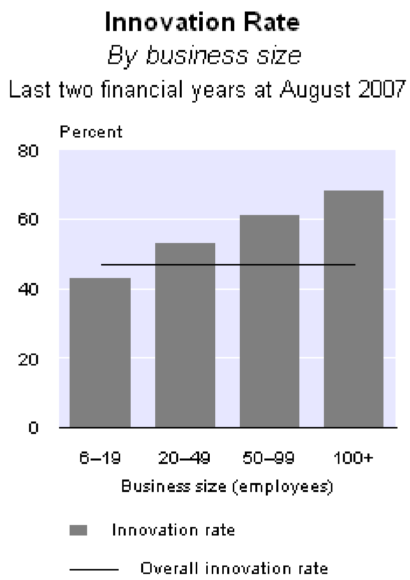
Embargoed until 10:45am – 28 April 2008

Business Operations Survey: 2007

Highlights

- Twenty-one percent of businesses invested in expansion in the last financial year.
- Forty-seven percent of businesses engaged in innovation over the past two years.
- Twenty percent of businesses generated some form of overseas income in the last financial year.
- Over a third of businesses with overseas income earned this through provision of services.



Geoff Bascand
Government Statistician

28 April 2008
ISSN 1178-0711

There is a companion Media Release published – *Business Operations Survey: 2007*.

Commentary

Business Operations Survey

The Business Operations Survey collects information from a wide cross-section of New Zealand businesses in order to build a better understanding of a range of business practices and behaviours that may have some impact on business performance.

This is the first release of Business Operations Survey 2007 statistics. A detailed report on innovation in New Zealand will be published in July 2008 and a paper covering the international engagement module will follow later in 2008.

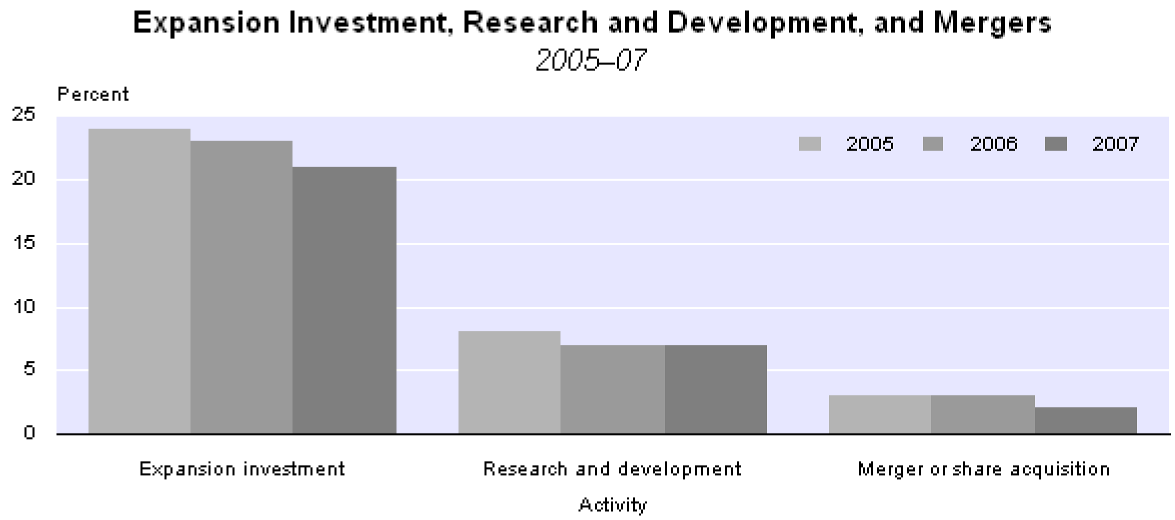
Business operations

Future focus

The Business Operations Survey collects a range of information on activities related to the current and future focus of businesses. Investment in expansion, research and development and merger or acquisitions are some activities which may reflect future focus.

Twenty-one percent of businesses invested in expansion in the financial year ending August 2007. This is a similar result to 2006 and 2005 (23 percent and 24 percent respectively). Larger businesses are more likely to invest in expansion than smaller businesses. Forty-one percent of businesses with 100 or more employees indicated they had invested in expansion, compared with only 19 percent of businesses in the 6–19 employees group.

