

Innovation in New Zealand



2007



Innovation in New Zealand: 2007



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Citation

Statistics New Zealand. (2008). *Innovation in New Zealand: 2007*.
Wellington: Statistics New Zealand

Published in July 2008 by

Statistics New Zealand
Tatauranga Aotearoa
Wellington, New Zealand

ISSN 1176-7022 (print)

ISSN 1177-6927 (online)

Recommended retail price \$35.00 (including GST)

Preface

Innovation in New Zealand: 2007 gives a statistical picture of business innovation and performance in New Zealand. Innovation is defined as the introduction of any new or significantly improved good, service, process, or marketing method.

Economic growth and development depends on the generation, exploitation and diffusion of new knowledge, methods, processes and products. Policymakers need quantitative and qualitative data to understand the nature of innovation and the way it changes over time, the mechanisms that foster or hinder the innovation process, and the effect of innovation on business performance.

The Business Operations Survey 2007 was conducted in August 2007. The survey had a modular design and included an innovation module (sponsored by the Ministry of Research, Science and Technology) and a business performance module. The modular design enables analysis of the effect of businesses' practices on their performance.

In 2007, the innovation module was refined to make the way innovation is measured clearer. As a result, more details are available on innovation activities and expenditure on product development and related activities. This report is the first in which broad comparisons have been made with previous innovation collections.

Statistics New Zealand appreciates the cooperation of the businesses and individuals who participated in the Business Operations Survey and enabled these results to be produced.



Geoff Bascand
Government Statistician

Standards and further information

This report was prepared by the Business Performance and Agriculture unit of Statistics New Zealand and published by the Product Development and Publishing unit.

Statistics New Zealand is grateful for the support and collaboration of the Ministry of Research, Science and Technology, which assisted in the development of the report.

Percentage changes

Percentage movements are, in a number of cases, calculated using data of greater precision than published. This could result in slight variations.

Rounding procedures

On occasion, figures are rounded to the nearest thousand or some other convenient unit. This may result in a total disagreeing slightly with the total of the individual items as shown in tables. Where figures are rounded the unit is in general expressed in words below the table headings, but where space does not allow this the unit may be shown as (000) for thousands, etc.

All business counts in this report have been randomly rounded to base 3 to protect the confidentiality of respondents. For this reason not all figures will sum to stated totals.

Changes of base

Where consecutive figures have been compiled on different bases and are not strictly comparable, a footnote is added indicating the nature of the difference.

Source

All data is compiled by Statistics New Zealand, except where otherwise stated. Both administrative and survey data had been used in this report.

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1 Guide to interpreting the data

Consider the following factors when analysing the innovation results of the Business Operations Survey 2007. See chapter 9, 'Technical notes', for a full technical description of the survey's background, design, scope and methodology.

Definition of innovation

The innovation module of the Business Operations Survey is designed to collect innovation data in accordance with the Organisation for Economic Co-operation and Development (OECD) guidelines contained in the third edition of the *Oslo Manual* (2005).¹

An **innovation** is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations. [Page 46]

The *Oslo Manual* identifies four types of innovations:

- product innovations – new or significantly improved goods or services
- process innovations – new or significantly improved methods for production or delivery (operational processes)
- organisational innovations – new or significantly improved methods in a firm's business practices, workplace organisation or external relations (organisational or managerial processes)
- marketing innovations – new or significantly improved marketing methods.

Data collection

The Business Operations Survey 2007 was a postal survey sent out in August 2007. The innovation module collected information on the innovation activities that enterprises undertook during the last two financial years² the reasons for innovating, sources of ideas, types of cooperative arrangements and factors hampering innovation. The business performance module collected financial information and business performance indicators such as market share and profitability.

Limitations of the data

The results presented from this survey are subject to error (sample and non-sample). The sample was designed to give sample errors for total revenue with a maximum of 10 percent relative sample error at the overall level. Refer to chapter 9, 'Technical notes', for more detail.

Given the nature of the data collected, there are additional non-statistical limitations on the level of accuracy that the survey can provide. Respondents may not keep records in the form required for the survey, and some estimation may be required.

¹ Organisation for Economic Co-operation and Development and Statistical Office of the European Communities (2005). *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data*, 3rd Edition, OECD, Paris. The *Oslo Manual* is available from <http://www.oecd.org>.

² For the purpose of this survey, this refers to the last two financial years for which the business had results available, as at August 2007, as entered on the questionnaire.

Presentation of numeric totals

Some figures may not add to totals due to rounding.

Results are presented grouped by business size and industry. In most cases, these groups correspond to the groups used for the survey sample design, which was stratified according to business size and industry for the business types and institutional sectors in the survey's scope. The design stratifications have been further split into sub-populations for the very small and very large business-size groupings. Refer to chapter 9, 'Technical notes', for more detail.

Comparisons with previous surveys

Only minor changes were made to the innovation module of the Business Operations Survey between 2005 and 2007. These changes occurred in two areas:

- Innovation activities – in 2005, non-innovating businesses did not have to answer the question about activities supporting innovation. In 2007, all businesses answered this question. The purpose of this change was to make the activities that accompany innovation more visible. The change was needed because businesses can perform some of the more general activities for the purpose of innovation or they may perform them as part of their normal activities but not for the purpose of innovation.
- Innovation related expenditure – the 2005 survey collected estimates from innovating businesses of their combined expenditure on innovation activities in ranges, as a percentage of total expenditure. Some businesses found this difficult to estimate, so in 2007, innovation expenditure was more tightly focused on product development and related activities. This approach is more specific to innovation and allows businesses to provide more precise dollar amounts.

These changes mean data in these two areas are not directly comparable with previous survey results.

Comparing results with other innovation surveys can be misleading because of differences in the way innovation is measured. International comparisons and comparisons with New Zealand innovation surveys before 2005 should be treated with caution because methodologies and question definitions differ between surveys.

2 Overview

This chapter gives an overview of the results from the innovation module of the Business Operations Survey 2007.

Rate of innovation

In 2007, innovation activity was reported by 47 percent of New Zealand businesses, a decrease from the 2005 innovation rate of 52 percent. The rate includes businesses with implemented innovations (42 percent), and businesses with ongoing or abandoned innovations (5 percent).

The innovation rate increases with business size: 68 percent of businesses with 100 or more (100+) employees innovated compared with 43 percent of businesses with 6–19 employees.

The industry with the highest innovation rate in 2007 was communication services (73 percent), while in 2005 it was finance and insurance (68 percent).

A small number of other countries have conducted innovation surveys based on the *Oslo Manual* (OECD, 2005) definition. Only high-level comparisons can be made between these countries, as differences exist between survey designs, methodologies, populations and reference periods. The innovation rate in New Zealand (47 percent) is higher than the rate in France (46 percent) and Norway (21 percent).

Innovation activities

Businesses could indicate that an activity was done to support innovation, or that it was done, but not to support innovation. Thirty-nine percent of innovating businesses performed employee training, and 38 percent acquired computer hardware or software to support innovation. The most common activity, done, but not to support innovation, was employee training (51 percent), followed by acquisition of computer hardware and software (46 percent).

Sources of ideas and information

Innovating businesses found their existing staff to be the most important source of ideas and information for innovation (70 percent), followed by customers (57 percent) and new staff (51 percent). The sources rated as important by the least number of businesses were government agencies; universities or polytechnics; and 'Crown research institutes (CRIs), other research institutes or research associations' (all at less than 14 percent).

The relative importance of information sources in 2007 was similar to 2005. The sources of ideas and information showed some variation between industries in both years.

Innovation and business performance

The most common reasons for innovating were to increase revenue (87 percent of all innovating firms) and reduce costs (71 percent). These reasons were followed by increasing market share, improving productivity, and increasing responsiveness to customers – reasons given by over half of all innovating businesses.

Forty-five percent of product innovators reported that more than 10 percent of sales came from new or improved products introduced in the last two years.

Innovators performed better than non-innovators against a range of business performance indicators (sales, profitability, productivity, and market share). The most notable difference was for increase in productivity; 48 percent of innovators reported an increase in market productivity, compared with 32 percent of non-innovators, a result similar to 2005.

Fifty-nine percent of innovating businesses use at least one method of intellectual property protection, compared with 32 percent of non-innovating businesses. Confidentiality agreements were the most commonly used method, with 38 percent of all innovating businesses using them.

Product development and related activities

The proportion of total expenditure spent on product development or related activities is very small. Forty-seven percent of businesses investing in product development spent less than 1 percent of their total expenditure on product development activities. Fifty percent of businesses investing in product development spent less than \$1,000 per employee on product development or related activities.

Investment in product development or related activities encompasses four different kinds of expenditure: research and development (R&D), design, marketing, and 'other' (for example, prototyping, trials or commercialisation). The majority of product development expenditure came under the marketing category, with all innovating business spending 41 percent of their total product development expenditure on marketing. Small businesses were more likely to spend more on marketing (57 percent) than larger businesses (36 percent).

The results of the survey show that 7 percent of all businesses undertook or funded R&D activities in the 2007 financial year. This compares with 47 percent of all businesses undertaking some form of innovation activity in the reporting period ending the same year.

Innovation cooperation

Innovating businesses can undertake cooperative arrangements with other organisations or individuals for the purposes of innovation, although reported rates of such cooperation were low. Of the businesses recording innovation cooperation, more than one-third did so primarily to access new markets, access management skills, share costs, or access R&D.

Factors hampering innovation

The most common factors that hampered businesses' ability to innovate were lack of management resources (17 percent to a high degree and another 24 percent to a medium degree), the cost of developing or introducing innovations, and lack of appropriately skilled personnel.

Sixty percent of businesses said government regulation was not hampering innovation activities compared with 55 percent in 2005.

3 Rate of innovation

This chapter details innovation rates for New Zealand businesses over the last two financial years. Innovation rates by business size and industry are explored, as well as the types of innovation performed. New Zealand's innovation rate is compared with selected countries and information about how each type of innovation was developed by New Zealand businesses is provided.

Please view detailed tables 1 to 3 in appendix 1 along with this chapter.

Innovation rate in New Zealand

Forty-seven percent of New Zealand businesses reported innovation activity in 2007.

The innovation rate is the proportion of businesses that undertook any activity during the last two financial years that resulted in the development or introduction of new or significantly improved:

- goods or services (products)
- operational processes
- organisational or managerial processes
- marketing methods.

The rate of innovation can be split into two distinct categories:

- implemented innovations – where the innovation has been introduced
- ongoing or abandoned innovations – where the innovative activity was still in progress or had been abandoned over the two-year period.

Most innovating businesses had implemented innovations in the last two financial years, as illustrated in table 3.01.

Table 3.01

Innovation in New Zealand		
<i>Last two financial years at August 2005 and 2007</i>		
	Percentage of all businesses ⁽¹⁾	
	2005	2007
Innovators ⁽²⁾		
With implemented innovations	47	42
With ongoing or abandoned innovation activity	5	5
Total innovators	52	47
Non-innovators	48	53

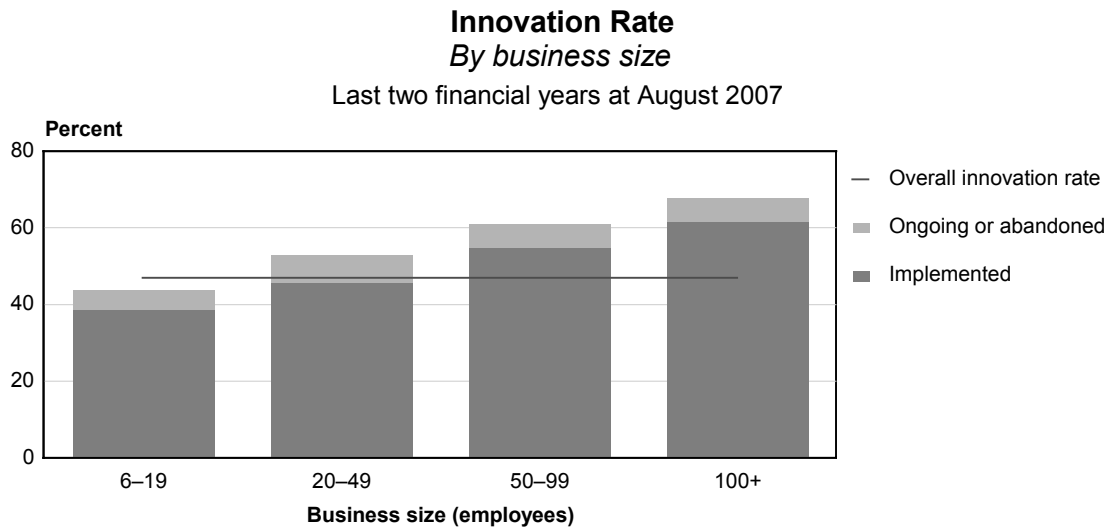
(1) For more information on businesses included, see chapter 9.

