Stats NZ
Tatauranga Aotearoa

Business Demography Statistics

New Zealand Government

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Beauty Service

Abstract

Business demography statistics provide an annual snapshot as at February, of the structure and characteristics of New Zealand businesses. Statistics produced include counts of enterprises and geographic units by industry, region, institutional sector, business type, degree of overseas ownership, enterprise births, enterprise deaths, survival rate of enterprises and employment levels. The series covers economically significant private-sector and public-sector enterprises that are engaged in the production of goods and services in New Zealand.

Up to the 2015 release, the business demography statistics series used the Longitudinal Business Frame as its data source. The Longitudinal Business Frame was constructed from all current and historic Business Frame data. The Statistical Business Register (SBR) that replaced the Business Frame in 2014 allows for easy creation of longitudinal snapshots. From the 2016 release onwards, the business demography statistics use the BR as its data source.

In 2021 Business Register (BR) has changed its name to Statistical Business Register (SBR). From the 2021 release onwards, the business demography statistics use this new name.

Purpose

Business demography statistics are used for the research purposes and support policy analysis on regional, national and international level.

Data Collection Methodology - Data Quality

Data Quality

Methodology

Quality limitations of fine-level data

We recommend caution when using fine-level regional and industry business demography data. The Statistical Business Register (SBR) supports quality national-level and aggregate industry-level statistics but is not designed to provide quality fine-level regional or industry statistics. The SBR update sources can have timing lags and less robust information for small and medium-sized enterprises. These quality weaknesses can be highlighted in fine-level business demography statistics.

Period specific information The latest reference period in this release (February 2021) coincided with the first anniversary of the commencement of COVID-19 related restrictions imposed by the New Zealand government.

From the 2018 release onwards, the business demography statistics use the Statistical Area 2 (SA2) geography in place of the Area Unit geography used before. The earlier data has been reclassified to the new SA2 boundaries.

Regional data throughout this release use the 2018 area boundaries.

Business demography data is provisional Data on the SBR is continually updated to maintain the latest information on businesses. Updates can affect the history of businesses as well. This means that statistics based on the SBR can change if they are recreated from an updated version of the SBR.

From 2007 onwards, we release business demography statistics provisionally to allow updates to the series to be incorporated in the next release. We expect the largest revisions in the most-recent reference periods, with smaller changes earlier in the time series. This is mainly due to the lags associated with processing administrative data, which are a key component of the SBR maintenance strategy.

How businesses are represented as statistical units Businesses are represented in the SBR and the business demography statistics as statistical units. We use two types of statistical units:

The **enterprise unit** represents the legal business entity (eg a limited company, a partnership, a trust, an incorporated society). Where a group of limited companies is linked by ownership of shares, we record each individual limited company in the statistics as a separate enterprise.

The **geographic unit** represents a business location engaged in one, or predominantly one, kind of economic activity at a single physical site or base (eg a factory, a farm, a shop, an office). Geographic units are unique to enterprises and an enterprise unit can have one or many geographic units (business locations). Typically, an enterprise unit only has a single geographic unit,

unless the enterprise has paid employees who permanently work at more than one location. Geographic units can be transferred between enterprises (eg enterprise B purchases a factory (a geographic unit on the SBR) as a going concern from enterprise A).

Employee count data We source the employee count (EC) data we publish in the business demography statistics and Linked Employer-Employee Database (LEED) from the employer monthly schedule (EMS) tax form. Conceptual differences between the business demography EC size measures and the published LEED employment statistics include:

• business demography includes employees of all ages (LEED statistics exclude employees under 15 years)
•

business demography counts people employed at any time during the February month (LEED statistics only count those employed on the 15th of the reference month)
•

business demography uses the EMS data before all returns are finalised. When we publish the business demography statistics, we consider the EMS data robust enough to accurately indicate business size.

Business demography does not provide official statistics on employment levels. The EC data in business demography is primarily used to support business size statistics.

• Business demography revisions each year can include updates to the EC data for previous years.
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Interpreting time series data and data limitations apply to the EC statistics and the counts of statistical units.
•

The timing of seasonal business activity (eg horticultural crop harvesting) can influence the time series for some industries and regions.
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EC statistics include all employees who are paid during the month, irrespective of the number of hours or days they work. If an individual has multiple jobs during a month, with different employers, we count all jobs.
•

EC statistics at the geographic-unit level for multi-geographic-unit enterprises (many business locations) are calculated by a process that includes some estimation. We proportion enterprise-unit EC data to the constituent geographic units by using survey data and administrative records on employee locations.
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Generally the EC for a geographic unit is all paid employees working at that business location. However, for industries with employees who do not work at a fixed location, we count employees at the geographic unit that represents the base, administrative, or head office of their employer (eg building and construction, transport, contract labour, health care and assistance, gardening, agriculture contracting, cleaning).
•

Data users need to be cautious and understand the factors influencing EC statistics when interpreting changes over time.