Research and development, and mergers or acquisitions also increased with business size although the overall rates are much lower. These rates have remained relatively consistent over the last three years. The manufacturing industry had consistently higher rates of research and development compared to other industries (17 percent compared to seven percent overall), while the communications services and finance and insurance industries showed higher rates or merger and acquisition activity (both nine percent, compared with two percent overall).



Finance requests

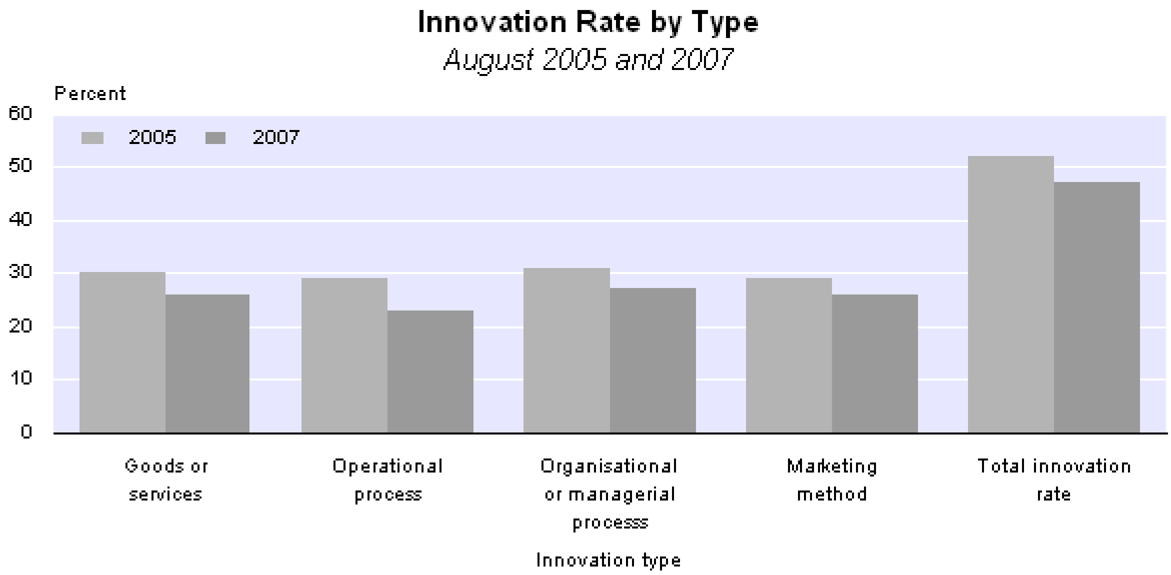
Businesses may require additional finance for a range of reasons, including expansion. Twenty-nine percent of businesses requested debt finance in 2007, compared to 11 percent for equity finance. Rates of acceptance for both were high; 93 percent of those requesting debt finance indicated it was available on acceptable terms while for equity finance the corresponding figure was 81 percent. These trends have been relatively consistent since 2005.

Debt finance was requested most by the businesses in the agriculture, forestry and fishing industry (43 percent) while equity finance was requested most by the construction industry (18 percent).

Innovation

Innovation activity

Survey results indicate that 47 percent of businesses engaged in innovation activity over the past two years, a small drop from 52 percent in 2005. This result was due to slight decreases in all of the different types of innovation across most industry and size groups. The industry with the highest overall innovation rate was communication services (70 percent). The larger the business size (number of employees), the more likely they were to innovate, which is the same trend seen in the 2005 results.



The overall rate is made up of four distinct categories of innovation, although an individual business can engage in more than one of these categories, as shown below:

- Twenty-six percent of businesses undertook innovation in goods or services.
- Twenty-three percent of businesses undertook innovation in operational processes.
- Twenty-seven percent of businesses undertook innovation in organisational or managerial processes.
- Twenty-six percent of businesses undertook innovation in marketing methods.

It can be seen that results were evenly spread across the different types of innovation. The same pattern was evident in 2005. The communication services industry had the highest rates of any distinct kind of innovation activity with 55 percent of businesses in this industry developing or introducing new goods or services.