(2) If a business has implemented an innovation it is included under the 'Implemented' category, even if it also has ongoing or abandoned innovations.

Innovation rate by business size

This section examines the rate of innovation for each business-size group. Results of the survey, presented in figure 3.01, show that the innovation rate increases with business size: from 43 percent for businesses with 6–19 employees to 68 percent for businesses with 100+ employees.

Figure 3.01

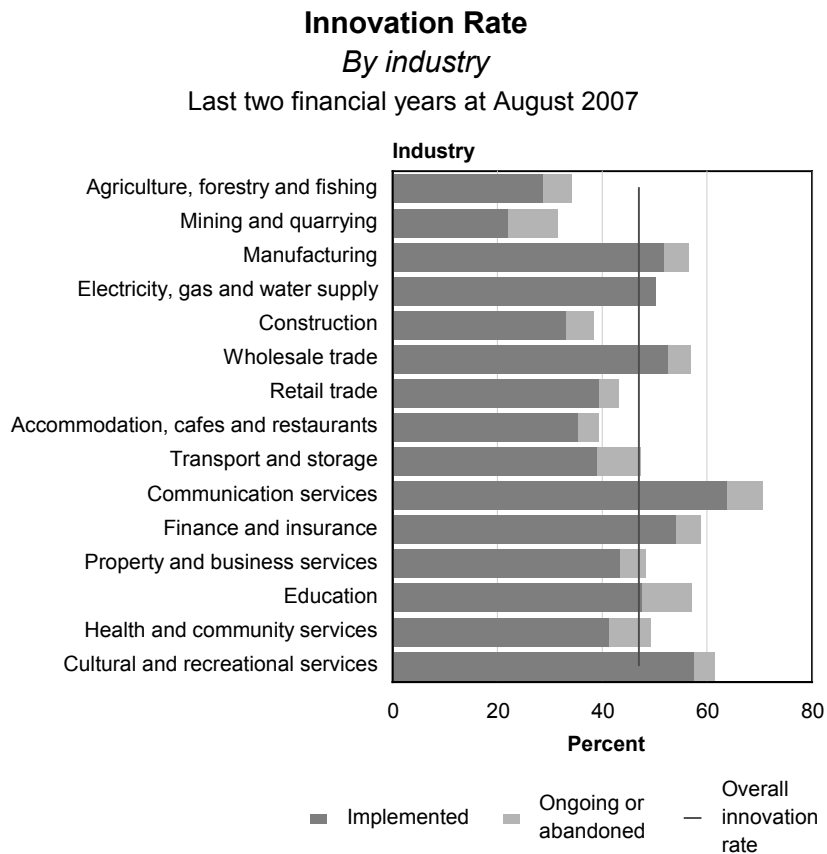


Note: If a business has implemented an innovation it is included under the 'Implemented' category, even if it also has ongoing or abandoned innovations.

Innovation rate by industry

The innovation rate for each industry and the overall innovation rate are provided in figure 3.02 to aid investigation of whether some industries are more innovative than others. The communication services industry reported the highest rate of innovation, at 73 percent. The following industries had rates lower than the overall innovation rate: agriculture, forestry and fishing; mining and quarrying; construction; retail trade; and accommodation, cafes and restaurants.

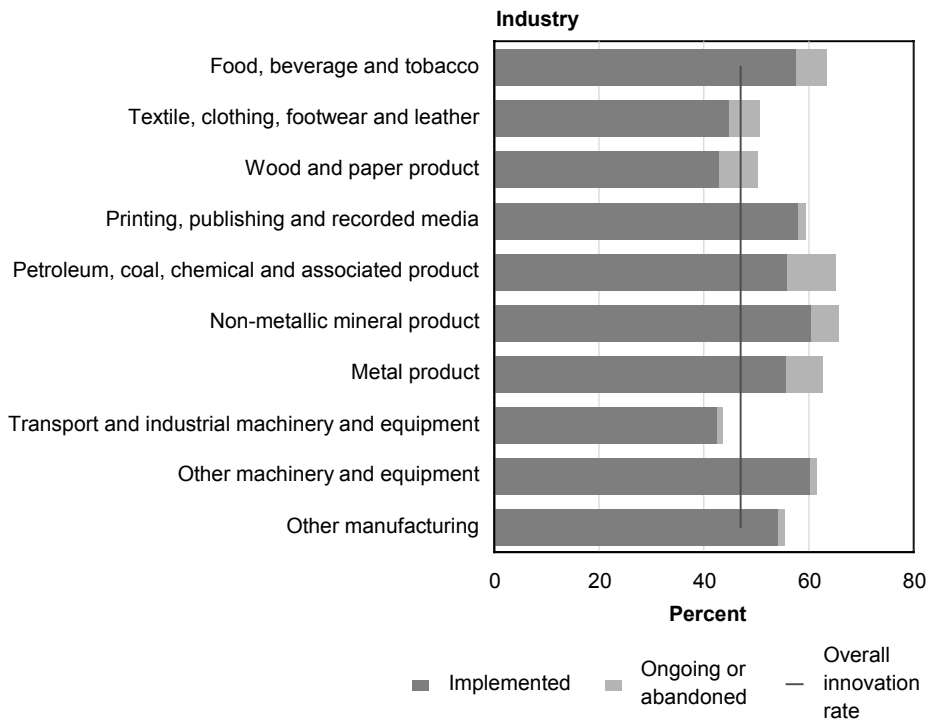
Figure 3.02



Innovation rates for the manufacturing industry divisions are illustrated in figure 3.03. The manufacturing industry is notable as it had the largest number of businesses taking part in the Business Operations Survey (approximately one-third of all businesses sampled). The innovation rates of the manufacturing industry divisions ranged from 44 percent to 67 percent. Only the transport and industrial machinery and equipment industry division had an innovation rate lower than the overall innovation rate.

Figure 3.03

Innovation Rate – Manufacturing Last two financial years at August 2007

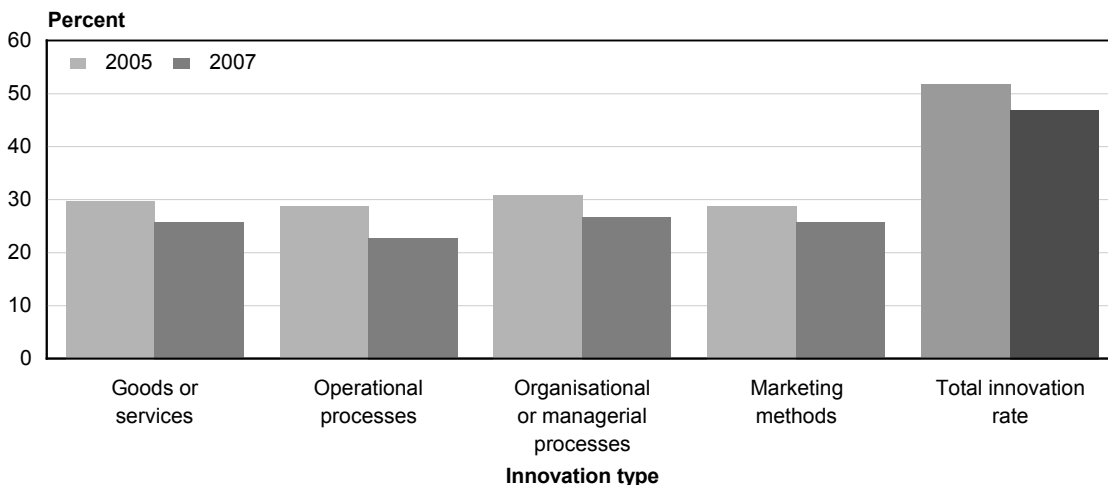


Innovation rate by type of innovation

The surveyed businesses were asked about their innovation activities in each of the four innovation types: product, process, organisational, and marketing. Figure 3.04 illustrates the rates of each type of innovation in New Zealand. The total innovation rate for 2007 is 47 percent, and each type of innovation has a rate close to 25 percent. This indicates that no one type of innovation is more prevalent than the others and that many businesses are involved with more than one type of innovation activity.

Figure 3.04

Innovation Activity Last two financial years at August 2005 and 2007



International comparisons

This section compares the innovation rate in New Zealand with the rates in selected countries. Overseas implementation of the broader definition of innovation (including organisational and marketing innovations) is still in progress in some countries, which limits the ability to make international comparisons.

France and Norway, like New Zealand, have included all four types of innovation in the overall innovation rates. Australia has included organisational innovation but not marketing. Ireland has provided experimental data on organisational and marketing innovation while testing continues. Portugal has used only product and process innovation to calculate the overall rate.

Only high-level comparisons can be made between these countries, as differences exist between survey designs, methodologies, populations, and reference periods. Table 3.02 shows that New Zealand's overall innovation rate is higher than that of France, Australia, Portugal and Norway, but lower than that of Ireland.

Table 3.02

Rates of Innovation Activity By selected countries

Country	Innovation activity					Number of years	Employee size threshold
	Goods or services (product)	Operational processes	Organisational or managerial processes	Marketing methods	Total innovation rate		
	Percent						
Ireland	38	43	51 ⁽¹⁾	25 ⁽¹⁾	66 ⁽¹⁾	3 ⁽²⁾	10
New Zealand	26	23	27	52	47	2⁽³⁾	6
France	13	20	34	18	46	3 ⁽²⁾	10
Australia	19	21	21	14	42	2 ⁽⁴⁾	0
Portugal	23	34	41	3 ⁽²⁾	10
Norway	16	13	29	21	21	2 ⁽²⁾	5

Sources : National statistical agencies in each country

(1) This data is experimental and further methodological and testing work is continuing in this area.

(2) The reference period for the European countries is the three calendar years 2002–2004, and the most recently published results are included.

(3) The reference period for New Zealand is the last two financial years as at August 2007.

(4) The reference period for Australia is the two calendar years 2005–2006.

Symbol:

... not applicable

For certain types of innovation there is a high degree of variation between countries. The introduction of new definitions mean it is uncertain to what extent this variation is caused by varying survey methodologies and respondent interpretations rather than truly comparable differences in innovation rates.

Development of innovations

The survey asked innovating businesses to indicate how each type of innovation was developed to determine whether businesses were more likely to develop their own innovations or obtain them from others. Businesses could select a combination of answers if they used more than one approach.

The results indicated that most businesses develop their own innovations (60 percent of product innovators) or develop innovations in partnership with others (23 percent). A smaller number of product innovators obtained innovations from others and made no significant improvements (18 percent), and slightly fewer obtained innovations from others and significantly improved them (17 percent).

These trends are similar to those of 2005 when calculated on the same basis. However, the 2005 results in table 3 have been revised – a better understanding of how businesses operate meant the 2005 figures could be analysed more accurately.

4 Sources of ideas and information

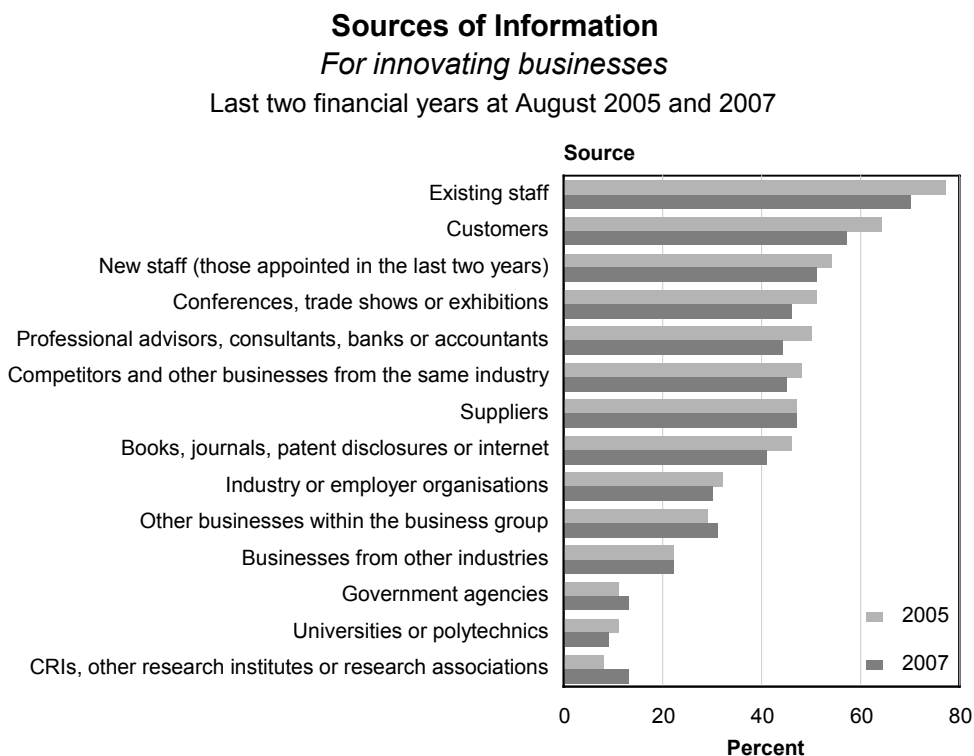
The survey asked innovating businesses to identify the sources of ideas or information that they found important for the purposes of innovation. This chapter presents the overall results and some results by industry.

