equipment.

Investment in transport equipment rose 9.9 percent, and investment in plant, machinery, and equipment fell 1.2 percent. While imports of machinery and plant increased this quarter, these goods were held as distribution inventories instead of being capitalised.

Infrastructure boosts construction

Economic activity in construction grew 2.2 percent in the June 2014 quarter, following a 12.5 percent increase in the March 2014 quarter. The biggest increase was in heavy and civil engineering construction, although all other construction types also had increased activity.

Gross fixed capital formation by asset type Change from March 2014 quarter



Note: Seasonally adjusted chain-volume series expressed in 1995/96 prices.

Investment in other construction, which includes roading and infrastructure such as power plants and pipelines, increased 19.9 percent, following a 2.9 percent decline in the March 2014 quarter. The increase was spread across a range of projects. Infrastructure investment levels can vary from quarter to quarter as large projects are started or completed.

Investment in non-residential building increased 2.5 percent, following a 15.8 percent increase in the March 2014 quarter. Investment in residential buildings declined 0.2 percent in the June 2014 quarter, after an 11.2 percent increase in the March 2014 quarter, and eight consecutive quarters of growth.

For more detailed data see the Excel tables in the 'Downloads' box.

Definitions

About gross domestic product

Gross domestic product (GDP) is New Zealand's official measure of economic growth.

Three different approaches can be taken to calculate GDP – the production approach, the expenditure approach, and the income approach. We use the production and expenditure approaches to calculate New Zealand's GDP on a quarterly basis. The production approach is available on a chain-volume basis, while the expenditure approach is on a chain-volume basis and in current prices. Chain-volume estimates have the effect of price change (inflation) removed from them.

The **production approach** to GDP measures the total value of goods and services produced in New Zealand, after deducting the cost of goods and services used in the production process. This is also known as the value-added approach.

The **expenditure approach** to GDP (also known as gross domestic expenditure or GDE) measures the final purchases of goods and services produced in the New Zealand domestic territory. Exports are added to domestic consumption, as they represent goods and services produced in New Zealand, while imports are subtracted. Imports represent goods and services produced by other economies.

Conceptually, both the production-based and expenditure-based GDP series should produce the same growth rates, because what is produced by an economy should equal what is used. However, as each series uses independent data and estimation techniques, some differences between the alternative measures arise. The expenditure-based series has historically shown more quarterly volatility and is more likely to be subject to timing and valuation problems. For these reasons, we prefer the production-based measure for quarter-on-quarter and annual changes.

More definitions

Broad industry groups: in tables 3, 4, 5, 6, 25, and 26, we combine industry groups to form the following broad groupings, based on the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC06):

- primary industries (agriculture, forestry, and fishing; mining)
- goods-producing industries (manufacturing; electricity, gas, water, and waste services; construction)
- service industries (wholesale trade; retail, accommodation, and restaurants; transport, storage, and warehousing; finance and insurance services; rental, hiring, and real estate services; professional, scientific, technical, administration, and support services; public administration and safety; education and training; health care and social assistance; arts, recreation, and other services).

As well as these industrial groupings, there is an 'unallocated' category. This category includes taxes on production and imports (import duties, GST, and taxes on capital transactions) that are not allocated to industries.

Business investment: measures the investment of producers in land improvements; non-residential building; other construction; transport equipment; plant, machinery, and equipment; and intangibles (mining exploration and computer software).

Chain-volume series expressed in 1995/96 prices: are best described as annually reweighted, chained Laspeyres volume indexes. Series are expressed in 1995/96 dollars rather than as index numbers, since this has the advantage of showing the relative size of each component.

See <u>data quality</u> for more information on chain-volume series under 'Constructing a chain-volume series'.

Change in inventories: is change in the value of inventories of raw materials, work-in-progress, and finished goods, over a given period. The change is measured in the appropriate prices in the market at the time additions and withdrawals are made. The correct valuation of the change in inventories requires continually updated data on the quantities of individual commodities held in stock together with appropriate prices. As this data is rarely available, our usual practice is to revalue stocks at the end of the period. This is the best estimate of the physical change in stocks during a given period.