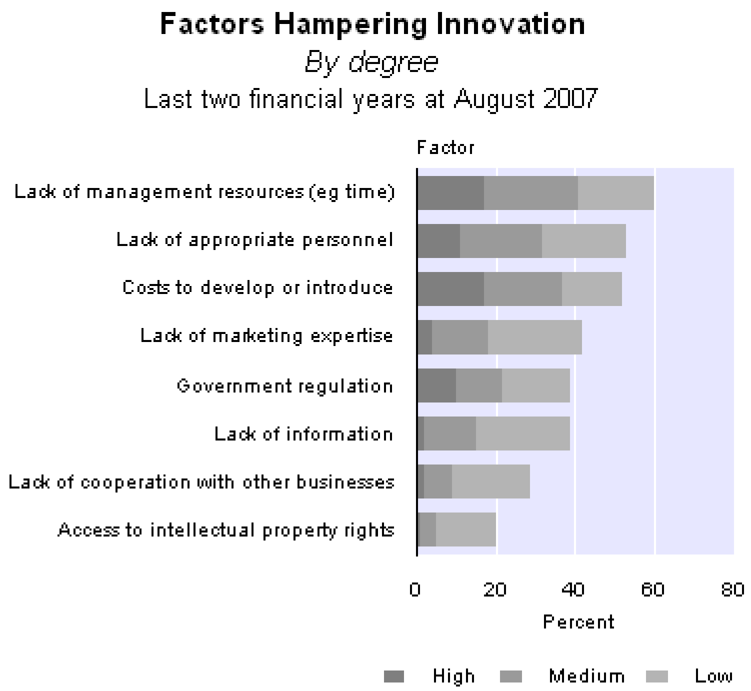
Activities supporting innovation

Employee training was the most commonly reported activity amongst innovating businesses. Ninety percent of innovating businesses had undertaken employee training in the last two financial years with 39 percent of these businesses doing this specifically for innovation purposes.

There are a number of activities that business may undertake in support of innovation. In the 2005 Business Operations Survey, this data was collected only from innovators, but in 2007 data was collected from all businesses in the survey together with an indication of whether the activity was done or not, and if so if it was done specifically to support innovation. While this means these results are not directly comparable to 2005, it gives more transparency to how and why these activities are undertaken.

Factors hampering innovation

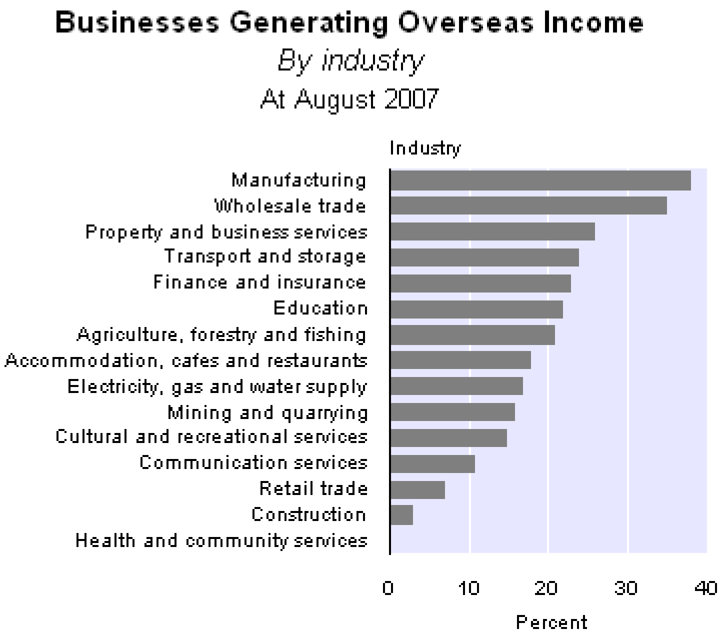
Lack of management resources, and costs to develop or introduce were rated as the biggest constraints on innovation. Seventeen percent of businesses rated these as limiting innovation to a high degree. Results for all constraints showed similar patterns to 2005, although government regulation was reported as less of a barrier. In 2007, 60 percent of businesses indicated this was not a barrier to innovation, down from 55 percent in 2005. Access to intellectual property rights was the least commonly reported factor, with 80 percent of businesses indicating this did not hamper their innovation activities.