Please view detailed tables 4 and 5 in appendix 1 along with this chapter.

Overall sources

Survey results show that the sources of information most likely to have been important to innovating businesses were existing staff (70 percent), customers (57 percent) and new staff (51 percent). Less than 14 percent of innovating businesses rated government agencies; universities or polytechnics; and 'Crown Research Institutes (CRIs), other research institutes or research associations' as important sources of information. Figure 4.01 illustrates the 2007 results and compares them with the 2005 results.

Figure 4.01



Sources by industry

This section looks in more detail at the following specialist agencies:

- industry or employer organisations
- government agencies
- universities or polytechnics
- CRIs, other research institutes or research associations.

Results are provided by industry to identify which sectors have the largest proportions of businesses rating each agency as an important source of information.

Industry or employer organisations were rated as important sources by 57 percent of businesses in the forestry and logging industry, 44 percent in the education industry and 43 percent of the accommodation, cafes and restaurants industry.

Government agencies were rated as important sources by 32 percent of businesses in the education industry and the accommodation, cafes and restaurants industry.

Universities or polytechnics were rated as important sources by 64 percent of businesses in the machinery and equipment wholesale trade industry, 50 percent in the electricity, gas and water supply industry and 30 percent in the education industry.

CRIs, other research institutes or research associations were rated as important by 30 percent of businesses in the mining and quarrying industry, and 25 percent in the electricity, gas and water supply industry.

5 Innovation and business performance

The Business Operations survey asked businesses about their reasons for innovating and their sales from product innovations. Innovators also provided information on performance measures and methods of protecting intellectual property.

Please view detailed tables 6 to 9 in appendix 1 along with this chapter.

Reasons for innovation

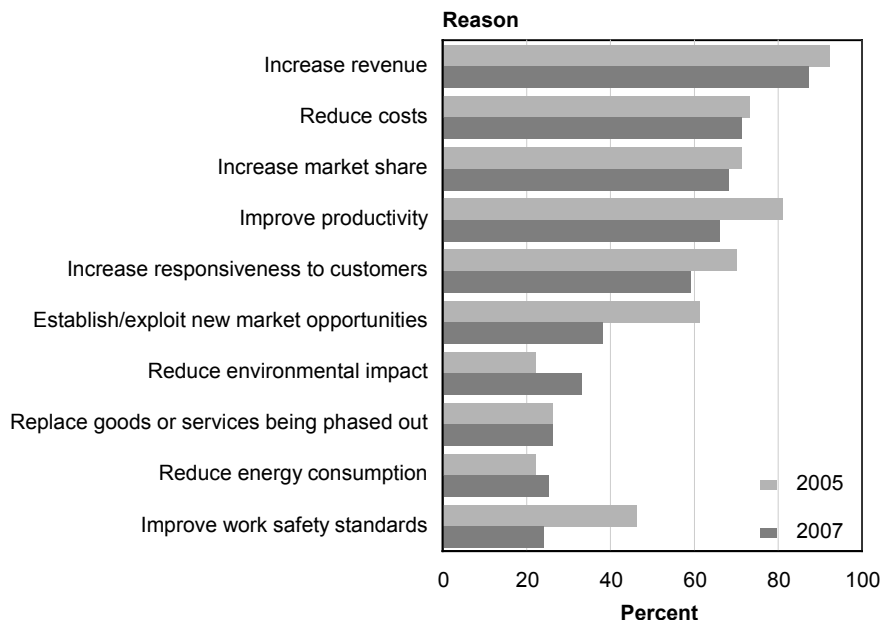
The Business Operations Survey asked all innovating businesses to indicate their reasons for undertaking innovation. Innovation included all four subcategories (goods or services, operational processes, organisational/managerial processes and marketing methods). Overall results for all businesses are shown in figure 5.01.

The most common reasons for innovating were to increase revenue (87 percent of all innovating firms) and reduce costs (71 percent). These reasons were followed by increasing market share, improving productivity, increasing responsiveness of customers and establishing/exploiting new market opportunities, respectively.

These findings were generally similar across most business-size classes and most industries (see table 6 in appendix 1 for a full breakdown). However, larger businesses tended to indicate more reasons, and cited reducing costs, increasing market share and improving productivity more frequently than small businesses did. Some industry-specific trends can also be seen in table 6.

Figure 5.01

Reasons for Innovating
Last two financial years at August 2005 and 2007



Some of the reasons for innovating in 2007 differ from those of 2005. In particular, the proportion of businesses listing improving work safety standards as a reason has dropped from 46 percent in 2005 to 24 percent in 2007. Establishing or exploiting new market opportunities and improving productivity also showed significant drops – from 61 to 38 percent and from 81 to 66 percent, respectively. Reducing environmental impacts increased from 22 percent in 2005 to 33 percent in 2007. These changes may reflect different priorities or market conditions at different times or the fact that businesses are consolidating their previous innovations.

Businesses that introduced new or significantly improved goods or services in the last two financial years (product innovators) were asked to indicate the percentage of sales that came from these goods or services in the last financial year. Results by business size are shown in table 5.01.

Forty-five percent of product innovators reported that more than 10 percent of sales came from new or significantly improved products introduced in the last two years. Only 2 percent of product innovators reported no sales from product innovations.

When product innovators were examined according to business size, small businesses reported higher proportions of sales from new or significantly improved products (49 percent of business with 6–9 employees reported over 10 percent of sales compared with only 26 percent for business with 100+ employees).

Table 5.01

Sales from Product Innovations⁽¹⁾

By business size

Last financial year at August 2007

Percentage of sales	Business size ⁽²⁾ (number of employees)			
	6–19	20–49	50–99	100+
	Percentage of product innovators ⁽³⁾			
Zero	2	2	3	2
1–10	39	43	56	65
11–20	23	27	23	17
21–30	11	12	4	4
31–40	6	4	4	2
41–100	9	4	3	3
Don't know	10	8	8	7
Number of businesses with product innovations⁽⁴⁾				
	4,725	1,368	480	483

(1) Product innovations are the introduction of any new or significantly improved goods or services.

(2) Defined by rolling mean employment (RME) count. For more information on the RME count, see chapter 9.

(3) Percentages are of businesses with implemented goods or services innovation in each business-size category.

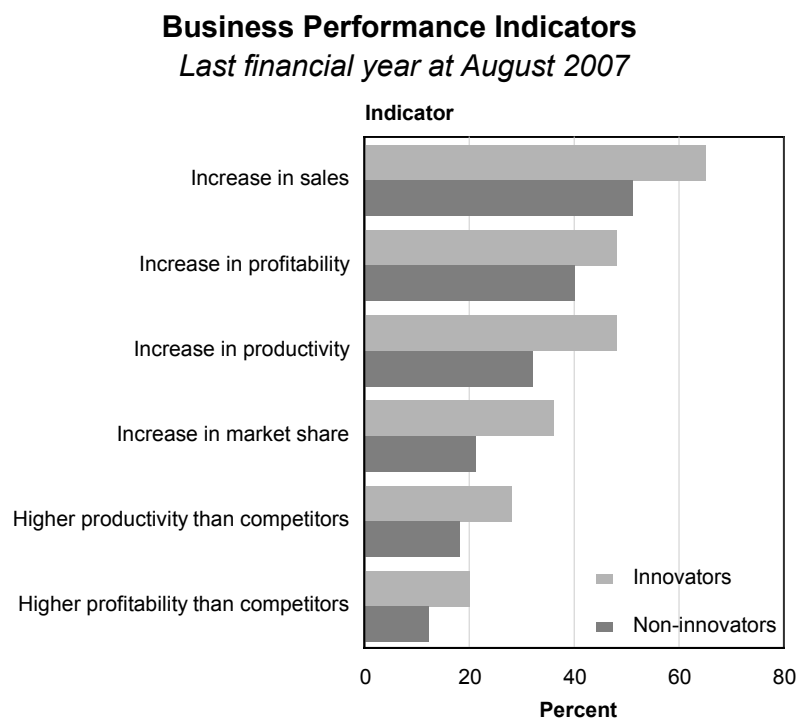
(4) For more information on businesses included, see chapter 9.

Innovation and business performance measures

A number of business performance indicators for the last financial year were compared between innovators (implemented, ongoing, or abandoned, across all four types of innovation) and non-innovators (all other businesses). This analysis is summarised in figure 5.02.

An increase in sales was the most commonly achieved measure for both innovators and non-innovators, followed by increased profitability and increased productivity. Compared with non-innovators, innovators were more successful in all measures. The biggest differences were the higher proportions of innovating firms with increased productivity (48 percent of innovators compared with 32 percent of non-innovators) and increased market share (36 percent compared with 21 percent). All these results are similar to those of 2005.

Figure 5.02



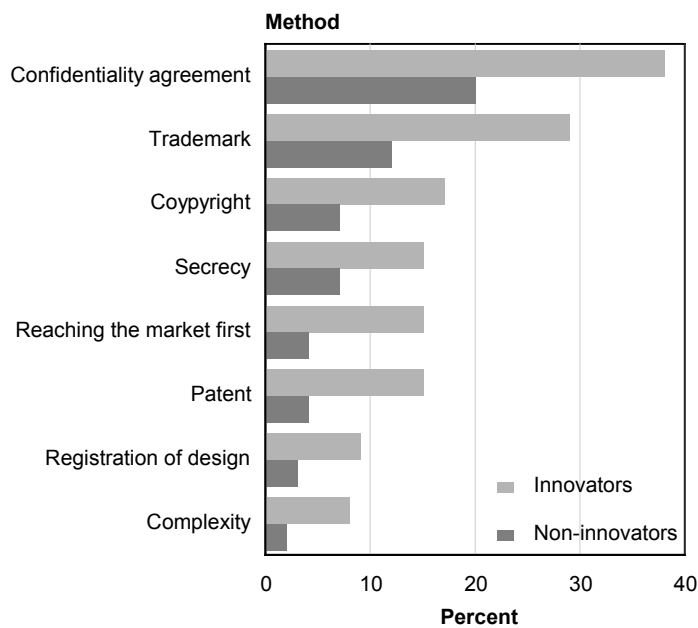
Protection of intellectual property

Respondents were asked what, if any, methods of protection were used to protect their intellectual property. The results for innovating and non-innovating businesses are shown in figure 5.03.

Fifty-nine percent of innovating businesses used at least one method to protect their intellectual property, compared with 32 percent of non-innovating businesses. A confidentiality agreement was the most commonly used method (used by 38 percent of all innovating businesses), followed by the use of trademarks (29 percent). The remaining methods were each used by less than 20 percent of innovating businesses.

Figure 5.03

Methods for Protecting Intellectual Property
Last two financial years at August 2007



6 Innovation activities

A number of activities performed by businesses can be classed as innovation activities. This chapter explores these activities, along with one of the major innovation activities – product development. Research and development activity is also explored in relation to the entire Business Operations Survey population.

Please view detailed tables 10 to 15 in appendix 1 along with this chapter.

Innovation activities

The survey asked all innovating businesses to indicate which activities supported innovation during the last two financial years. More than one-third of innovating businesses undertook the three most frequently reported activities:

- employee training (39 percent of innovating businesses)
- acquisition of computer hardware and software (38 percent)
- implementation of new business strategies or management techniques (35 percent).

The 2007 results differ from those of 2005, as the types of businesses answering the question changed to include all businesses, not just innovating businesses. Businesses were also given more options to choose from, so they could indicate that an activity was done to support innovation, or was done, though not to support innovation.

Product development expenditure

Often, a key focus of innovation activities is on product development or activities related to it. Innovating businesses were asked to indicate the proportion of their total expenditure spent on product development or related activities in the last financial year. Results for all innovating businesses are shown in table 6.01.

Almost half of innovating businesses spent less than 1 percent of their total expenditure on innovation activities. Similar proportions were found for most business-size classes and industries (see table 12 in appendix 1 for a full breakdown).