EC data does not include working owners, unless they pay themselves a salary or wage that is subject to PAYE. So enterprises in the zero EC size category may have:

• working owners
•

labour provided by other businesses or contractors
•

business activity that requires no labour (eg passive investment).

Business births and deathsIdentifying business births and deaths

To observe business dynamics (eg births and deaths) over time, from administrative data sources, we must be able to link continuing businesses if their identifiers change in the source data. A business may undergo several changes in its lifetime, not just birth and death. For example, legal or administrative entities may close down or emerge due to breakups, mergers, split-offs, takeovers, or restructuring. Any of these events can result in the business obtaining a new unique identifier (an IRD number) in the tax reporting system and subsequently on the SBR. A business would then appear as a death and subsequent birth in these systems. However, neither administrative changes nor the events mentioned above necessarily indicate a birth or death of the underlying business activity in the real world.
The methods we use to identify business births, deaths, and continuing businesses in the business demography dataset are in line with recommendations from the Organisation for Economic Co-operation and Development (OECD) and Eurostat. The theoretical criteria we use to define each are based on a combination of factors of production (land, labour, capital). A birth is an assembly of new factors of production. A death is a disassembly of factors of production.

In practice, the information we use as proxies for these production factors, to identify continuing businesses, are whether a business:

• holds a majority of its original geographic units (business locations)
•

keeps the same trading name
•

is in the same industry
•
continues to operate from the same location
•
continues to employ most of its former employees.

In contrast, indicators for a new business (birth) are whether a business forms new geographic units, has a new trading name, and mostly recruits new employees.

Reference period for births and deaths We present births and deaths on an annual basis, at February. For us to count a birth or death in a reference period, it must have occurred at some stage during the year (1 March to end of February), and not have a changed status by the February reference point. For example, an enterprise that ceased operation during the year, and then started again before February, is not counted as a death.

According to Eurostat's recommendations for enterprise births and deaths, a reactivation (an existing enterprise that was dormant for a period and came back into the business demography population) after less than two years of inactivity is not counted as a death and subsequent birth. To identify births at time (T), we need to check movements in the enterprise population over more than one period (a year) – that is, at least back to time T-2 years. This also helps us to filter out temporary movements in and out of scope (as determined by the economic significance of an enterprise, which may change from one period to the next). The number of periods we can look back for births, or forward for deaths, is limited by the start and end points of the available data (the LEED holds data from April 1999 to the current month). For enterprise births in 2001, we used the snapshots of April 1999 and February 2000 as reference points. For all other birth and death reference periods, we only used snapshots for February as reference points.

Identifying enterprise births**Total entries** for period T are all enterprises whose identifiers exist at time T but not at time T-1 year. Of these, **real births** are all enterprises whose geographic units existed at neither time T-1 year, nor time T-2 years.

• If an enterprise consists of more than one geographic unit, we only consider it a real birth if none of its units existed in the previous two years.
•
Entries other than real births are enterprises that experience administrative changes or movements in and out of scope.

Once we identify real births on the SBR using the methods above, we analyse them further by splitting real births of period T into:

• **pure births** (where birth dates of all geographic units and the enterprise are more recent than the February snapshot of time T-2 years)
•
other births (birth dates are not recent, and are therefore likely to be reactivations)
•
surviving births (survive at least one period until time T+1 year)
•
short-lived births (disappear by time T+1 year, due to either death or dormancy).

Identifying enterprise deaths Total exits for period T are all enterprises whose identifiers exist at time T-1 year but not at time T. Of these, real deaths are all enterprises whose geographic units exist at neither time T, nor time T+1 year. - If an enterprise consists of more than one geographic unit, we only consider it a death if all its units disappear in the following two years. - Exits other than real deaths are enterprises that experience administrative changes or movements in and out of scope. - If data for time T+1 year are not available, the number of real deaths is provisional until revised after the next snapshot is available. Therefore, deaths for the more recent reference periods should be treated with caution.

Identifying geographic-unit births and deaths These statistics are available by regional council and territorial local authority. The rules for identifying geographic unit births and deaths mirror those of enterprise units, as described above, except that the enterprise unit to geographic unit linkages are irrelevant. We do not consider existing geographic units moving between regions to be births or deaths.