International engagement

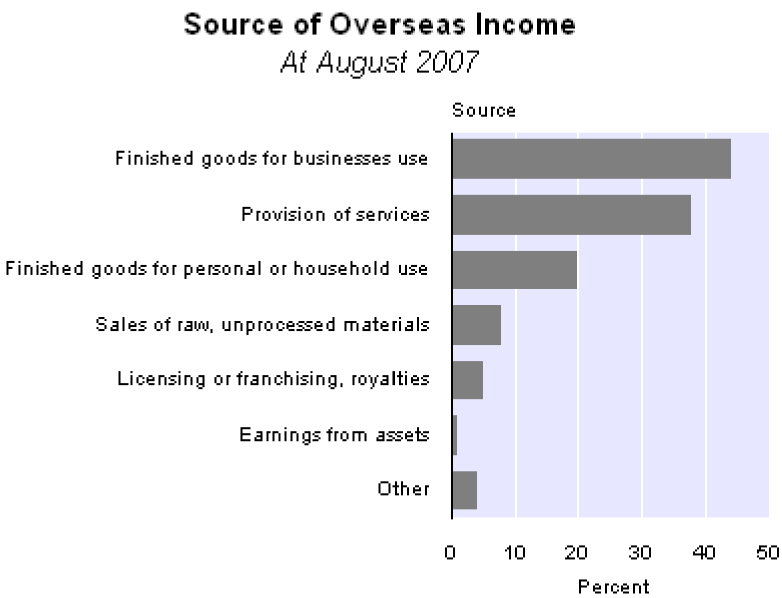
Generation of overseas income

Twenty percent of businesses generated some form of overseas income in the last financial year. Businesses that generated overseas income in previous financial years (but not in 2007) represented only three percent of businesses. This category may reflect the recent changes in trading conditions such as exchange rate level. Large-sized businesses (100 or more employees) where most likely to obtain income from offshore sources (40 percent). The manufacturing industry had the highest proportion (38 percent) of businesses generating some form of overseas income, followed by wholesale trade (35 percent).



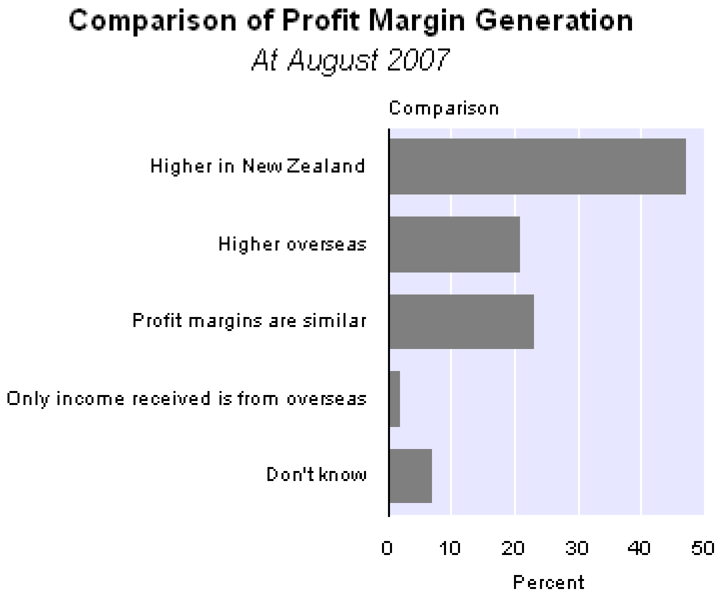
Source of overseas income

Businesses may generate overseas income by a variety of means. The most common was sales of processed or finished goods for use by other businesses (44 percent), while 20 percent gained income through sale of finished goods for personal or household use. Only eight percent of businesses generated their overseas income from sales of raw, unprocessed materials. Provision of services was also a significant source of overseas income, with 38 percent of businesses reporting overseas income from services.



Profit margins

Differing profit margins may be obtainable in different markets. Forty-seven percent of businesses that currently generate overseas income indicated that New Zealand provided the highest profit margins for their business. This may be due to exchange rate conditions or level of competition overseas. Overseas markets provided higher profit margins for 21 percent of businesses with current overseas income. Two percent of businesses received income only from overseas sources in the last financial year. Agriculture, forestry and fishing was noticeably different, with a majority of businesses in this industry (53 percent) generating higher profit margins overseas.