Table 6.01

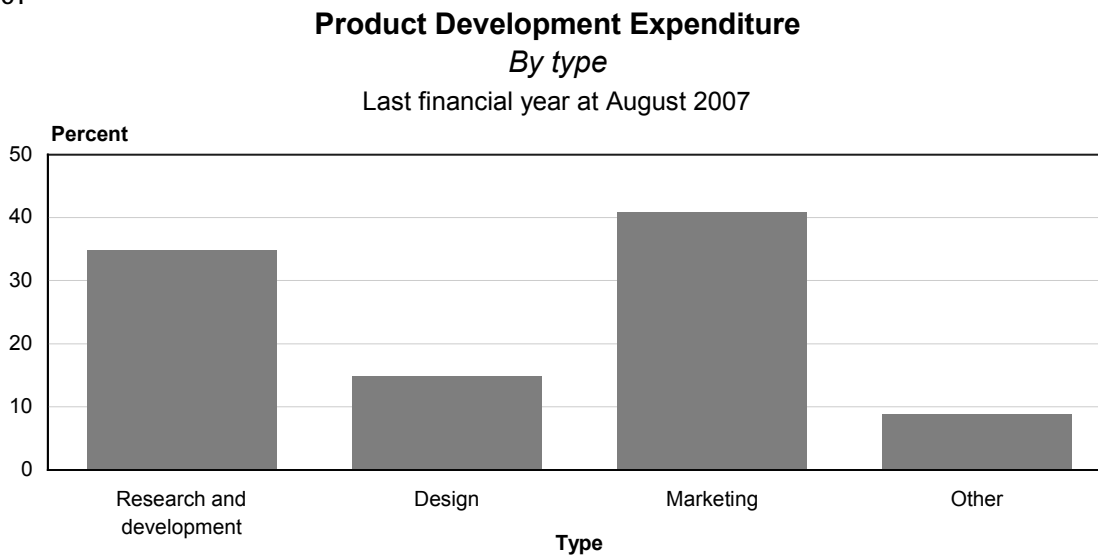
Product Development Expenditure
As a percentage of total expenditure
Last financial year at August 2007

Percentage spent on product development	Percentage of innovating businesses ⁽¹⁾
0–0.9	47
1–1.9	12
2–4.9	19
More than 5 percent	16

(1) For more information on businesses included, see chapter 9.

Data collected on product development and related expenditure encompasses research and development (R&D), design, marketing and other activities. Innovating businesses spent the majority (41 percent) of their total product development expenditure on marketing. Design was a major proportion of expenditure in the textile, clothing, footwear and leather industry (73 percent) and the printing, publishing and recorded media industry (41 percent). However, the proportion spent on design was low in all other industries. Small businesses were more likely to report expenditure on marketing (57 percent) than larger businesses (36 percent).

Figure 6.01



Product development expenditure per employee shows that 50 percent of innovating businesses spent less than \$1,000 per employee.

Rates of innovation and research and development

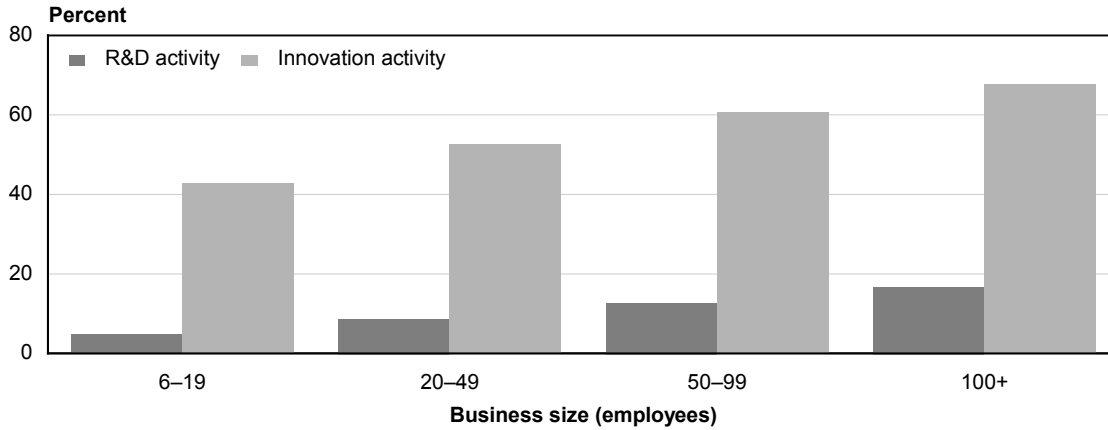
Research and development is also one of the key components of innovation and product development. This section compares the overall rate of innovation with the proportion of firms undertaking or funding R&D activities.

Only a small proportion of businesses perform R&D (7 percent of business with six or more employees), compared with much higher rates of wider innovation (47 percent).

Research and development and innovation activity by business size is shown in figure 6.02. For both types of activity, higher rates are found amongst larger businesses, with businesses of 100+ employees most likely to perform R&D and/or innovate.

Figure 6.02

Research and Development⁽¹⁾ and Innovation Activity⁽²⁾
By business size
 Financial year at August 2007



(1) Results are for the last financial year at August 2007.
 (2) Results are for the last two financial years at August 2007.

To give these results context across the New Zealand economy, it is useful to consider dimensions of scale. The majority of New Zealand businesses are small and although the business operations survey does not include very small businesses (those with less than six employees), their statistical picture is likely to be similar to the one for small businesses. Only 4 percent of businesses in the survey have 100+ employees, whereas 73 percent have 6-19 employees.

However, in terms of economic impact, a different picture emerges. The 4 percent of businesses in the largest size group account for 50 percent of all employees and 7 percent of all product development expenditure. This means that the innovation practices of all the business-size groups are important for giving an accurate picture of the New Zealand economy.

Figure 6.03

Businesses in Business Operations Survey
By business size
 Last financial year at August 2007

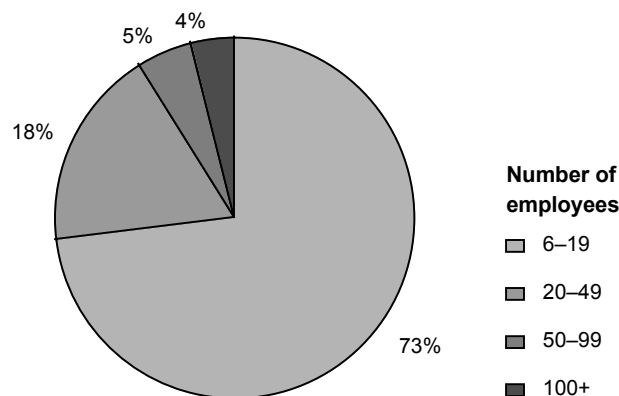


Figure 6.04

Employees in Business Operations Survey
By business size
Last financial year at August 2007

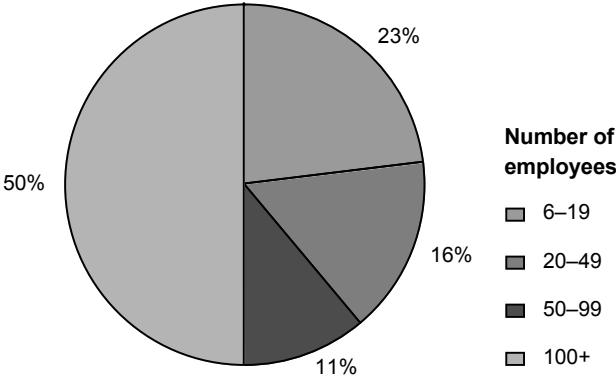
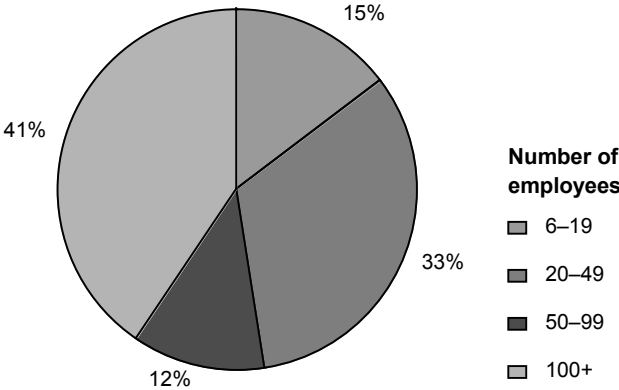


Figure 6.05

Product Development Expenditure of Innovating Businesses
By business size
Last two financial years at August 2007



7 Innovation cooperation

Businesses can cooperate with many different kinds of partners for innovation. This chapter explores the types of cooperative arrangements and the reasons for engaging in them.

Please view detailed tables 16 and 17 in appendix 1 along with this chapter.

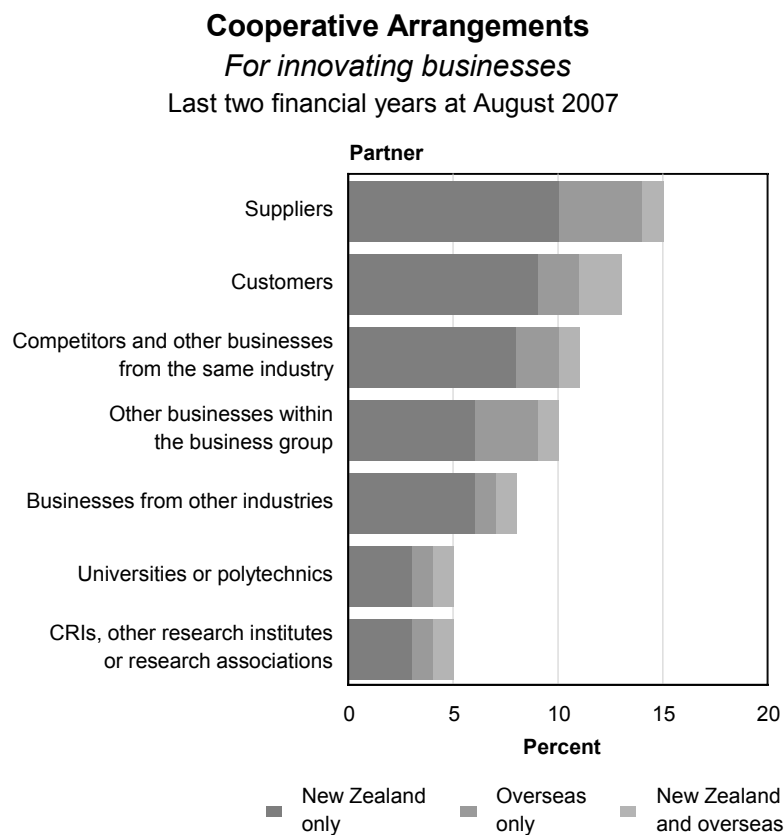
Partners in cooperative arrangements

In the Business Operations Survey 2007, a cooperative arrangement was defined as participating with another organisation or individual in activities for the purposes of innovation.

Most cooperative arrangements were made with partners located within New Zealand, as illustrated in figure 7.01. Fifteen percent of innovating businesses had cooperative arrangements with suppliers and 13 percent with customers. Cooperation with competitors was reported by 10 percent of innovating businesses, as was cooperation with other businesses within their business-size group.

Results for cooperation with overseas partners were similar to those of 2005, but reported rates were all lower, at less than 4 percent.

Figure 7.01

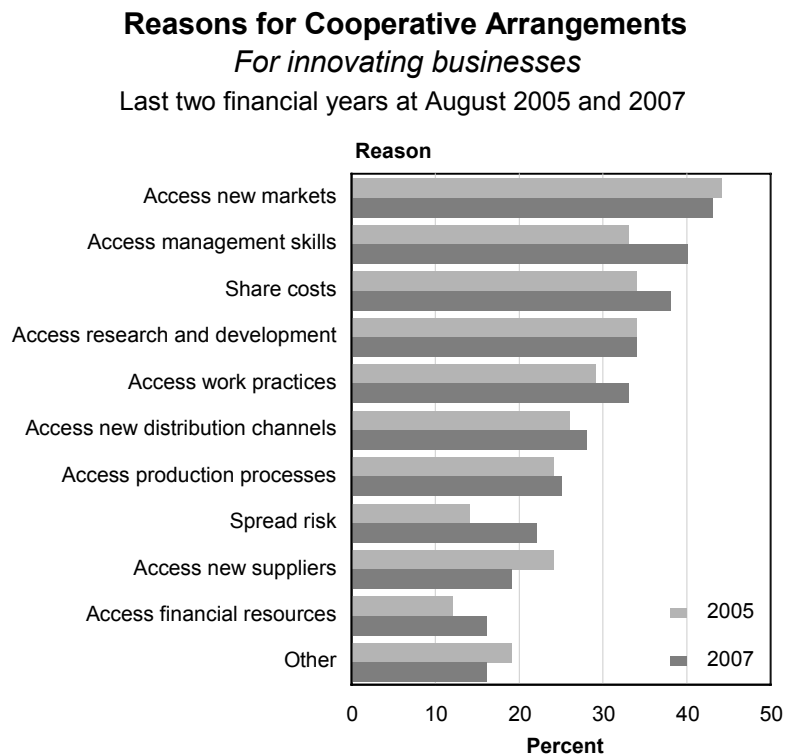


Reasons for engaging in cooperative arrangements

The most common reason for innovating businesses engaging in cooperative arrangements was to access new markets (43 percent), as shown in figure 7.02. Other significant reasons included access to management skills (40 percent) and sharing costs (38 percent).