Durable goods: are goods that are not consumed in one use (eg appliances and electronic goods).

Gross fixed capital formation: producers' outlay on durable fixed assets, such as buildings, motor vehicles, plant and machinery, hydro-electric construction, roading, and improvements to land. 'Gross' indicates that consumption of fixed capital is not deducted from the value of the outlays.

Gross national disposable income (GNDI): is the income received (less income payable) by New Zealand residents, from both domestic and overseas sources, after taking account of income redistribution by way of international transfers, or gross national income plus international transfers.

Household consumption expenditure (HCE): is an estimate of total expenditure by New Zealand resident households. It includes expenditure by New Zealand households overseas but does not include expenditure by overseas tourists in New Zealand.

Implicit price deflators: tables 23 and 24 contain implicit price deflators (IPDs) for expenditure on GDP and its components. IPDs provide a broad measure of price change for total economic activity and each of the expenditure components.

Low-value imports: are imports of goods purchased directly by New Zealand households that have a value of less than \$1,000. We estimate these separately as they are not captured in the administrative data used to measure imports of goods.

Non-durable goods: are goods that are either consumed immediately in one use or within three years.

Real gross national disposable income (RGNDI): measures the real purchasing power of national disposable income, taking into account changes in the terms of trade, and real gains from net investment and transfer income with the rest of the world. Effectively, it is a measure of the volume of goods and services New Zealand residents have command over.

See <u>data quality</u> for more information on calculating RGNDI under 'Calculating real gross national disposable income'.

Services: are products other than tangible goods. Services result from production activity that changes the conditions of the consuming units, or makes the exchange of products or financial assets possible.

Value added: is income formed in the production process. Value added equals output minus intermediate consumption. Value added is the income available to reward the production factors involved.

Related links

Upcoming releases

Gross Domestic Product: September 2014 quarter will be released on 18 December 2014.

Gross Domestic Product: June 2014 quarter is the last release before we implement new international standards in *Gross Domestic Product: September 2014 quarter*. The next release will also update the base year that we use to express our volume series, from 1996 to 2010.

<u>Preview of 2014 national accounts improvements</u> has more information on the changes.

Subscribe to information releases, including this one, by completing the online subscription form.

The release calendar lists all our upcoming information releases by date of release.

Related releases

The quarterly production measure of GDP is reconciled to benchmarks from <u>National Accounts</u> (<u>Industry Benchmarks</u>): <u>Year ended March 2011</u>.

The quarterly expenditure measure of GDP is reconciled to benchmarks from <u>National Accounts</u> (Income and Expenditure): Year ended March 2013.

Past releases

Gross Domestic Product – information releases has links to past releases.

Related information

<u>National accounts</u> provide an annual measure of economic aggregates in the New Zealand economy.

Data quality

Period-specific information

This section contains information that has changed since the last release.

- Reference period
- Consistency with balance of payments

General information

This section contains information that does not change between releases.

- Data source
- Incorporating annual data
- The System of National Accounts
- Australian and New Zealand Standard Industrial Classification 2006
- Constructing a chain-volume series
- Revisions resulting from chain-linking
- Calculating real gross national disposable income
- Calculating implicit price deflators
- Revisions policy
- Interpreting the data
- · Confidentiality and accessing the data
- More information

Period-specific information

Reference period

Information for this release was collected for the period April–June 2014.

Consistency with balance of payments

Balance of Payments and International Investment Position: June 2014 quarter implemented changes from Balance of Payment and International Investment Position Manual 6th edition (BPM6), which aligns with the 2008 System of National Accounts (2008SNA). We will implement the 2008SNA in the Gross Domestic Product: September 2014 quarter release on 18 December 2014.

Our current GDP release uses data for exports and imports of goods and services based on *Balance of Payment and International Investment Position Manual* 5th edition. As a result, values for imports and exports of goods and services are different between the June 2014 quarter's BoP and GDP releases.

Please note investment income and transfers data used in calculating real gross national disposable income (RGNDI) is based on BPM6, which has resulted in revisions to RGNDI and related series. These revisions have little impact on the movements of this series over time.