Barriers to generating overseas income

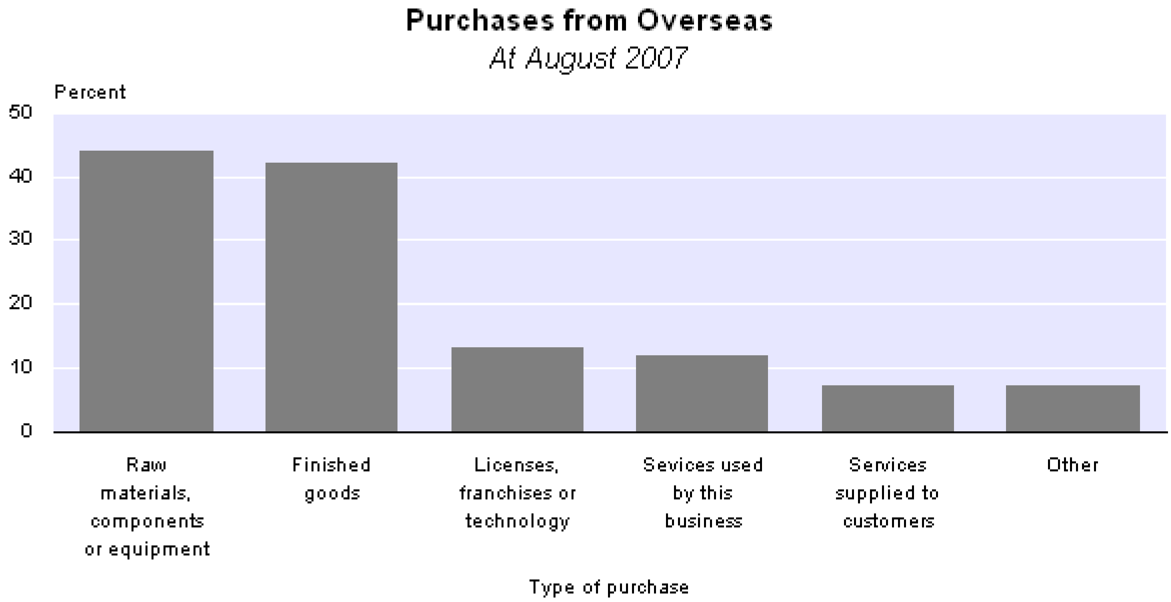
For businesses with current overseas income, the most common barriers listed were exchange rate volatility and exchange rate level, both at 38 percent, followed by distance from market at 37 percent. Language and cultural differences was a barrier to 12 percent of businesses, while 11 percent indicated their inability to rapidly increase supply was a barrier.

Reasons for not generating overseas income

Many businesses surveyed were not currently generating overseas income. This was due to a number of reasons, the most common of which was the importance of being physically close to customers (63 percent). Thirty-seven percent felt the New Zealand market was sufficient while 23 percent indicated their goods and services satisfied demand specific to New Zealand. Eleven percent of businesses were limited to the New Zealand market by business structure, and only eight percent felt that costs, risks or barriers were prohibitive.