Survival of enterprise births The longitudinal nature of the SBR allows us to track enterprise births in any reference period over subsequent years. Survival rate statistics can be used to analyse the survival of new births, by both industry and business size. We calculate survival rates as the percentage of births in each reference period that survive into future reference periods in the business demography population (surviving births divided by total births for a particular reference period). To be a survivor, the enterprise must have existed at every reference period between its birth year and the given reference period.

International comparability The OECD study on international comparability of business start-up rates found that although enterprise birth rates are a key economic indicator, their availability and definition varies between countries, making comparison difficult. Eurostat and the OECD are working on standard models for business populations and standardised definitions for key indicators. The definitions and methods we use align well with the best practice models presented in the OECD study.

Interpreting time-series data Improved processes

Our business demography time-series data has several significant changes caused by improved processes. Due to data constraints, we have not attempted to remove the influence of these changes, but they are described here so customers can understand the time series.

Agriculture units (ANZSIC06 subdivision A01). For a period before 2002 the agricultural units on the SBR were maintained to a lower quality level than other units on the SBR (we had no agricultural production statistics programme in place). When we reintroduced a programme of annual agricultural production statistics in 2002, the SBR quality improved, with business demography data for the agriculture industry being more robust from 2004. However, feedback on the SBR from the agriculture programme cycle can still result in some volatility in the agriculture series. Some changes in business demography statistics for agriculture therefore reflect quality improvements in the SBR, rather than actual changes.

Small drop in total enterprises from 2000 to 2001. This was influenced by a change in June 2000 to the methodology used to add new units to the SBR. Under the new methodology, we only added units to the SBR after administrative data sources reported the unit displayed sufficient activity to meet the SBR economic significance conditions. Previously, we added non-employing units to the frame before they met these conditions. The change only affected non-employing businesses.

Significant increase in enterprises in 2004 – particularly in ANZSIC06 divisions K (financial and insurance services) and L (rental, hiring, and real estate services). This was largely a consequence of our improved use of administrative data to maintain the SBR. Most enterprises added were non-employing businesses.

Changes in how we represent businesses on the SBR Structural changes in businesses, such as business mergers, one business taking over another business, or a business selling part of its activities can also affect time-series data. This can cause a significant EC data movement in an industry (ANZSIC) time series. For example, in a business takeover where one enterprise is absorbed into another, the employees of the smaller enterprise will typically become classified to the industry of the larger enterprise.

Regional business demography time-series statistics can be influenced by changes in how we represent an enterprise with many business locations on the SBR. For example, a move to a less-granular or more-detailed geographic unit structure, due to changes in a way a business reports regional information, can influence regional time series.

Many enterprises undertake a range of business activities simultaneously. For example, they manufacture and wholesale goods, and their activities can be over commodities that cross ANZSIC boundaries. Enterprises are classified on the SBR according to their predominant activity. Movements in time series can be caused by the predominant activity changing, which can appear to be a significant change in an industry time series. Such changes need to be interpreted carefully, because the business activity may be largely continuing, but under a different predominant industry classification.

Data limitations associated with business demography data include:• non-coverage of 'small' enterprises that fall below the economic significance criteria

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partial coverage of enterprises in the gap between the SBR economic significance condition ($30,000 of sales subject to GST) and the compulsory GST registration threshold ($60,000 from 1 April 2009). We can’t quantify our partial coverage, but some businesses register for GST when their activity is below the threshold

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residential property operators industry (ANZSIC06, class L6711) contains only partial coverage (analyse with care)

•

lags exist in recording enterprise births and deaths

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our published time series is revised each year as we incorporate the latest SBR data. Revisions of any significance mainly affect the end points of the series

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non-availability of overseas ownership information for some SBR units

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information on enterprise ownership links (needed to identify SBR enterprise groups) is limited to administrative data sources; direct surveys cover only large businesses

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difficulties in maintaining industrial and geographic classifications for medium and smaller enterprises (primarily maintained on SBR using administrative data)

•

some classification data is imputed (estimated) in back-cast ANZSIC06 statistics – apply caution when using them

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we introduced classification for Māori enterprises only in 2010. Due to small numbers, any detailed analysis of Māori enterprise and EC data should be done with caution.

Further data limitations The numbers of business births, deaths, and surviving businesses rely on several data sources to identify a continuing business (eg one changing legal ownership and restructuring) and genuine start-ups and closures. These data sources are not comprehensive and are of lower quality for small non-employing businesses. When businesses register for GST and are added (or 'birthed') onto the SBR, we give them a new reference number. Company restructuring or ownership change can result in a new GST registration being filed, even though it relates to an existing business. While the SBR has procedures to identify links between new and existing businesses, we can’t guarantee that all links are identified. We recommend caution in interpreting and using these statistics.