See <u>Preview of 2014 balance of payments improvements</u> for more information on improvements to New Zealand's balance of payments and international investment position statistics.

General information

Data source

<u>Quarterly Gross Domestic Product: Sources and Methods (third edition)</u> presents the sources and methods used in compiling quarterly GDP.

Incorporating annual data

National Accounts (Industry Benchmarks): Year ended March 2011 was released on 21 November 2013. As annual data has a wider range of data sources, it is more complete. We reconciled the quarterly estimates of industries in GDP and the components of gross domestic expenditure (GDE) to annual estimates to ensure we show the most robust picture of economic activity.

We incorporated annual benchmarks for the production measure of GDP up to the year ended March 2011, and to the year ended March 2013 for GDE.

See National Accounts (Income and Expenditure): Year ended March 2013 for more information.

The System of National Accounts

The conceptual framework we use to compile New Zealand's national accounts and GDP is based on the System of National Accounts 1993 (SNA93). The SNA93 is jointly published by the United Nations, the Commission of the European Communities, the International Monetary Fund, the Organisation for Economic Co-operation and Development, and the World Bank.

The latest SNA is for 2008 (2008SNA). New Zealand will introduce 2008SNA into the New Zealand accounts at the end of 2014.

Australian and New Zealand Standard Industrial Classification 2006

The production measure of GDP is presented by industry. The industry classification we use for GDP is the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC06).

See ANZSIC 2006 - industry classification for more information about implementing ANZSIC06.

Gross Domestic Product: December 2011 quarter was the last GDP release to use ANZSIC96.

Constructing a chain-volume series

We constructed the chain-volume measures of GDP and GDE by:

- (a) compiling a Laspeyres volume index of the component in question, using the previous year's prices as weights; then
- (b) chaining the sequence of annual movements to produce a continuous time series.

This procedure is used at different levels within the accounts. For example, we compile GDP by weighting together the individual industry value-added components to produce a Laspeyres volume index for each quarter, and then linking the resulting indexes to produce the GDP time series. Each industry component, such as transport, postal, and warehousing, is also a chained-

volume series. At the lowest level, the 'elemental series' are not chained and are either single series in their own right or fixed-weight series comprising many components. Chaining is not adopted, either because the details needed for annual weights are not available, or relative price changes are not significant.

Note that chain-volume series are not additive (ie the chain-volume series for an aggregate will not equal the sum of the values of its components).

See <u>Chain volume measures in national accounts</u> for a full explanation of the concepts and procedures used to compile chain-volume series.

Usually, the industry 'elemental series' estimates that make up the production-based GDP are calculated by extrapolating value added using indicator series that represent the quantities of output produced. The technique known as double deflation, by which volume value added is calculated as the difference between volume outputs and inputs, is not widely used. We currently use double deflation on an annual basis for these industries: agriculture; electricity and water transport; owner-occupied dwellings; health care and social assistance; education and training; professional, scientific, and technical services; administration and support services; arts and recreation services; and other services.

Revisions resulting from chain-linking

One of the key benefits of adopting chain-volume measures in place of fixed-weight series is that the relative weights of the component series are more up-to-date. This reduces the likelihood of introducing biases in the volume measures, which would otherwise become progressively unrepresentative as relative prices change. The disadvantage is that the annual reweighting introduces another cause for revision.

Reweighting is part of our annual revisions cycle and is usually timed to coincide with introducing other new annual data from the current price GDP accounts. See 'Incorporating annual data' above.

The current price annual accounts provide the detailed component series needed for weighting the production-based series of GDP. There is usually a two-year time lag before these detailed series are available. The latest year for which up-to-date weights were used for the production-based series is for the year ended 31 March 2011; all subsequent guarters use these weights.

Current price data for GDE components are more timely. As a result, the latest year for which we use up-to-date weights for the GDE series is for the year ended 31 March 2013. All subsequent quarters use these weights.

When the weights are updated, this procedure results in revisions to all periods beyond the latest year for which detailed series are available (currently 2010/11 for the production-based measure and 2012/13 for the expenditure-based measure).