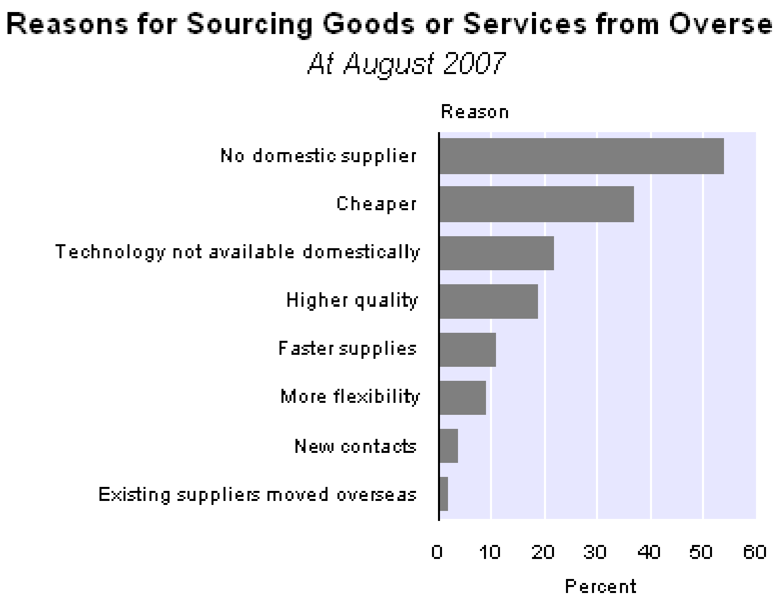
Purchases from overseas

Businesses may participate in various forms of international engagement and New Zealand business are also active in purchasing goods or services from overseas. Raw materials were the most common type of purchases from overseas with 44 percent, followed by finished goods with 42 percent. This differs from the information presented in the source of overseas income section, where the predominant source was sales of manufactured, processed or finished goods for use by other businesses, and raw materials was one of the lower ranked sources.



Reasons for sourcing goods and services from overseas

The most common reason for businesses to source goods and services from overseas was that there was no domestic supplier (54 percent), followed by a cheaper source of supply (37 percent). Existing suppliers moving overseas was only a small factor for businesses (2 percent). Larger business (100 or more employees) indicated that technology was not available domestically (30 percent), which was more than smaller businesses (21 percent).



For technical information contact:
Hamish Hill
Wellington 04 931 4600
Email: info@stats.govt.nz

Technical notes

Survey background

The New Zealand Government has a range of initiatives aimed at increasing New Zealand's economic growth rate above the OECD average and sustaining this higher growth performance over a number of years. In order for New Zealand's economic performance to be measured against these initatives, a large range of data on a variety of measures needs to be collected.

Because of the large range of data needed, Statistics New Zealand has developed an integrated, modular survey – the Business Operations Survey – as a way of collecting the required information while minimising the reporting load for New Zealand businesses. The survey has been designed to include up to three 'modules' and has been run annually by Statistics New Zealand since 2005.

The survey has been developed by Statistics NZ in conjunction with the Ministry of Economic Development (MED), New Zealand Trade and Enterprise (NZTE) and Treasury.

The main objective of the survey is to collect information on the operations of New Zealand businesses in order to quantify business behaviour, capacity and performance. In addition, each module in the survey has its own specific objectives. The modules included in the Business Operations Survey 2007 and their objectives are listed below.

Module A: Business operations module

The objective of this module is to provide a longitudinal series of information relating to business performance. The information required can be grouped into two main categories:

- financial performance measures
- business environment measures.

The purpose of collecting financial measures of business performance is to measure and monitor business performance, and to relate the impact of potential enablers on this performance. An important element of these financial measures is their longitudinal dimension, which will enable changes over time to be analysed. This will assist in the development of models aimed at investigating causal relationships. As well as traditional measures of performance such as turnover and profitability, there is also a desire to collect information on such areas as export intensity. The purpose of collecting environmental information is to analyse any relationships between the environment in which a business operates and the results it achieves.

Module B: Innovation

The objective of this module is to provide information on the characteristics of innovation in New Zealand private-sector businesses to enable the development of policy which will facilitate innovation, and understand the dynamics of innovative businesses. The innovation module runs every two years, and replaced Statistics New Zealand's former Innovation Survey, last run in 2003. The module has been designed in accordance with OECD guidelines to develop an understanding of the contribution of all aspects of innovation to the New Zealand economy by measuring:

- levels of firm innovation
- how and why firms collaborate with other firms and institutions in order to innovate
- factors affecting the ability of firms to innovate
- outcomes of innovation for firms, including its effect on exports.

Module C: International engagement module

This module covers data previously uncollected regarding the characteristics and strategies towards international engagement undertaken by New Zealand businesses. The objectives of this module echo and extend upon those of the overall survey. The module collects information on a range of practices and behaviours associated with either current, past or future international engagement which may have either positive or negative impacts on a business's performance. This module has topics that measure:

- current overseas income
- previous overseas income
- future generation of overseas income
- overseas production of goods and services
- purchases from overseas.

