Regional gross domestic product

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Regional gross domestic product

Abstract

Regional gross domestic product (regional GDP) is a geographic breakdown of national-level GDP, which is New Zealand's official measure of economic activity.

Regional GDP is presented in current (nominal) prices, and measures the value of production in the prices prevailing at the time (inflation is not removed). The series is consistent with published national accounts industry and total GDP.

Purpose

Regional GDP provides coherent statistics about the economic activity of regions, using a well-recognised macroeconomic concept. The release is in response to interest in regional economies, reflected in regional GDP being added to the list of Tier 1 official statistics.

It supports Stats NZ's objective of providing the information New Zealand needs to grow and prosper.

Regional gross domestic product: Frequently asked questions

Methodology

#####Frequently asked questions

What is GDP?

Gross domestic product (GDP) is an internationally accepted measure of economic activity. There are three approaches to measuring GDP. The production approach (which is used for compiling regional GDP) measures the value added of producers, by deducting the value of goods and services used up in production from the total value of goods and services produced. GDP statistics can be presented in either current (nominal) or constant (real) prices. Regional GDP is reported in current prices only.

What is regional GDP?

When GDP is presented on a regional basis provides an indication of the size and structure of a regional economy and measures the changes taking place within. Statistics NZ's regional GDP measures are compiled by industry using the production-approach and presented in current prices (inflation not removed).

What is the use of regional GDP?

Economic statistics such as regional GDP provide a basis for evaluating economic activity in a region and give an empirical basis on which to make economic decisions. It provides information to help understand the economic structures of regions and the factors influencing regional economic growth.

Could regional GDP be estimated using different regional classifications?

The methodology being used for regional GDP could in principle be adapted for different regional classifications, though in practice the choice is restricted to the classification used in the input data. Providing regional GDP estimates for different regional classifications would be a major exercise requiring additional funding. Also, the smaller the region being estimated, the more likely there are to be quality and confidentiality concerns with the estimates.

Why are some industries not separately available in your classifications?

We cannot publish all the regional statistics by industry because we need to aggregate results from some industries in order to meet quality and confidentiality standards in published statistics.

What about other economic statistics?

Regional GDP has current price production-based series or components of GDP by region, with statistics presented by industries. Its possible that in future we might produce other regional economic indicators, such as regional expenditure on GDP, regional constant price GDP, regional quarterly GDP, or a wider range of regional economic statistics.

Does the release have regional input-output tables?

Input-output tables analyse the individual components of the economy, including industries and goods and services. This type of table shows, in a matrix form, the interactions and dependencies between industries and commodities. We do not currently plan to include official regional input-output tables in the release.

Regional gross domestic product: General information

Methodology

#####General information
GDP Compilation

The internationally preferred approach for regional GDP compilation is to directly measure the activity of local units (represented by geographic units in New Zealand), and build up regional accounts from this information. The geographic unit compilation approach is preferred as it directly measures value added.

This approach is also useful analytically, since it clearly links the activities of businesses within a region to the growth of that region. We've used this approach for most industries in New Zealand's regional GDP estimates.

The method of building up regional estimates from geographic unit data is known as the 'bottom-up' approach. The alternative, where regional indicators are used to allocate national level GDP estimates to regions, is the 'top-down' approach.

A top-down approach is used if the bottom-up approach cannot be implemented for an industry. This is usually due to a lack of unit-level data for that industry. Because there are many exceptions to applying a bottom-up approach across-the-board, we've determined regional GDP methodology on an industry-by-industry basis. The top-down approach was used for industries such as: agriculture, part of property services, and ownership of owner-occupied dwellings.

Scope of regional gross domestic product

The regional GDP estimates are in current prices and are consistent with published production-based GDP. They are essentially the regional allocation of national GDP. An official constant-price regional GDP estimate is not available and would require us to develop a new methodology. The estimates do not provide information on inter-region flows.

Regional gross domestic product concepts

Regional GDP is conceptually the same as national GDP, with the GDP of each region summing to the national GDP total. In producing regional GDP, we use many concepts to decide how GDP is allocated to the specific regions. The residency concept clarifies whether GDP should be allocated to the producer's location or to where the economic activity actually takes place.

See Regional GDP concepts, sources, and methods for information on how we treat residency, statistical units, and the valuation basis of regional GDP.

Backdated series 2000 to 2006

We derived the 2000–06 backdated regional GDP estimates at the industry level using a selection of methods, with the most appropriate method chosen depending on the period and data available.