Calculating real gross national disposable income

We calculate RGNDI as follows:

chain-volume measure of **gross domestic product** (production-based measure) plus a terms of trade effect (trading gain/loss) **equals real gross domestic income** plus real value of total net investment income

equals real gross national income plus real value of total net transfers equals real gross national disposable income

where the terms of trade effect is defined as: current price exports deflated by an imports implicit price index less chain-volume measure of exports

and the real value of total net investment income equals: investment income credits **less** investment income debits all deflated by an imports implicit price index

and the real value of total net transfers equals: transfers credits

less transfers debits
all deflated by an imports implicit price index.

A per capita measure is simply the series in question divided by the projected population of New Zealand. From the March 1991 quarter onwards, we used the 'estimated resident population of New Zealand'. This is defined as New Zealand residents currently in New Zealand plus those temporarily overseas. We exclude overseas tourists visiting New Zealand.

Calculating implicit price deflators

We calculate implicit price deflators (IPDs) by dividing the seasonally adjusted current price quarterly series by the equivalent chain-volume series. This provides a broad estimate of price change between the base period and any other period. Significant compositional changes may result in the IPDs being a less precise estimate of price change. This problem is more likely to occur in the gross national expenditure and expenditure on GDP aggregates. This is because both measures include the change in inventories item, which is highly subject to compositional changes, including a change in sign.

Revisions policy

We may revise previously published series each quarter. The frequency and cause of these revisions are listed below.

- Quarterly more data becoming available for the latest quarters, which is used to replace existing estimates. Revisions to quarterly data (eg revisions to BoP or the Retail Trade Survey), which we incorporate as soon as possible to maintain consistency between published macroeconomic statistics.
- **Annual** introduction of annual data after the release of the latest annual national accounts; annual updating of the weights used to link component series to totals and subsequent chaining (see 'Revisions resulting from chain-linking' above).
- **Irregular** for example, methodological changes. Note that as far as possible, we incorporate revisions of this nature to coincide with the annual cycle of revisions outlined above, or discuss them in a separate paper ahead of the changes.

Each of the above causes for revision, and/or the addition of a new point in the actual quarterly series, can alter seasonal factors and may lead to a revision in the seasonally adjusted series.

Interpreting the data

Annual percentage changes

When using annual percentage changes, our customers should take care to ensure the measures used are correctly understood. Annual measures are calculated by summing the actual series for a four-quarter period. Unless otherwise stated, the annual percentage change is the most recent four-quarter period compared with the previous four-quarter period.

Direct and indirect seasonal adjustment

The level at which a series is seasonally adjusted is important, since it has the potential to affect the series' quality. The individual component series of the main economic variables can be seasonally adjusted and then summed to derive totals. This is called an indirect seasonal adjustment. Alternatively, the main economic variables can be seasonally adjusted at the total level, independently of the seasonal adjustment of their components. The adjustment of the total of an aggregate series is called a direct seasonal adjustment. The indirect approach has the advantage of retaining additivity, but this applies only to the current price series. While the indirect approach conceptually also provides additivity for volume series, additivity is lost by chain-linking.

The direct approach will often give better results if the component series show similar seasonal patterns. At the most detailed level, the irregular factor may be large compared with the seasonal factor and therefore may make it difficult to perform a proper seasonal adjustment. In a small country like New Zealand, irregular events can have a strong impact on particular data. However, if the component series show the same seasonal pattern, aggregation often reduces the impact of the irregular factors in the component series. This is relevant for New Zealand, where seasonal fluctuations in the primary industries affect economic series.

We analysed both direct and indirect approaches for the two quarterly GDP aggregates, the production and expenditure on GDP. We prefer to use the direct approach because the resulting series are smoother and more stable.

The residual between the seasonally adjusted components and the aggregates is referred to as the balancing item. The balancing item will often show significant seasonal variations. This is expected, as it captures the undetected seasonality in the component series.

Note: The level at which seasonal adjustment is applied to quarterly GDP series may differ from other Statistics NZ surveys (eg the Economic Survey of Manufacturing and the Wholesale Trade Survey). These may contribute to differences in the aggregate seasonally adjusted series.