Data collection

The Business Operations Survey 2007 was a postal survey. Initial contact was made to key and/or complex businesses in the survey by telephone, before the mail-out, to determine the appropriate person(s) within the business to whom the survey questions could be directed. For all other businesses, the survey form was addressed to the managing director. The survey was posted out in August 2007 and collected information for the last financial year for which the business had data available at that point.

Target population

The target population for the Business Operations Survey 2007 was live enterprise units on Statistics NZ's Business Frame that at the population selection date:

- were economically significant enterprises (those that have an annual GST turnover figure of greater than $30,000)
- had six or more employees
- had been operating for one year or more
- were classified to Australian and New Zealand Standard Industrial Classification – New Zealand Version 1996 (ANZSIC96) codes listed as 'in scope' in List 1 below
- were private enterprises as defined by New Zealand Institutional Sector 1996 Classification (NZISC96) listed in List 2 below.

An enterprise is defined as a business or service entity operating in New Zealand, such as a company, partnership, trust, government department or agency, state-owned enterprise, university or self-employed individual.

The final estimated population size for the survey was 35,004 enterprises.

List 1 – ANZSIC96 Codes in scope

In scope

ANZSIC96 code – description
A – Agriculture, forestry and fishing
B – Mining and quarrying
C – Manufacturing
D – Electricity, gas and water supply
E – Construction
F – Wholesale trade
G – Retail trade
H – Accommodation, cafes and restaurants
I – Transport and storage
J – Communication services
K – Finance and insurance
L – Property and business services
N – Education
O – Health and community services
P91 – Motion picture, radio and television services
P93 – Sport and recreation

Out of scope

M – Government administration and defence
P92 – Libraries, museums and the arts
Q – Personal and other services.

List 2 – NZISC96 Codes in scope

In scope

NZISC96 code – description
1111 – Private corporate producer enterprises
1121 – Private non-corporate producer enterprises
1211 – Producer boards
1311 – Central government enterprises
2211 – Private registered banks
2221 – Private other broad money (M3) depository organisations
2291 – Private other depository organisations nec
2311 – Private other financial organisations excluding insurance and pension funds
2411 – Private insurance and pension funds.

Out of scope

1321 – Local government enterprises
21 – Central bank
2212, 2213, 2222, 2223, 2292, 2293, 2312, 2313, 2412, 2413 – Central and local government financial intermediaries
3 – General government
4 – Private non-profit organisations serving households
5 – Households
6 – Rest of world

Sample design

The sample design was a two-level stratification according to ANZSIC industry and employment size groups. This information was obtained using enterprise ANZSIC industry and employment information from Statistics NZ's Business Frame.

The first level of stratification was 33 ANZSIC industry groupings. Within each of the ANZSIC groups there is a further stratification by employment size group. The four employment size groups used in the sample design are:

- 6–19 employees (small)
- 20–29 employees (medium 1)
- 30–49 employees (medium 2)
- 50 or more employees (large).

The two medium groups have been amalgamated, and the large size group further broken down for this publication, as these businesses were of particular interest for some of the results.

Measurement errors

The Business Operations Survey 2007 results are subject to measurement errors, including both non-sample and sample errors. These errors should be considered when analysing the results from the survey.

Non-sample errors

Non-sample errors include mistakes by respondents when completing questionnaires, variation in the respondents' interpretation of the questions asked, and errors made during the processing of the data. In addition, the survey applied imputation methodologies to cope with non-respondents. Statistics NZ adopts procedures to minimise these types of error, but they may still occur and are not quantifiable.

Given the nature of the data collected, there are limitations on the level of accuracy that can be expected from the survey. Businesses' records may not be kept in the form required for the survey and some estimation by the respondent may be required.

Sample errors

Total revenue was used as the numeric design variable for the survey. The sampling error on the total revenue figure has been measured at 3.8 percent at the 95 percent confidence level. Most results in this release relate to percentage of businesses. For businesses with current overseas income (a key output from module C) the estimate of 20 percent has a 95 percent confidence interval from 18.2 to 21.8 percent.

Response rate

The Business Operations Survey 2007 targeted an 80 percent response rate. The survey achieved an actual response rate of 80.1 percent, which represented 5,728 businesses.