The 2007 results for cooperative arrangements have changed slightly from the 2005 results. Access to management skills was reported as a reason for cooperation by 40 percent innovating businesses with cooperative arrangements in 2007, compared with 33 percent in 2005. Similarly, spreading risk was cited by 22 percent of businesses in 2007 compared with 14 percent in 2005.

Figure 7.02



8 Factors hampering innovation

Many factors can either hamper innovation activity, or discourage businesses from innovating at all. This chapter looks at the overall factors cited by businesses as hampering innovation, and explores the differences in these factors by business size and industry.

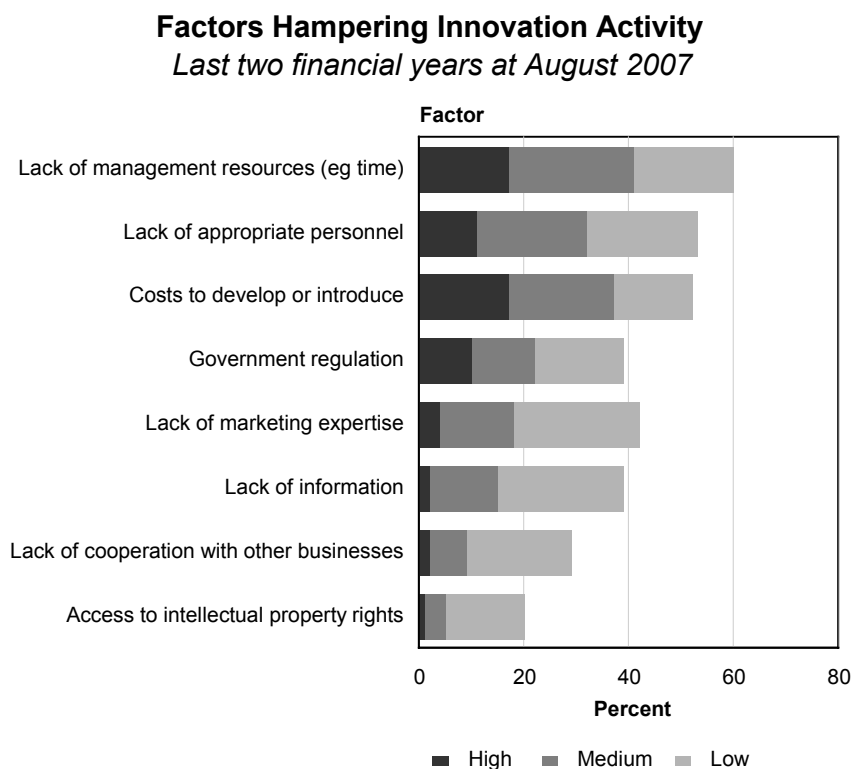
Please view detailed tables 18 and 19 in appendix 1 along with this chapter.

Overall results

The Business Operations Survey asked businesses to rate the degree to which a number of specific factors hampered their ability to innovate. These obstacles or barriers to innovation may have been reasons for not starting innovation activities at all, or for restricting innovation activities.

Figure 8.01 shows that lack of management resources was the most significant factor hampering businesses' ability to innovate (17 percent reported that it hampered them to a high degree and 24 percent to a medium degree), followed by costs to develop or introduce (17 percent to a high degree, and 20 percent to a medium degree).

Figure 8.01

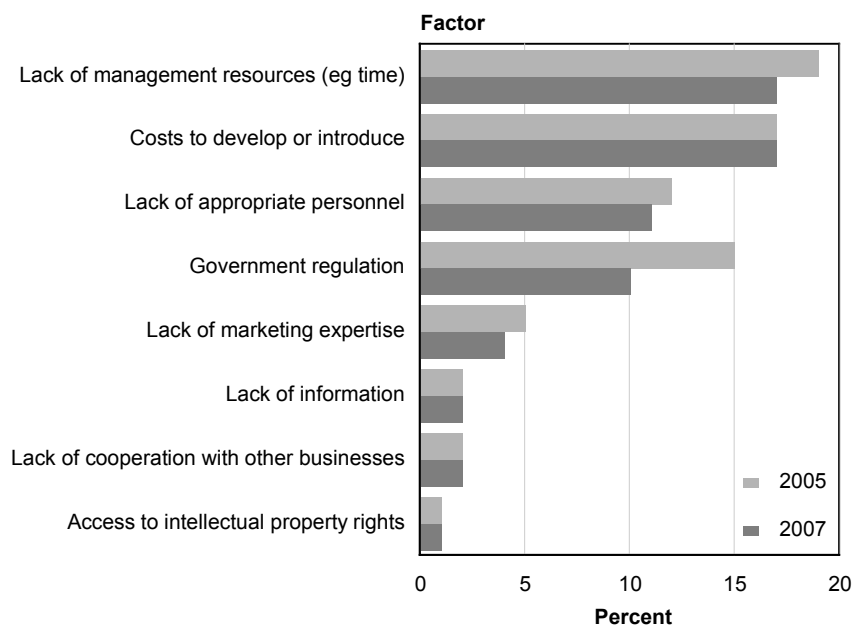


Access to intellectual property rights, lack of cooperation with other businesses, and lack of information were factors that affected the least number of businesses' ability to innovate.

Similar results were obtained in 2005 across most categories. The factor showing the most change was government regulation. In 2007, this factor was cited by 60 percent of businesses as not hampering their ability to innovate compared with 55 percent in 2005.

Figure 8.02

Factors Hampering Innovation to a High Degree
Last two financial years at August 2005 and 2007



Results by business size and industry

Some factors affected certain industries less than others. For example, few businesses in the electricity, gas and water industry, and the mining and quarrying industry reported lack of marketing expertise or lack of cooperation with other businesses as factors hampering innovation. Government regulation was a hampering factor for a high proportion of businesses in the education industry (47 percent), but a low proportion in the printing, publishing and recorded media industry (10 percent) and the construction industry (14 percent). See table 19 in appendix 1 for full details.

9 Technical notes

This chapter provides a technical description of the data that has been used to compile this report. It focuses on the data quality and the definitions and processes used for data collection and analysis.

Survey background

The New Zealand Government has a range of initiatives aimed at increasing New Zealand's economic growth rate above the Organisation for Economic Co-operation and Development (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 initiatives, a wide range of data on a variety of measures needs to be collected.

Because of the wide 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 since 2005.

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 performance 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 purposes of collecting financial measures of business performance are to measure and monitor business performance, and to assess the impact of potential enablers on this performance. An important element of these financial measures is their longitudinal dimension, which enables changes over time to be analysed. Longitudinal analysis will assist the development of models that investigate causal relationships. As well as traditional measures of performance such as turnover and profitability, a need for information on areas such as export intensity is also fulfilled with this module. 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 module

The objectives of this module are to provide information on the characteristics of innovation in New Zealand private sector businesses that contributes to the development of policy that facilitates innovation, and to understand the dynamics of innovative businesses. The innovation module runs every two years, and replaced Statistics New Zealand's Innovation Survey, last run in 2003. This module has been designed in accordance with OECD guidelines to develop understanding of the contribution of innovation to the New Zealand economy by measuring the following aspects:

- 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 affect on exports.

Module C: International engagement

This module covers previously uncollected data about the characteristics and strategies of international engagement undertaken by New Zealand businesses. The objectives of this module echo and extend on 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 that may have either a positive or a negative impact 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. Key and/or complex businesses in the survey were phoned before the mail-out to make sure the survey questions were directed to the appropriate people. For all other businesses, the survey form was addressed to the managing director. The survey was posted out between August 2007 and October 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 or more years
- were classified to Australian and New Zealand Standard Industrial Classification – New Zealand Version 1996 (ANZSIC96) codes listed as 'in scope' in List 1 (see page 27)
- were private enterprises as defined by New Zealand Institutional Sector 1996 Classification (NZISC96) in List 2 (see page 27).

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***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***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 small and large groups further broken down for this publication, as these businesses were of particular note 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 the survey can give. Many respondents do not keep separate accounts of their innovation expenditure, or records may not be kept in the form required for the survey and estimation may be required. Even though the questionnaire had detailed descriptions of what should and should not be included as innovation, there may still be differences in interpretation of what constitutes innovation and the nature of any cooperative arrangements with other businesses involved in the innovation process.

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 that innovate, the estimates and sample errors are provided in the table below.

Table 9.01

Sample Errors For innovation variable estimates 2007

Variable	Sample error	Percentage estimate ⁽¹⁾	95 percent confidence interval	
Goods or services	7.35	26	24.2	28.1
Operational process	8.21	23	21.5	25.4
Organisational or managerial process	7.37	27	24.7	28.6
Marketing method	8.01	26	24.2	28.4

(1) Percentage estimate is the percentage of businesses performing innovation (also in table 2).

Response rate

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

Non-response and imputation

Unit non-responses

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-responses

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 cells and merging

Units were assigned to imputation cells for the calculation and assignment of imputation factors. Imputation cells were based on industry and rolling mean employment.

For each variable, a minimum number and percentage of linked units was required within the imputation cell for the imputation method to run. This was to ensure the robustness of the imputation factor calculations. The minimum number of linked units was 10 and the minimum percentage was 60 percent. If an imputation cell did not fulfil these criteria then it was merged before imputation, following a list of merging preferences until sufficient responses were achieved. The imputation factor was then calculated from all of the linked units in the merged cell, but applied to non-respondents in the original (unmerged) imputation cell only. If there was still insufficient response once all the specified cells were merged in order, the imputation factor

was calculated across all linked units in the final merged cell (that is, using the 'best available' imputation factor) and applied to non-respondents in the original (unmerged) imputation cell only.

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.

The weighted mean was calculated as follows:

$$\bar{v} = \frac{\sum_i^l (v_i * fw_i)}{\sum_i^l fw_i}$$

where:

l = number of units linked for weighted mean imputation within the imputation cell

v_i = value of linked unit i

fw_i = final weight for linked unit i

\bar{v} = weighted mean for the imputation cell.

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.

Unlinking

Influential responses were excluded from the imputation factor calculations for numeric variables. There were three kinds of unlinking:

- automatic exclusion – due to logic, that is, unit was non-response (unit or item), specially treated or not required to answer that question
- automatic unlinking – due to influence, that is, units with undesirable influence on imputation factor calculations for a variable were automatically detected and unlinked for that variable (with the ability to manually decline this). The checks were carried out at the imputation cell level or merged imputation cell level and were done separately for each variable
- manual unlinking – due to influence, that is, additional units with undesirable influence on imputation factor calculations that were not automatically detected could be unlinked.

Special treatment

Special treatment candidates were identified as outliers using an interquartile check. The checks were carried out separately by variable. However, if a unit was accepted for special treatment for one variable then it was specially treated for all variables. If a unit was specially treated then its final weight was set to 1 and it was unlinked for all imputation factor calculations. If a unit was not specially treated then its final weight was its adjusted weight.

Definitions

The Business Operations Survey was designed to collect data in accordance with the following definitions and terminology:

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 12-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 purpose 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 OECD *Oslo Manual* is available from <http://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 the business. This includes products, processes and methods that the business was the first to develop and those that have been adopted from other organisations.

For the Business Operations Survey 2007, an 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 – that is, methods of producing or distributing goods or services
- organisational/managerial processes – that is, significant changes in the business's strategies, structures or routines
- marketing methods – this includes sales and marketing methods intended to increase the appeal of goods or services for specific market segments, or to gain entry to new markets.

Cooperative arrangement

A cooperative arrangement is active participation with another organisation or individual in activities for the purposes of innovation. This includes collaborative arrangements for the purposes of innovation. Each party should bring exclusive knowledge or expertise to the cooperation. Partners do not necessarily gain immediate commercial benefit from the cooperation. A cooperative arrangement does not include only contracting-out work, where there is no active cooperation.

Appendix 1 Detailed tables

The following tables detail all the results mentioned in *Innovation in New Zealand: 2007*. Most of the tables have breakdowns by business size and industry.

Note: For the purpose of the Business Operations Survey, 'last financial year' or 'last two financial years' refers to the last year or last two financial years for which the business had results available, as at August 2007, as entered on the questionnaire.