Explanation of the seasonally adjusted balancing item

Seasonal adjustment removes seasonal variation from a statistical series. By removing seasonal effects from GDP, we can better understand the underlying economic activity. Examples of seasonal variation in economic activity are milking and lambing seasons, Christmas shopping, and peak periods for visitors to New Zealand.

The seasonal adjustment balancing item is the difference between directly seasonally adjusting total GDP and seasonally adjusting each component of GDP and adding them together. Directly seasonally adjusting total GDP is our preferred method. The seasonal adjustment balancing item does not contribute to GDP and therefore should not be interpreted as an economic variable. It

should also not be interpreted as a margin of error for the headline measure of GDP, as over the course of a year it balances out to zero.

We seasonally adjust quarterly GDP in line with international best practice.

Confidentiality and accessing the data

Data collected and information contained in this publication must conform to the provisions of the Statistics Act 1975. This requires that published information maintains the confidentiality of individual respondents.

More information

See more information about the quarterly gross domestic product.

Statistics in this release have been produced in accordance with the <u>Official Statistics System principles and protocols for producers of Tier 1 statistics</u> for quality. They conform to the Statistics NZ Methodological Standard for Reporting of Data Quality.

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Revisions

- Seasonal adjustment
- Interpolation
- Financial intermediation services indirectly measured
- Revisions to GDP
- Revisions to expenditure on GDP

We incorporated several revisions into GDP for the June 2014 quarter, which we discuss here.

Seasonal adjustment

We have updated the seasonal adjustment program used for quarterly GDP series from X12-ARIMA to X-13ARIMA-SEATS. The update includes improved treatment of outliers, which has resulted in revisions to some seasonally adjusted series. These revisions are generally small or zero for most series.

See X-13ARIMA-SEATS on the US Census Bureau website for more information.

Interpolation

For areas of the economy that have annual data but lack a quarterly indicator, we use an algorithm, called interpolation, to estimate quarterly movements from an annual benchmark. Annual benchmarks used for the quarterly GDP release are typically for years ended March. Therefore, the June 2014 quarter is the first quarter for the March 2015 year. When a new March year is entered, interpolation re-estimates quarterly movements, which can result in revisions.

Financial intermediation services indirectly measured

Updated input data for financial intermediation services indirectly measured (FISIM) have resulted in revisions to financial and insurance services in the production measure of GDP, and household consumption expenditure, private non-profit consumption expenditure, central and local government final consumption expenditure, and exports and imports of services in the expenditure measure of GDP.

Revisions to GDP

- Agriculture was revised due to updated annual benchmarks, and updated input data.
- Manufacturing was revised due to updated <u>Economic Survey of Manufacturing</u> data, and incorporating updated source data. This affected the series back to the December 2012 quarter.
- Local government was revised due to revisions incorporated in the <u>Local Authority</u>
 <u>Statistics: June 2014 quarter</u> release. This affected the series back to the September 2007 quarter. See <u>Government Finance Statistics</u> (<u>Local Government</u>): Year ended June 2013 for more information.
- Updated source data resulted in revisions to forestry; fishing; electricity, gas, water and waste services; transport, postal and warehousing; information media and telecommunications; financial and insurance services; rental, hiring, and real estate services; public administration and safety; and arts, recreation, and other services.

 Electricity, gas, water, and waste services; construction; rental, hiring, and real estate services; business services; and government were revised due to the interpolation method.

Revisions to expenditure on GDP

- Household consumption expenditure revised due to updated fringe benefit tax data.
- Central government revised due to updated health expenditure data.
- Local government revised due to updated data from the quarterly local authority statistics.
- Gross fixed capital formation revised due to updated transfer costs data and updated overseas merchandise trade (OMT) data.
- Inventories revised due to updated annual benchmarks and source data for agriculture, updated source data for forestry, updated Economic Survey of Manufacturing data, and updated Wholesale Trade Survey data.
- Exports and imports revised due to updated OMT data and updated balance of payments (BoP) data. Revisions due to BoP include updated data for exports and imports of insurance services back to the June 2000 quarter, and correcting an error in merchanting data for the March 2012 quarter.