RoundingEnterprise, geographic unit, and EC counts in the tables in this release are randomly rounded. Due to rounding, individual figures may not sum to the stated total(s). Derived figures (eg percentage changes) are calculated using unrounded data.

Confidentiality methodology From 2016 Stats NZ has implemented an ‘input perturbation’ approach to confidentialising business demography tables.

Input perturbation involves adding a small amount of ‘noise’ to the data at the individual (ie business or person) level, in such a way that the tables derived from this perturbed data are unbiased and contain as much information as possible while targeting protection to the sensitive cells.

A coordinated approach to count tables and magnitude tables We have developed an approach which perturbs both count and magnitude tables – we call this the Noised Counts and Magnitudes (NCM) method. This method is being considered more widely across the organisation as part of the development of an automated confidentiality service. Note that, in the context of business demography, the respondent whose confidentiality is being protected is the business. This means that tables of employee counts are considered magnitude tables, as the number of employees is a magnitude with respect to the business.

How it works Each business is assigned a random number uniformly distributed between 0 and 1. This random number is fixed across time to ensure the same degree of perturbation is applied to the business over time.

Business counts For count tables, the business-level random numbers are used to generate a new random number for businesses grouped together in a cell, and this is the basis for a ‘fixed’ version of random rounding to base 3 (FRR3) which will ensure that the same group of businesses will always be rounded the same way in related tables.

Employee counts The random number is used to generate a ‘noise multiplier’ for the generation of magnitude tables (ie employee counts). The noise aggregates to the table level in such a way that it is targeted towards sensitive cells where there is a disclosure risk. Individual values are protected by at least +/- n% so, for the most vulnerable cells with only one business, we guarantee this level of uncertainty about the employee count of that business. For cells composed of many businesses the noise will tend to cancel out.

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

LiabilityWhile all care and diligence has been used in processing, analysing, and extracting data and information in this publication, Stats NZ gives no warranty it is error-free and will not be liable for any loss or damage suffered by the use directly, or indirectly, of the information in this publication.

TimingOur information releases are delivered electronically by third parties. Delivery may be delayed by circumstances outside our control. Stats NZ does not accept responsibility for any such delay.

Frequency

4 Annual

Variables

Concepts

Business Demography Glossary

Name	Description

ANZSIC06	Australian and New Zealand Standard Industrial Classification 2006. Australian and New Zealand Standard Industrial Classification 2006. A business is normally assigned to an ANZSIC06 category according to the predominant activity it is engaged in. ANZSIC06 is a hierarchical classification with four levels: division, subdivision, group, and class.
BDSS	Business Demographic Statistics System.
BD	Business Demography
Business Register	Statistics NZs register of NZ businesses
Business type 96	Gives the legal status of the enterprise. For example, individual, partnership, public company, incorporated body, central government.
Ariā	Statistics NZ's storage and access system for Classifications And Related Standards.
Economically significant enterprise	An enterprise is economically significant if it meets any one of the following criteria: annual expenses or sales (subject to GST) of more than $30,000 or 12 month rolling mean employee count of greater than three or part of a group of enterprises or registered for GST and involved in agriculture or forestry or over $40,000 of income recorded in the IR10 annual tax return (this includes some units in residential property leasing and rental).
Enterprise	Enterprise: an institutional unit that generally corresponds to legal entities operating in New Zealand. It can be a company, partnership, trust, estate, incorporated society, producer board, local or central government organisation, voluntary organisation, or self-employed individual.
Geographic units or business location	Geographic units or business location: a separate operating unit engaged in New Zealand in one, or predominantly one, kind of economic activity from a single physical location or base.
Institutional sector 96	This is a hierarchical classification which groups together enterprises who play a similar role in the economic process, and who can be expected to have similar reactions to market, fiscal and monetary policy stimuli. At the highest level there are 6 categories: producers, financial intermediaries, government, private non-profit organisations serving households, household sand rest of world.
Longitudinal Business Frame (LBF)	The LBF is constructed monthly from all current and historic BF data, taking into account all updates that have occurred on the BF since the last construction. This means that statistics based on the LBF can change if they are recreated from an updated version of the LBF.
Multi geographic (activity) unit enterprise	An enterprise with two or more associated geographic units.
Overseas Ownership/Equity	Enterprise u nits are assigned a percentage between 0 and 100 to indicate their degree of overseas ownership.
Employee Count (EC)	Employees or employee count (EC): refers to paid employees. It is a head count of salary and wage earners sourced from taxation data. EC data is available on a monthly basis. The EC used for deriving business demography statistics is for the February month.
Birth	Birth: occurs when a new enterprise starts operation (ie a combination of production factors is created, and no other national businesses are involved). Births do not include entries into the population due to reactivations, mergers, break-ups, split-offs, or other restructuring of a group of businesses linked by ownership or control. Changes to characteristics of existing businesses are not births (this is largely based on, and fully consistent with, the Eurostat definition of enterprise births). To be a birth in the business demography population, the enterprise and associated geographic units existed at neither time T-1 year nor time T-2 years.