Table 1

Innovation Rate in New Zealand
Last two financial years at August 2005 and 2007

	Total number of businesses	Businesses with innovation activity						Businesses without innovation activity	
		Total innovation rate		Implemented		Ongoing or abandoned		2005	2007
		2005	2007	2005	2007	2005	2007		
Percent ⁽¹⁾									
Business size⁽²⁾									
6–19 employees	25,608	50	43	45	39	5	5	50	57
20–49 employees	6,216	57	53	51	46	6	7	43	47
50–99 employees	1,719	65	61	60	55	5	6	35	39
100+ employees	1,458	68	68	64	62	4	6	32	32
Industry									
Agriculture, forestry and fishing									
Agriculture	2,064	46	37	40	30	6	7	54	63
Services to agriculture, hunting and trapping	672	39	29	32	28	6	1	61	71
Forestry and logging	291	25	22	17	21	8	1	75	78
Commercial fishing	33	41	45	38	36	3	9	59	55
Total agriculture, forestry and fishing	3,060	42	34	36	29	6	5	58	66
Mining and quarrying	96	44	31	44	22	0	9	56	69
Manufacturing									
Food, beverage and tobacco	669	71	63	70	57	1	6	29	37
Textile, clothing, footwear and leather	411	66	51	57	45	10	6	34	49
Wood and paper product	612	49	50	36	43	14	7	51	50
Printing, publishing and recorded media	456	67	60	62	58	5	1	33	40
Petroleum, coal, chemical and associated product	453	70	65	62	56	8	9	30	35
Non-metallic mineral product	174	53	67	50	60	3	5	47	33
Metal product	945	59	63	53	56	6	7	41	37
Transport and industrial machinery and equipment	918	67	44	57	42	9	1	33	56
Other machinery and equipment	225	70	61	60	60	10	1	30	39
Other manufacturing	489	78	55	73	54	5	1	22	45
Total manufacturing	5,349	65	56	58	52	7	5	35	44
Electricity, gas and water supply ⁽³⁾	18	52	67	45	50	7	0	48	33
Construction	3,609	41	38	39	33	2	5	59	62
Wholesale trade									
Machinery and equipment wholesaling	666	65	54	61	49	4	5	35	46
Other wholesale trade	2,415	60	58	55	54	5	4	40	42
Total wholesale trade	3,081	61	57	56	52	5	4	39	43
Retail trade	5,772	46	43	37	39	8	4	54	57
Accommodation, cafes and restaurants	3,360	50	39	49	35	2	4	50	61
Transport and storage	1,530	53	47	49	39	4	8	47	53
Communication services	132	62	73	57	64	5	7	43	27
Finance and insurance	573	68	59	64	54	4	5	32	41
Property and business services	5,118	50	48	46	43	4	5	50	52
Education	606	58	57	55	48	4	9	42	43
Health and community services	2,097	59	49	57	41	2	8	41	51
Cultural and recreational services	597	57	61	51	57	5	4	43	39
Overall	35,004	52	47	47	42	5	5	48	53

(1) Percentages are of all New Zealand businesses in each business-size, industry or performance category. For more information on the businesses included, see chapter 9.

(2) Defined by rolling mean employment (RME) count.

(3) Results for the electricity, gas and water supply industry should be treated with caution due to the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated. Due to rounding, some percentages may not add to 100 percent.

Table 2

Innovation Activity
Last two financial years at August 2005 and 2007

	Total number of businesses ⁽¹⁾	Innovation activity									
		Goods or services		Operational process		Organisational or managerial process		Marketing method		Total innovation rate	
		2005	2007	2005	2007	2005	2007	2005	2007	2005	2007
Percent ⁽²⁾											
Business size⁽³⁾											
6–19 employees	25,608	29	24	27	21	29	24	28	26	50	43
20–49 employees	6,216	33	30	33	27	36	32	29	27	57	53
50–99 employees	1,719	40	36	40	38	42	39	35	29	65	61
100+ employees	1,458	42	42	46	42	45	41	37	32	68	68
Industry											
Agriculture, forestry and fishing											
Agriculture	2,064	15	16	30	21	26	15	16	16	46	37
Services to agriculture, hunting and trapping	672	20	18	28	17	32	6	25	8	39	29
Forestry and logging	291	8	6	13	14	16	12	5	7	25	22
Commercial fishing	33	29	18	26	36	17	18	14	0	41	45
Total agriculture, forestry and fishing	3,060	16	15	28	20	26	13	17	14	42	34
Mining and quarrying											
Mining and quarrying	96	17	9	31	25	17	19	8	9	44	31
Manufacturing											
Food, beverage and tobacco	669	60	45	43	39	40	30	45	31	71	63
Textile, clothing, footwear and leather	411	41	37	38	25	35	30	35	35	66	51
Wood and paper product	612	30	21	40	36	24	25	25	16	49	50
Printing, publishing and recorded media	456	42	40	44	45	34	29	40	32	67	60
Petroleum, coal, chemical and associated product	453	63	55	46	40	34	31	35	42	70	65
Non-metallic mineral product	174	40	47	35	38	20	34	30	33	53	67
Metal product	945	37	40	31	36	41	34	24	22	59	63
Transport and industrial machinery and equipment	918	51	31	42	20	34	27	24	28	67	44
Other machinery and equipment	225	62	56	36	31	35	29	44	21	70	61
Other manufacturing	489	70	52	39	34	44	28	41	33	78	55
Total manufacturing	5,349	49	40	40	33	35	30	32	28	65	56
Electricity, gas and water supply ⁽⁴⁾											
Electricity, gas and water supply ⁽⁴⁾	18	40	17	33	50	32	33	26	33	52	67
Construction											
Construction	3,609	12	16	22	16	33	26	26	21	41	38
Wholesale trade											
Machinery and equipment wholesaling	666	47	35	38	25	37	22	39	30	65	54
Other wholesale trade	2,415	37	39	33	25	36	31	38	32	60	58
Total wholesale trade	3,081	40	38	34	25	36	29	38	32	61	57
Retail trade											
Retail trade	5,772	28	17	25	17	29	28	20	32	46	43
Accommodation, cafes and restaurants											
Accommodation, cafes and restaurants	3,360	30	23	23	18	21	18	37	30	50	39
Transport and storage											
Transport and storage	1,530	26	28	37	25	31	28	28	21	53	47
Communication services											
Communication services	132	45	52	38	39	42	45	45	39	62	73
Finance and insurance											
Finance and insurance	573	40	36	47	37	45	36	43	33	68	59
Property and business services											
Property and business services	5,118	25	26	27	26	30	29	32	26	50	48
Education											
Education	606	39	34	30	29	40	40	41	35	58	57
Health and community services											
Health and community services	2,097	34	27	28	22	36	28	23	17	59	49
Cultural and recreational services											
Cultural and recreational services	597	32	38	24	33	36	38	42	45	57	61
Overall	35,004	30	26	29	23	31	27	29	26	52	47

(1) For more information on the businesses included, see chapter 9.

(2) Percentages are of all New Zealand businesses in each business size, industry or performance category.

(3) Defined by rolling mean employment (RME) count.

(4) Results for the electricity, gas and water supply industry should be treated with caution due to the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated. Percentages may add to over 100 percent as businesses may offer to more than one group.

Table 3

Development of Innovations
By type of innovation
 Last two financial years at August 2005 and 2007

Innovation type	Businesses with innovation activity ⁽¹⁾		Developed by business		Developed by business in partnership with others		Obtained from others and significant improvements made		Obtained from others and no significant improvements made	
	2005	2007	2005	2007	2005	2007	2005	2007	2005	2007
	Number		Percent ⁽²⁾							
Product	7,959	7,056	57 R	60	24	23	16	17	20 R	18
Process	7,116	5,562	59 R	62	32	24	19	18	10 R	13
Organisational	9,252	7,737	68 R	68	23	23	16	13	7 R	9
Marketing	8,321 R	7,662	50 R	53	32	31	7	17	7 R	15

(1) For more information on the businesses included, see chapter 9.

(2) Percentages are of innovating businesses in each innovation category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated. Percentages may add to over 100 percent as businesses may offer to more than one group.

Symbol:

R revised

Table 4

Sources of Information Used by Businesses
Last two financial years at August 2005 and 2007

Source	Percentage of innovating businesses ⁽¹⁾	
	2005	2007
Existing staff	77	70
Customers	64	57
New staff (those appointed in the last two years)	54	51
Suppliers	47	47
Conferences, trade shows or exhibitions	51	46
Competitors and other businesses from the same industry	48	45
Professional advisors, consultants, banks or accountants	50	44
Books, journals, patent disclosures or internet	46	41
Other businesses within the business group	29	31
Industry or employer organisations	32	30
Businesses from other industries	22	22
Government agencies	11	13
Crown research institutes (CRIs), other research institutes or research associations	8	7
Universities or polytechnics	11	9

(1) For more information on businesses included, see chapter 9.

Table 5

Selected Sources of Information Used by Businesses
By industry

Last two financial years at August 2005 and 2007

	Businesses with innovation activity ⁽¹⁾		Source							
			Industry or employer organisations		Government agencies		Universities or polytechnics		CRIs, other research institutes or research associations	
	2005	2007	2005	2007	2005	2007	2005	2007	2005	2007
	Number		Percent ⁽²⁾							
Business size⁽³⁾										
6–19 employees	12,692	11,043	30	28	11	14	10	9	8	6
20–49 employees	3,523	3,291	35	33	11	11	11	8	6	6
50–99 employees	1,107	1,047	36	36	12	14	12	13	9	9
100+ employees	917	993	37	33	12	11	15	15	12	11
Industry										
Agriculture, forestry and fishing										
Agriculture	996	771	45	34	11	9	18	9	45	18
Services to agriculture, hunting and trapping	255	195	27	28	9	9	18	17	10	3
Forestry and logging	84	63	46	57	15	10	6	10	12	14
Commercial fishing	18	15	29	20	36	20	7	0	51	20
Total agriculture, forestry and fishing	1,350	1,041	42	34	11	9	17	11	36	15
Mining and quarrying	36	30	38	50	11	20	11	20	14	30
Manufacturing										
Food, beverage and tobacco	477	423	33	24	11	11	14	11	12	12
Textile, clothing, footwear and leather	315	210	18	16	20	9	2	1	5	6
Wood and paper product	318	303	38	27	7	4	14	17	19	5
Printing, publishing and recorded media	330	273	30	24	2	4	4	3	2	1
Petroleum, coal, chemical and associated product	321	294	32	23	10	8	9	7	8	8
Non-metallic mineral product	87	117	27	44	10	8	8	28	14	10
Metal product	564	591	20	25	6	4	12	6	3	1
Transport and industrial machinery and equipment	645	402	21	32	7	16	13	6	1	2
Other machinery and equipment	162	138	12	9	11	4	15	20	10	13
Other manufacturing	429	270	11	22	1	4	10	3	1	3
Total manufacturing	3,648	3,018	24	25	8	8	11	8	6	5
Electricity, gas and water supply ⁽⁴⁾	9	12	38	25	24	25	12	50	0	25
Construction	1,359	1,380	43	37	11	8	4	2	3	7
Wholesale trade										
Machinery and equipment wholesaling	603	360	33	16	9	8	18	64	5	4
Other wholesale trade	1,377	1,392	18	21	4	5	6	8	8	2
Total wholesale trade	1,983	1,749	22	20	6	5	8	1	7	3
Retail trade	2,655	2,469	20	26	1	14	1	9	1	5
Accommodation, cafes and restaurants	1,683	1,317	56	43	18	32	19	9	7	15
Transport and storage	783	720	37	36	16	15	4	2	10	3
Communication services	90	96	6	19	1	13	1	9	1	9
Finance and insurance	387	336	30	28	4	8	6	4	4	2
Property and business services	2,424	2,463	23	25	10	15	10	12	7	7
Education	333	348	43	44	33	32	29	30	4	8
Health and community services	1,152	1,029	49	37	36	24	29	18	7	5
Cultural and recreational services	351	363	36	31	16	17	13	12	11	11
Overall	18,240	16,374	32	30	11	13	11	9	8	7

(1) For more information on the businesses included, see chapter 9.

(2) Percentages are of innovating businesses in each industry category.

(3) Defined by rolling mean employment (RME) count.

(4) Results for the electricity, gas and water supply industry should be treated with caution due to the small number of businesses in this category.

Notes: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated. Percentages may add to over 100 percent as businesses may offer to more than one group.