The following table shows the previously published and revised quarterly movements for GDP and expenditure on GDP.

Quarter	GDP		GDE	
	Percentage change from previous quarter			
	Previously published	Revised	Previously published	Revised
September 2008	-0.2	-0.2	-0.5	-0.5
December 2008	-0.6	-0.6	-0.1	-0.1
March 2009	-1.1	-1.1	-0.2	-0.2
June 2009	-0.2	-0.2	1.3	1.3
September 2009	0.6	0.6	0.8	0.8
December 2009	1.5	1.5	0.6	0.6
March 2010	0.2	0.2	1.0	1.1
June 2010	1.0	1.0	0.4	0.3
September 2010	-0.3	-0.3	-1.3	-1.3
December 2010	-0.4	-0.4	-0.1	-0.2
March 2011	0.9	0.9	0.2	0.3
June 2011	0.8	0.8	1.1	1.0
September 2011	0.9	0.9	1.3	1.2
December 2011	0.6	0.6	0.8	0.8
March 2012	0.8	0.8	0.5	-0.0
June 2012	0.2	0.3	0.5	0.9
September 2012	0.3	0.2	0.4	0.4
December 2012	1.2	1.1	1.1	1.1
March 2013	0.5	0.5	0.5	0.6
June 2013	0.6	0.6	0.1	0.1
September 2013	1.1	1.1	1.0	0.7
December 2013	1.0	1.0	0.7	0.7
March 2014	1.0	1.0	1.3	1.4

Contacts

For media enquiries contact:

Daniel Lensen Wellington 04 931 4600 **Email:** info@stats.govt.nz

For technical information contact:

Sabine Hoellersberger or Matthew Collison Wellington 04 931 4600

Email: info@stats.govt.nz

For general enquiries contact our Information Centre:

Phone: 0508 525 525 (toll free in New Zealand)

+64 4 931 4600 (outside New Zealand)

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Tables

The following tables are available in Excel format from the 'Downloads' box. If you have problems viewing the files, see opening files and PDFs.

- 1 Gross domestic product by industry June 2014 quarter
- 2 Expenditure on gross domestic product June 2014 quarter
- 3 Gross domestic product by industry quarterly values
- 4 Gross domestic product by industry quarterly percentage changes
- 5 Gross domestic product by industry annual values
- 6 Gross domestic product by industry annual percentage changes
- 7 Expenditure on gross domestic product quarterly values
- 8 Expenditure on gross domestic product quarterly percentage changes
- 9 Expenditure on gross domestic product annual values
- 10 Expenditure on gross domestic product annual percentage changes
- 11 Household consumption expenditure quarterly values and percentage changes
- 12 Household consumption expenditure annual values and percentage changes
- 13 Gross fixed capital formation quarterly values and percentage changes
- 14 Gross fixed capital formation annual values and percentage changes
- 15 Exports of goods and services quarterly values and percentage changes
- 16 Imports of goods and services quarterly values and percentage changes
- 17 Expenditure on gross domestic product current price quarterly values
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- 21 Per capita measures quarterly values and percentage changes
- 22 Per capita measures year ended June values and percentage changes
- 23 Implicit price deflators quarterly index values and percentage changes
- 24 Implicit price deflators annual index values and percentage changes
- 25 Gross domestic product by industry percentage changes from same quarter of previous year
- 26 Gross domestic product by industry year ended June values
- 27 Gross domestic product by industry year ended June percentage changes
- 28 Expenditure on gross domestic product year ended June values and percentage changes

Supplementary tables

These tables show a longer time series for expenditure on gross domestic product and gross domestic product by industry than is included in the June 2014 quarter tables. See the 'Downloads' box.

- 1 Expenditure on gross domestic product annual values
- 2 Expenditure on gross domestic product annual percentage changes
- 3 Expenditure on gross domestic product components quarterly values
- 4 Expenditure on gross domestic product components quarterly percentage changes
- 5 Gross domestic product by industry annual values
- 6 Gross domestic product by industry annual percentage changes
- 7 Gross domestic product by industry quarterly values

8 Gross domestic product by industry – quarterly percentage changes

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