Death	Death: occurs when an enterprise ceases operation (ie a combination of production factors is dissolved, and no other domestic businesses are involved). Deaths do not include exits from the population due to temporary inactivity, mergers, takeovers, break-ups, or other restructuring of a group of businesses linked by ownership or control. Changes to characteristics of businesses that remain active are not deaths (this is largely based on, and fully consistent with, the Eurostat definition of enterprise deaths). To be considered a death in the business demography population, the enterprise and associated geographic units exist at neither time T year nor time T+1 year.
Survival rate	Survival rates are calculated as the percentage of births in each reference period that survive into future reference periods in the business demography population (surviving births divided by total births for a particular reference period). To be considered a survivor, the birthed enterprise must have existed at every reference period between its birth year and the given reference period.
Control Classification	**Control Classification** The Control classification is a flat classification and has four categories. Control is the ability to determine the general corporate policy of the institutional unit.
Statistical Classification for Institutional Sectors	**SCIS** Institutional sector is an economic entity that is capable in its own right, of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities
Employee count size groups	EC data in this release is summarised into seven employment size groups: 0 EC 1–5 EC 6–9 EC 10–19 EC 20–49 EC 50–99 EC 100+ EC.
Enterprise group	Enterprise group: a grouping of enterprises in the Business Register linked by common ownership. Generally, the Business Register only records links of over 50 percent shareholding between enterprises. Types of enterprise groups are: • all-resident enterprise group – an enterprise group in which all enterprises are resident in New Zealand • multinational enterprise group – an enterprise group that contains one or more enterprises resident outside New Zealand • foreign-controlled enterprise group – a multinational enterprise group controlled by a group head with its headquarters outside New Zealand • domestically controlled enterprise group – a multinational enterprise group controlled by a group head with its headquarters in New Zealand.
Māori enterprise	Māori enterprise: An enterprise is treated as a Māori enterprise if it meets one (or more) of these conditions: • it is an enterprise (business) with a collectively managed asset that uses current Inland Revenue eligibility criteria to be a Māori authority (whether or not it elects to be a Māori authority for tax purposes) • it is a commercial business that supports the Māori authority's business and social activities, and sustains or builds a Māori authority's asset base • it is a business that is 50 percent or more owned by Māori authorities.
Pure birth	Pure birth: birth with a recent birth date. That is, the birth dates of all geographic units and the enterprise are more recent than the February snapshot of time T-2 in the business demography population. Pure births generally exclude reactivations (enterprises dormant for a period that come back into the population).

Reactivation	Reactivation: enterprise dormant for a period that comes back into the business demography population.
Short-lived birth	Short-lived birth: birth that disappears by time T+1 reference period in the business demography population, due either to death or dormancy.
Surviving birth	Surviving birth: birth that survives at least one period (until time T+1 reference period) in the business demography population.
LEED	Linked Employer-Employee Data. LEED uses existing administrative data drawn from the taxation system, together with business data from the Statistics NZ Business Register (BR). The LEED dataset is created by linking a longitudinal employer series from the BR to a longitudinal series of Employer Monthly Schedule (EMS) payroll data from Inland Revenue.
Turnover data	**Turnover data** Turnover is the total sales for the year ending February 2020. Sourced from administrative data. Turnover data is for Non-financial business enterprises that belong to Sector 1 of the Standard Classification for Institutional Sector. They exclude financial business enterprises, general government institutions, non-profit institutions serving households and households.
Turnover size group	**Turnover size group** Turnover data in this release is summarised into eight turnover size groups: Less than $100K, $100K to <$500K, $500K to <$1M, $1M to <$5M, $5M to <$10M, $10M to <$20M, $20M to <$50M and $50M or more.
Age of firms	**Age of firms** An enterprise live in the latest BD year and the number of years it has been live since it first appeared in the BD dataset. Example, if an enterprise first birthed in 2010 and live in 2020 then the age of that enterprise is 10 years.
Age of firms group	**Age of firms group** Age of firms in this release is summarised into five groups: Less than one year, 1-5, 6-10, 11-20 and 21 or more.