CRIs=Crown Research Institutes

Table 6a

Reasons for Innovating
Last two financial years at August 2007

	Businesses with innovation activity ⁽¹⁾	Reason									
		Increase revenue	Reduce costs	Increase market share	Improve productivity	Increase responsiveness to customers	Establish/exploit new market opportunities	Reduce environmental impact	Replace goods or services being phased out	Reduce energy consumption	Improve work safety standards
		Percent ⁽²⁾									
Business size⁽³⁾											
6–19 employees	11,043	88	62	67	73	70	58	27	24	25	38
20–49 employees	3,291	86	70	68	75	72	58	22	24	19	33
50–99 employees	1,047	89	77	75	81	76	66	28	26	26	42
100+ employees	993	87	80	75	83	78	61	30	29	27	41
Industry											
Agriculture, forestry and fishing											
Agriculture	771	84	28	45	64	51	32	18	35	17	28
Services to agriculture, hunting and trapping	195	74	74	77	52	57	34	43	18	31	23
Forestry and logging	63	71	48	33	81	43	57	19	29	24	10
Commercial fishing	15	60	20	60	60	20	0	20	20	0	20
Total agriculture, forestry and fishing	1,041	81	38	50	63	52	34	23	31	20	26
Mining and quarrying	30	80	60	60	70	50	80	10	60	30	50
Manufacturing	3,018	89	64	68	72	68	41	41	25	27	23
Food, beverage and tobacco	423	89	45	74	70	72	33	45	33	25	27
Textile, clothing, footwear and leather	210	81	71	80	73	89	33	39	19	29	26
Wood and paper product	303	94	66	58	68	63	56	11	32	11	31
Printing, publishing and recorded media	273	84	77	76	78	62	33	41	29	30	26
Petroleum, coal, chemical and associated product	294	89	60	80	70	72	38	55	29	45	20
Non-metallic mineral product	117	97	59	90	82	72	64	28	41	33	23
Metal product	591	89	57	54	69	51	43	41	20	18	19
Transport and industrial machinery and equipment	402	81	69	64	67	66	45	46	21	23	21
Other machinery and equipment	138	89	67	65	65	76	41	52	26	48	26
Other manufacturing	270	97	81	66	92	80	40	47	12	41	18
Total manufacturing	3,018	89	64	68	72	68	41	41	25	27	23
Electricity, gas and water supply ⁽⁴⁾	12	100	50	50	75	75	50	0	50	50	25
Construction	1,380	89	83	62	82	49	70	20	35	21	31
Wholesale trade											
Machinery and equipment wholesaling	360	94	64	79	68	72	33	33	23	27	16
Other wholesale trade	1,392	88	74	77	70	63	29	47	22	34	14
Total wholesale trade	1,749	89	72	77	70	65	30	44	22	32	15
Retail trade	2,469	90	72	78	65	58	35	28	26	26	31
Accommodation, cafes and restaurants	1,317	99	75	79	58	62	52	39	56	26	50
Transport and storage	720	90	81	76	70	56	33	25	33	22	34
Communication services	96	78	63	66	53	69	22	38	16	25	13
Finance and insurance	336	88	75	74	67	63	13	27	10	18	7
Property and business services	2,463	86	76	65	64	58	20	30	11	23	9
Education	348	85	80	62	55	59	33	33	16	16	15
Health and community services	1,029	69	76	39	36	45	40	38	15	18	13
Cultural and recreational services	363	90	87	75	64	63	40	40	36	28	36
Overall	16,374	87	71	68	66	59	38	33	26	25	24

(1) For more information on the businesses included, see chapter 9.

(2) Percentages are of innovating businesses in each industry category.

(3) Defined by rolling mean employment (RME) count.

(4) Results for the electricity, gas and water supply industry should be treated with caution due to the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated. Percentages may add to over 100 percent as businesses may select more than one option.

Table 6b

Reasons for Innovating
Last two financial years at August 2005

	Businesses with innovation activity ⁽¹⁾	Reason									
		Increase revenue	Improve productivity	Reduce costs	Increase market share	Increase responsiveness of customers	Establish/exploit new market opportunities	Improve work safety standards	Replace goods or services being phased out	Reduce energy consumption	Reduce environmental impact
		Percent ⁽²⁾									
Business size⁽³⁾											
6-9 employees	6,294	90	78	66	66	67	58	45	29	22	23
10-19 employees	6,396	95	79	75	70	66	62	40	22	20	19
20-49 employees	3,522	91	88	75	74	78	63	52	26	23	22
50-99 employees	1,104	91	82	79	77	78	66	52	29	25	25
100+ employees	918	91	87	83	82	83	65	52	32	31	33
Industry											
Agriculture, forestry and fishing	1,350	89	92	78	41	45	43	65	21	33	37
Mining and quarrying	36	84	93	89	67	79	56	93	16	39	57
Manufacturing											
Food, beverage and tobacco	477	95	79	77	63	60	78	51	29	33	38
Textile, clothing, footwear and leather	315	83	91	75	63	68	70	36	33	18	18
Wood and paper product	318	84	87	83	68	61	58	69	35	34	24
Printing, publishing and recorded media	330	99	82	69	93	86	60	39	16	26	29
Petroleum, coal, chemical and associated product	321	96	83	79	72	72	77	56	45	32	39
Non-metallic mineral product	87	90	87	63	83	79	72	53	24	20	35
Metal product	564	93	82	72	62	66	59	51	27	26	19
Transport and industrial machinery and equipment	645	84	83	76	61	65	63	48	25	17	14
Other machinery and equipment	162	95	68	71	81	74	81	66	46	20	17
Other manufacturing	429	92	89	96	74	62	60	41	43	32	27
Total manufacturing	3,648	91	83	77	69	67	66	50	31	26	25
Electricity, gas and water supply ⁽⁴⁾	9	76	88	100	50	86	74	62	0	24	24
Construction	1,359	93	84	86	65	71	57	78	11	26	30
Wholesale trade	1,983	96	74	65	90	79	76	40	39	15	18
Retail trade	2,655	93	73	76	70	68	71	53	31	21	18
Accommodation, cafes and restaurants	1,683	99	83	77	85	53	52	20	18	28	28
Transport and storage	783	92	87	76	77	83	65	46	29	20	26
Communication services	90	97	85	74	87	76	67	31	30	12	15
Finance and insurance	387	89	77	63	76	80	66	18	19	6	6
Property and business services	2,424	93	83	66	74	80	60	23	24	10	13
Education	333	84	78	49	75	85	65	36	23	18	14
Health and community services	1,152	77	82	54	49	82	35	60	17	25	17
Cultural and recreational services	351	94	71	70	68	82	69	46	23	46	21
Overall		92	81	73	71	70	61	46	26	22	22

(1) For more information on businesses included, see chapter 9.

(2) Percentages are of innovating businesses in each industry category.

(3) Defined by rolling mean employment (RME) count. For more information on the RME count, see chapter 9.

(4) Results for the electricity, gas and water supply industry should be treated with caution because of the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual figures may differ from those stated.

Percentages may add to over 100 percent as businesses may select more than one option.

Table 7

Sales from Product Innovations⁽¹⁾
Last financial year at August 2007

	Businesses with product innovation ⁽²⁾	Percentage of sales from product innovations						Don't know
		Zero	1–10	11–20	21–30	31–40	41–100	
		Percentage of product innovators ⁽³⁾						
Business size⁽⁴⁾								
6–19 employees	4,725	2	39	23	11	6	9	10
20–49 employees	1,368	2	43	27	12	4	4	8
50–99 employees	480	3	56	23	4	4	3	8
100+ employees	483	2	65	17	4	2	3	7
Industry								
Agriculture, forestry and fishing								
Agriculture	183	15	48	15	11	0	0	8
Services to agriculture, hunting and trapping	96	3	31	25	28	0	6	0
Forestry and logging	12	0	75	25	0	0	0	0
Commercial fishing	3	0	200	0	0	0	0	0
Total agriculture, forestry and fishing	294	10	45	19	17	0	2	5
Mining and quarrying	6	0	50	50	0	50	0	0
Manufacturing								
Food, beverage and tobacco	231	1	71	17	9	1	1	1
Textile, clothing, footwear and leather	123	0	49	27	22	0	0	5
Wood and paper product	72	29	29	17	8	4	0	13
Printing, publishing and recorded media	150	2	60	32	4	0	0	0
Petroleum, coal, chemical and associated product	219	3	59	10	10	0	0	18
Non-metallic mineral product	57	16	63	5	0	11	0	0
Metal product	282	1	50	43	0	0	3	3
Transport and industrial machinery and equipment	246	0	66	16	1	2	13	2
Other machinery and equipment	120	3	53	13	10	0	23	0
Other manufacturing	219	0	47	12	15	1	12	12
Total manufacturing	1,716	3	57	21	7	1	6	6
Electricity, gas and water supply ⁽⁵⁾	3	0	100	0	0	0	0	0
Construction	381	3	31	35	13	13	0	5
Wholesale trade								
Machinery and equipment wholesaling	159	0	66	19	2	4	2	11
Other wholesale trade	834	0	44	26	11	4	4	10
Total wholesale trade	993	0	47	25	9	5	3	10
Retail trade	831	0	38	19	17	13	13	0
Accommodation, cafes and restaurants	561	0	4	29	7	3	17	40
Transport and storage	258	1	72	16	6	0	5	0
Communication services	42	0	50	0	0	7	14	29
Finance and insurance	153	4	53	18	6	4	6	10
Property and business services	1,005	4	38	29	7	5	9	8
Education	144	4	29	25	23	10	4	6
Health and community services	486	5	42	19	12	1	6	18
Cultural and recreational services	177	3	32	27	10	15	12	2
Overall	7,056	2	43	23	10	5	7	9

(1) Product innovations are the introduction of any new or significantly improved goods or services.

(2) For more information on the businesses included, see chapter 9.

(3) Percentages are of all businesses with implemented product innovations in each business-size or industry category.

(4) Defined by rolling mean employment (RME) count.

(5) Results for the electricity, gas and water supply industry should be treated with caution due to the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated. Due to rounding, some percentages may not add to 100 percent.

Table 8

Business Performance Indicators
By type of innovator
 Last financial year at August 2005 and 2007

	Total number of businesses ⁽¹⁾	Higher profitability than competitors		Higher productivity than competitors		Increase in sales		Increase in profitability		Increase in productivity		Increase in market share	
		2005	2007	2005	2007	2005	2007	2005	2007	2005	2007	2005	2007
		Percent ⁽²⁾											
Innovators													
Implemented	14,616	20	21	30	29	64	65	52	49	50	49	37	36
Ongoing and abandoned	1,758	19	16	19	22	55	60	45	42	45	37	28	33
Overall innovators	16,374	20	20	29	28	63	65	51	48	49	48	36	36
Non-innovators	18,630	15	12	19	18	60	51	43	40	33	32	21	21
Overall	35,004	18	16	24	23	62	58	47	44	42	39	29	28

(1) For more information on businesses included, see chapter 9.

(2) Percentages are of all New Zealand businesses in each innovation category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated.

Table 9

Methods for Protecting Intellectual Property
Last two financial years at August 2007

	Total number of businesses ⁽¹⁾	Method								At least one method used
		Confidentiality agreement	Trade-mark	Copy-right	Secrecy	Reaching the market first	Patent	Register-ing of design	Com-plexity ⁽²⁾	
		Percent ⁽³⁾								
Business size⁽⁴⁾										
6–19 employees	25,608	25	16	10	10	8	8	5	5	15
20–49 employees	6,216	33	21	13	12	12	10	6	4	17
50–99 employees	1,719	46	34	18	15	15	17	9	9	18
100+ employees	1,458	55	50	26	18	19	24	13	9	20
Industry										
Agriculture, forestry and fishing										
Agriculture	2,064	15	11	3	10	7	5	2	3	7
Services to agriculture, hunting and trapping	672	14	4	1	8	9	3	2	4	13
Forestry and logging	291	20	6	4	5	3	4	2	2	4
Commercial fishing	33	9	9	0	9	0	9	0	0	9
Total agriculture, forestry and fishing	3,060	15	9	3	10	7	5	2	3	8
Mining and quarrying	96	31	16	6	16	3	13	6	6	3
Manufacturing										
Food, beverage and tobacco	669	43	42	11	11	13	14	8	4	28
Textile, clothing, footwear and leather	411	23	45	8	17	20	8	14	5	20
Wood and paper product	612	24	15	9	22	12	16	10	9	5
Printing, publishing and recorded media	456	31	17	23	8	13	7	4	7	24
Petroleum, coal, chemical and associated product	453	43	48	21	20	22	42	16	12	36
Non-metallic mineral product	174	47	38	26	17	31	24	9	2	19
Metal product	945	28	25	17	11	12	18	10	4	25
Transport and industrial machinery and equipment	918	34	25	17	13	18	19	15	5	20
Other machinery and equipment	225	47	39	27	16	27	33	9	5	32
Other manufacturing	489	19	18	22	18	25	10	6	2	26
Total manufacturing	5,349	32	29	17	15	17	18	10	6	23
Electricity, gas and water supply ⁽⁵⁾	18	50	33	0	17	17	0	0	17	0
Construction	3,609	18	5	3	9	6	1	3	2	8
Wholesale trade										
Machinery and equip. wholesaling	666	42	19	9	18	17	11	2	7	18
Other wholesale trade	2,415	33	39	19	11	16	19	13	4	27
Total wholesale trade	3,081	35	35	17	12	16	17	11	4	25
Retail trade	5,772	28	23	10	11	4	15	5	6	12
Accommodation, cafes and restaurants	3,360	13	17	15	5	4	5	5	4	15
Transport and storage	1,530	37	16	7	8	12	5	7	5	12
Communication services	132	50	36	11	16	23	9	2	9	27
Finance and insurance	573	48	29	18	15	11	7	7	7	16
Property and business services	5,118	41	19	15	13	9	6	4	7	14
Education	606	38	20	26	2	8	4	6	7	19
Health and community services	2,097	29	7	6	6	7	1	1	5	19
Cultural and recreational services	597	30	26	23	10	21	8	8	9	24
Innovation										
Innovators	16,374	38	29	17	15	15	15	9	8	59
Non-innovators	18,629	20	12	7	7	4	4	3	2	32
Overall	35,004	29	20	12	11	9	9	6	5	15

(1) For more information on the businesses included, see chapter 9.