Non-response and imputation

Unit non-response

Unit (or complete) non-response occurs when units in the sample do not return the questionnaire. The initial selection weight of the remaining units in the stratum was adjusted to account for the unit non-response (no item non-response imputation would occur for the units that did not return the questionnaire).

Item non-response

Item (or partial) non-response is when units return the questionnaire but some questions are not answered. No item non-response imputation was carried out for units that did not answer 60 percent or more of the questions they were required to answer (based on questionnaire routing rules). The respondents who did not meet this criterion were classified as unit non-responses and the weights were adjusted accordingly.

Imputation of numeric variables

The imputation methods used were weighted mean imputation and donor imputation.

Using the weighted mean method, a weighted mean was calculated from linked responding units for each numeric linecode within each imputation cell. Non-responding units were then imputed with the weighted mean for their imputation cell. Weighted mean imputation was used to impute totals.

Donor imputation randomly selected a donor from within each imputation cell. The non-respondent was then imputed with the value(s) from the donor. Donor imputation was used to impute components and percentages so that the distribution was maintained.

Imputation of categoric questions

For categoric imputation the method used was nearest neighbour imputation, which involved finding a donor with the most similar responses. The donor supplied responses for all categoric variables requiring imputation. If the donor unit did not respond to any of the variables requiring a response, then we chose the next best donor to supply this information. This was continued until all the variables had a response.

Definitions

ANZSIC: Australian and New Zealand Standard Industrial Classification System – New Zealand Version 1996.
Business Frame: A register of all businesses operating in New Zealand.
Employees: The number of employees is defined by an enterprise's rolling mean employment (RME) count. RME is a twelve-month moving average of the monthly employment count (EC) figure. The EC is obtained from taxation data.
Enterprise: A business or service entity 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.
Goods and Services Tax (GST): Respondents are asked to exclude GST if possible in the financial figures provided in the questionnaire. If they did not, Statistics NZ takes out GST to make all enterprises comparable.
Last financial year: For the purposes of this survey, this refers to the last financial year for which the business had results available as at August 2007, as entered on the questionnaire.

Innovation Definitions

The Innovation module of the survey is designed to collect innovation data in accordance with the definitions contained in the *OECD Oslo Manual* (2005). The *Oslo Manual* is available from www.oecd.org/. The following definitions relate specifically to the innovation module:

Innovation: For the purpose of this survey, innovation is broadly defined. It includes the development or introduction of any new or significantly improved activity for this business. This includes products, processes and methods that this business was the first to develop and those that have been adopted from other organisations.

For the Business Operations Survey 2007, innovation is defined as the development or introduction of new or significantly improved:

- *Goods or services* – This does not include the selling of new goods or services wholly produced and developed by other businesses.
- *Operational processes* – ie methods of producing or distributing goods or services
- *Organisational / managerial processes* – ie significant changes in the business's strategies, structures or routines.
- *Marketing methods* – intended to increase the appeal of goods or services for specific market segments, or to gain entry to new markets.

Co-operative Arrangement: Active participation with another organisation or individual in activities for the purpose of innovation.

- This includes collaborative arrangements for the purpose of innovation.
- Each party should bring exclusive knowledge or expertise to the co-operation.
- Partners do not necessarily gain immediate commercial benefit from the co-operations.
- This does not include only contracting-out work, where there is no active cooperation or collaboration.

More information

For more information, follow the link from the Technical notes of this release on the Statistics NZ website.

Copyright

Liability

While care has been used in processing, analysing and extracting information, Statistics NZ gives no warranty that the information supplied is free from error. Statistics NZ shall not be liable for any loss suffered through the use, directly or indirectly, of any information, product or service.

Timing

Timed statistical releases are delivered using postal and electronic services provided by third parties. Delivery of these releases may be delayed by circumstances outside the control of Statistics NZ. Statistics NZ accepts no responsibility for any such delays.

Next release ...

An *Innovation in New Zealand: 2007* report will be released in July 2008.

Statistics New Zealand: The first source of independent information for your key decisions.

Tables

The following tables can be downloaded from the Statistics New Zealand website in Excel format. If you do not have access to Excel, you may use the Excel file viewer to view, print and export the contents of the file.

List of tables