For 2000–03, existing regional GDP feasibility numbers were released in 2007, based on the historic ANZSIC96 classification. We were able to 'reuse' the feasibility workings for a number of activities – mainly for those where the change to ANZSIC06 had little or no effect.

For 2005 and 2006, we analysed AES ANZSIC06 data as a basis for regional allocations and used it for a number of activities. For some activities, we used LEED gross earnings to derive regional ratios from 2000–06. Note that for some activities, LEED is a very good proxy for GDP, but for other activities it is not a suitable proxy. For activities where we reused the feasibility estimates in 2000–03 and used the AES data for 2005–06, there was a data gap for 2004. AES unit datasets on an ANZSIC06 basis were not available for 2004. In these instances, 2004 is generally estimated using regional ratios from the surrounding years. The 2004 allocation may be adjusted for large units that are important in particular regions. Where LEED data is used there is no data gap.

Industry breakdowns

Where possible we provide a finer-level industry breakdown for selected industries:

• Forestry, fishing, mining, electricity, gas, water, and waste services:

• forestry, fishing, and mining
• electricity, gas, water, and waste services
• Manufacturing:

• primary manufacturing
• other manufacturing
• Primary manufacturing in regional GDP consists of these industries:

• food, beverage, and tobacco product manufacturing
• wood and paper products manufacturing
• petroleum, chemical, polymer, and rubber product manufacturing
• non-metallic mineral product manufacturing
• Other manufacturing consists of these industries:

• textile, leather, clothing, and footwear manufacturing
• printing
• metal product manufacturing
• transport equipment, machinery, and equipment manufacturing

• furniture and other manufacturing
• Professional, scientific, and technical services

• Administrative and support services.

Regional population estimates

We use population estimates to calculate GDP per capita. These are the latest 'estimated resident population' of each region, sourced from the Census of Population and Dwellings.

The regional population estimates used in this release are derived, and differ, from subnational population estimates, which are published annually with a reference date of 30 June. We used mean population estimates to better reflect the average population over each March year. In this release, regional population estimates are the mean (average) for the years ended June, while regional GDP is for the years ended March.

Frequency

• Annual

Related Materials

More information

- Regional gross domestic product releases 2016 onward
- Regional gross domestic product releases 2010 to 2016
- Regional gross domestic product sources and methods
- National accounts
- Annual national accounts sources and methods
- National accounts (industry production and investment) releases
- Tourism satellite account releases

Variables

Concepts

Regional GDP Concept Set

Name	Description
Annual Enterprise Survey (AES)	an annual survey that collects national-level economic information by industry, including measures of financial performance and financial position. The target population for AES is all economically significant businesses operating in New Zealand, but with some industries excluded. Around 90 percent of GDP production is covered. We selected AES as the core data source for compiling regional GDP for industries where AES is used in compiling the national accounts. AES is collected at the kind-of-activity unit (KAU) level, and is apportioned to geographic units using LEED data.
Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC06)	the official industrial classification used by Statistics NZ. The classification system aims to reflect the structure of Australian and New Zealand industries and enable comparison with other countries' statistics. Regional GDP data series published in 2006 used the previous ANZSIC96 industrial classification system. We have replaced this system with a full data series to March 2000 available on an ANZSIC06 basis.
Bottom-up (direct measure)	the internationally preferred approach for compiling regional GDP is to directly measure the local activity of enterprises, and build up regional accounts from this information. The enterprise-level approach is preferred as it directly measures value added. It is also useful analytically as it clearly links the activity of enterprises within a region to the overall economic performance of the region. We compile New Zealand regional GDP statistics using this approach where AES data (or a similar unit level collection) is used. The main alternative to the bottom-up approach is the top-down (or indirect) approach.

Business Frame (BF)	a database of all known individual private and public sector businesses and organisations engaged in producing goods and services in New Zealand that meet economic significance criteria. BF data contributes to other data sources that may be used in estimating regional GDP. The BF provides the detail of the structure of businesses in the economy (Enterprise / KAU / geographic unit) including the location of geographic units.
Current prices	We present regional GDP estimates in current prices. Current (or nominal) price GDP measures production in the prices prevailing at the time. This means inflation (price effect) is not removed.
Enterprise	a business or service entity operating in New Zealand, including a company, partnership, trust, estate, incorporated society, producer board, local or central government organisation, voluntary organisation, or self-employed individual. An enterprise makes financing and distributive decisions on behalf of its group of firms. It can operate at one or several locations.
Geographic unit (GEO)	a separate operating unit engaged in one or predominantly one kind of economic activity, from a single physical location or base in New Zealand. It can be classified to industry and region but has no, or limited, financial data available.
Gross domestic product (GDP)	total market value of goods and services produced in a given area, minus the cost of goods and services used in the production process.
Gross domestic product (GDP) per capita	the economic output of a geographic area divided by the population in that geographic area.
Industry	a group of establishments engaged in the same or similar kinds of activity. We use ANZSIC06 for compiling and presenting industry statistics. The published level of industries has changed slightly from the regional GDP statistics released in 2006, because of confidentiality requirements as a result of the new ANZSIC06 industry classifications, and quality issues in some cases.
Kind-of-activity unit (KAU)	a subdivision of an enterprise producing goods and services, with a single set of accounting records. This can be classified to industry, and is the usual basis of financial information we use to compile regional GDP.
Linked Employer–Employee Data (LEED)	an integration project that brings together Inland Revenue administrative data with Statistics NZ's Business Frame data, to provide employment statistics by industry and region. LEED data is available at the geographic unit level and is used to apportion AES data (collected at the KAU level) to regions.
Local kind of activity (LKAU)	a notional unit established for the purpose of compiling regional GDP. It can be classified to industry and region. Transactional information can be imputed or can be estimated from a 'regionalisation' of KAU data.
Output	value of goods and services produced during a time period, regardless of whether they are produced for sale or own use.
Owner-occupied property operation	**Owner-occupied property operation** is used only for national accounts purposes. It represents the service dwellings provide to their owner-occupiers. This industry comprises households that own their own homes and notionally rent them back to themselves. It includes private dwellings such as houses, flats, and farm houses, if they are owned by the people who occupy them. We define output as the imputed rental value of owner-occupied dwellings (ie the gross rents that would be collected if the dwellings were rented in an unfurnished state). The inputs of the industry are homeownership expenses, such as repairs and maintenance, insurance service charges, bank service charges associated with home loans, rates, and depreciation. We include the imputed rental payment in final consumption expenditure of households.
Production approach to GDP	this is one of the three approaches of measuring GDP. This approach derives the total value added of producers by deducting the value of goods and services used up in production from the value of goods and services produced. This is the approach used for deriving regional GDP statistics by Stats NZ.

Regions	the regional breakdown is based on regional council administrative boundaries. Tasman and Nelson are combined, due to difficulties in assuring the correct differentiation of economic activity between the regions.

The published regions are

- Northland
- Auckland
- Waikato
- Bay of Plenty
- Gisborne
- Hawke's Bay
- Taranaki
- Manawatu-Wanganui
- Wellington
- Tasman and Nelson
- Marlborough
- West Coast
- Canterbury
- Otago
- Southland. |
Residency	the residency approach to regional GDP is based on the physical and legal existence of a unit in a region. It allocates value added to the region where the production unit is resident. This is important where a unit creates value added in more than one region, but is based only in one region. One such example is a transport business that provides services outside its resident region, but its capital and employees are based in the resident region. Where a unit creates considerable value added in more than one region we apply the territory principle in place of the residency principle, and allocate proportions of the unit's value added to the regions where the production activity takes place.
Statistical unit	the entity for which we store, produce, and publish statistics. These are used to recognise units that make production or financial decisions and to collect this information from enterprise / kind-ofactivity / geographic units.
Territory	the territory concept allocates activity to the region where it takes place, reflecting the activity of labour and capital operating in a region regardless of where the 'owning' production unit is located. We apply this approach where a unit's workers are employed in more than one region, or when a unit owns considerable capital in a region that is different to the unit's resident region (eg a power company based in one region that owns a hydroelectric power station in another region).
Top-down (indirect measure)	this method allocates national-level GDP to regions using a variable with a regional correlation to GDP (eg employment numbers or wages paid). The method is named top-down because we allocate the variable to a region not to a local unit. While top-down can be easier to implement than the bottom-up method, the accuracy may be harder to assess. Applying a top-down method often implicitly assumes that regions are homogenous (eg that pay rates are the same in every region, or the amount of capital per worker is the same in every region).
Value added	another term for GDP, it represents income formed in the production process. Value added equals output minus intermediate consumption. Value added is the income available to compensate the production factors involved.