(2) Goods, services or processes too complex to copy.

(3) Percentages are of all New Zealand businesses in each business-size or industry category.

(4) Defined by rolling mean employment (RME) count.

(5) Results for the electricity, gas and water supply industry should be treated with caution due to the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated. Percentages may add to over 100 percent as businesses may select more than one option.

Table 10

Innovation Activities
Last two financial years at August 2007

Activity	Done to support innovation	Done, but not to support innovation
	Percentage of innovating businesses ⁽¹⁾	
Employee training	39	51
Acquisition of computer hardware and software	38	46
Implementing new business strategies or management techniques	35	33
Acquisition of machinery and equipment	29	38
Organisational restructuring	22	31
Marketing the introduction of new goods or services	33	20
Market research	20	16
Significant changes to marketing strategies	17	17
Design (eg industrial, graphic or fashion design)	17	7
Acquisition of other knowledge	14	6

(1) For more information on businesses included, see chapter 9.

Table 11

Product Development Expenditure
Last financial year at August 2007

	Investing businesses ⁽¹⁾	Percentage of total expenditure spent on product development or related activities			
		0–0.9	1–1.9	2–4.9	More than 5
		Percent			
Business size⁽³⁾					
6–19 employees	6,378	44	21	10	18
20–49 employees	1,914	52	13	17	13
50–99 employees	633	55	18	13	12
100+ employees	630	60	12	14	10
Industry					
Agriculture, forestry and fishing					
Agriculture	420	53	20	16	6
Services to agriculture, hunting and trapping	93	31	51	14	6
Forestry and logging	24	40	10	26	30
Commercial fishing	9	59	28	0	0
Total agriculture, forestry and fishing	549	48	24	15	7
Mining and quarrying ⁽⁴⁾					
	12	69	17	0	9
Manufacturing					
Food, beverage and tobacco	336	66	17	8	7
Textile, clothing, footwear and leather	156	46	17	7	16
Wood and paper product	126	66	23	5	1
Printing, publishing and recorded media	207	47	20	24	7
Petroleum, coal, chemical and associated product	234	40	26	14	15
Non-metallic mineral product	81	38	21	31	5
Metal product	297	45	15	17	22
Transport and industrial machinery and equipment	336	47	16	6	31
Other machinery and equipment	99	34	18	10	38
Other manufacturing	213	65	6	24	5
Total manufacturing	2,085	51	17	14	15
Electricity, gas and water supply ⁽⁴⁾					
	6	86	17	19	17
Construction					
	819	50	14	9	5
Wholesale trade					
Machinery and equipment wholesaling	237	60	16	16	7
Other wholesale trade	822	48	21	12	16
Total wholesale trade	1,059	51	20	13	14
Retail trade					
	1,314	38	17	3	26
Accommodation, cafes and restaurants					
	984	59	14	12	13
Transport and storage					
	450	51	22	18	8
Communication services					
	39	43	5	10	37
Finance and insurance					
	210	40	18	17	23
Property and business services					
	1,341	34	26	16	21
Education					
	180	25	30	10	34
Health and community services					
	303	76	4	6	3
Cultural and recreational services					
	207	45	17	17	20
Overall	9,555	47	19	12	16

(1) Investing businesses are those that invested in product development or related activities. For more information on businesses included, see chapter 9.

(2) Percentages are of businesses in each business-size or industry category investing in product development or related activities.

(3) Defined by rolling mean employment (RME) count.

(4) Results for the electricity, gas and water supply and the mining and quarrying industries should be treated with caution due to the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated.

Table 12

Product Development Expenditure per Employee
Last financial year at August 2007

	Investing businesses ⁽¹⁾	Product development expenditure per employee (\$NZ)		
		0–1000	1001–5000	5000+
Percentage ⁽²⁾				
Business size⁽³⁾				
6–19 employees	6,378	50	30	17
20–49 employees	1,914	50	30	18
50–99 employees	633	48	31	20
100+ employees	630	48	33	19
Industry				
Agriculture, forestry and fishing				
Agriculture	420	56	32	9
Services to agriculture, hunting and trapping	93	87	3	11
Forestry and logging	24	57	19	30
Commercial fishing	9	59	39	0
Total agriculture, forestry and fishing	549	61	26	10
Mining and quarrying ⁽⁴⁾	12	69	9	26
Manufacturing				
Food, beverage and tobacco	336	59	24	17
Textile, clothing, footwear and leather	156	36	53	10
Wood and paper product	126	43	49	7
Printing, publishing and recorded media	207	59	29	13
Petroleum, coal, chemical and associated product	234	29	34	29
Non-metallic mineral product	81	63	8	26
Metal product	297	35	27	26
Transport and industrial machinery and equipment	336	26	36	37
Other machinery and equipment	99	28	24	50
Other manufacturing	213	68	28	6
Total manufacturing	2,085	44	31	22
Electricity, gas and water supply ⁽⁴⁾	6	50	19	69
Construction	819	72	21	5
Wholesale trade				
Machinery and equipment wholesaling	237	42	30	28
Other wholesale trade	822	28	41	26
Total wholesale trade	1,059	31	38	26
Retail trade	1,314	44	37	11
Accommodation, cafes and restaurants	984	81	9	10
Transport and storage	450	45	40	11
Communication services	39	19	39	40
Finance and insurance	210	26	34	38
Property and business services	1,341	34	37	29
Education	180	47	33	21
Health and community services	303	92	5	2
Cultural and recreational services	207	53	35	12
Overall	9,555	50	30	18

(1) Investing businesses are those that invested in product development or related activities. For more information on businesses included, see chapter 9.

(2) Percentages are of business investing in product development or related activities in each business-size, industry or performance category.

(3) Defined by rolling mean employment (RME) count.

(4) Results for the electricity, gas and water supply and the mining and quarrying industries should be treated with caution due to the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated.

Table 13

Product Development Expenditure Areas
Last financial year at August 2007

	Investing businesses ⁽¹⁾	Expenditure as a percentage of total expenditure			
		R&D ⁽²⁾	Design	Marketing	Other
		Percent ⁽³⁾			
Business size⁽⁴⁾					
6–19 employees	9,880	21	8	57	15
20–49 employees	2,884	23	33	40	4
50–99 employees	944	37	11	40	12
100+ employees	908	49	5	36	10
Industry					
Agriculture, forestry and fishing					
Agriculture	620	25	4	30	40
Services to agriculture, hunting and trapping	186	62	0	2	36
Forestry and logging	59	98	0	1	1
Commercial fishing	10	89	0	0	11
Total agriculture, forestry and fishing	875	48	2	14	36
Mining and quarrying ⁽⁵⁾					
Mining and quarrying	23	100	0	0	0
Manufacturing					
Food, beverage and tobacco	383	60	5	27	7
Textile, clothing, footwear and leather	184	1	73	25	1
Wood and paper product	260	25	13	48	14
Printing, publishing and recorded media	266	5	41	31	23
Petroleum, coal, chemical and associated product	252	72	6	14	7
Non-metallic mineral product	107	19	6	44	32
Metal product	524	47	5	25	22
Transport and industrial machinery and equipment	526	61	14	20	5
Other machinery and equipment	264	86	6	7	1
Other manufacturing	325	14	28	37	22
Total manufacturing	2,765	40	31	23	6
Electricity, gas and water supply ⁽⁵⁾					
Electricity, gas and water supply	10	55	3	23	20
Construction					
Construction	1,188	21	26	24	29
Wholesale trade					
Machinery and equipment wholesaling	667	6	0	63	31
Other wholesale trade	698	17	6	71	6
Total wholesale trade	1,616	15	5	70	10
Retail trade					
Retail trade	2,260	0	4	92	4
Accommodation, cafes and restaurants					
Accommodation, cafes and restaurants	1,189	3	6	87	4
Transport and storage					
Transport and storage	593	24	15	36	25
Communication services					
Communication services	85	31	1	66	3
Finance and insurance					
Finance and insurance	309	28	7	56	9
Property and business services					
Property and business services	2,207	65	5	18	12
Education					
Education	289	17	3	77	3
Health and community services					
Health and community services	865	4	4	18	75
Cultural and recreational services					
Cultural and recreational services	342	9	6	82	3
Overall	14,616	35	15	41	9

(1) Investing businesses are those that invested in product development or related activities. For more information on businesses included, see chapter 9.

(2) Research and development.

(3) Percentages are of all New Zealand businesses in each business-size, industry or performance category.

(4) Defined by rolling mean employment (RME) count.

(5) Results for the electricity, gas and water supply and the mining and quarrying industries should be treated with caution due to the small number of businesses in this category.

Table 14

Businesses with Research and Development⁽¹⁾ or Innovation Activities
At August 2005 and 2007

	Total number of businesses ⁽²⁾	Businesses with R&D activity ⁽³⁾⁽⁴⁾		Businesses with innovation activity ⁽⁵⁾	
		2005	2007	2005	2007
		Percent ⁽⁶⁾			
Business size⁽⁷⁾					
6–19 employees	25,608	7	5	50	43
20–49 employees	6,216	7	9	57	53
50–99 employees	1,719	12	13	65	61
100+ employees	1,458	15	17	68	68
Industry					
Agriculture, forestry and fishing					
Agriculture	2,064	5	6	38	37
Services to agriculture, hunting and trapping	672	6	5	39	29
Forestry and logging	291	7	4	40	22
Commercial fishing	33	8	18	41	45
Total agriculture, forestry and fishing	3,060	9	6	42	34
Mining and quarrying ⁽⁸⁾	96	6	9	44	31
Manufacturing					
Food, beverage and tobacco	669	22	22	71	63
Textile, clothing, footwear and leather	411	15	8	66	51
Wood and paper product	612	8	9	49	50
Printing, publishing and recorded media	456	7	4	67	60
Petroleum, coal, chemical and associated product	453	26	23	70	65
Non-metallic mineral product	174	12	41	53	67
Metal product	945	8	14	59	63
Transport and industrial machinery and equipment	918	27	27	67	44
Other machinery and equipment	225	30	33	70	61
Other manufacturing	489	14	9	78	55
Total manufacturing	5,349	17	17	65	56
Electricity, gas and water supply ⁽⁸⁾	18	13	33	52	67
Construction	3,609	4	4	41	38
Wholesale trade					
Machinery and equipment wholesaling	666	9	9	59	54
Other wholesale trade	2,415	9	8	66	58
Total wholesale trade	3,081	8	8	61	57
Retail trade	5,772	3	0	46	43
Accommodation, cafes and restaurants	3,360	6	3	50	39
Transport and storage	1,530	3	7	53	47
Communication services	132	2	9	62	73
Finance and insurance	573	7	7	68	59
Property and business services	5,118	7	9	50	48
Education	606	9	7	58	57
Health and community services	2,097	3	2	59	49
Cultural and recreational services	597	6	4	57	61
Overall	35,004	8	7	52	47

(1) Research and development.

(2) For more information on the businesses included, see chapter 9.

(3) Includes the buying abroad of technical knowledge or information.

(4) Last financial year at August 2007.

(5) Last two financial years at August 2007.

(6) Percentages are of New Zealand businesses in each business-size or industry category.

(7) Defined by rolling mean employment (RME) count. For more information on the RME count, see chapter 9.

(8) Results for the electricity, gas and water supply and the mining and quarrying industries should be treated with caution due to the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated.

Table 15

Employees and Product Development Expenditure
Last financial year at August 2007

	Number of businesses ⁽¹⁾	Number of employees ⁽²⁾		Product development expenditure \$(NZ) (000)	
		Average per business	Total	Average per business	Total
Business size⁽⁴⁾					
6–19 employees	25,608	11	266,172	12	306,934
20–49 employees	6,216	32	186,021	104	648,807
50–99 employees	1,719	71	119,988	136	232,936
100+ employees	1,458	362	562,686	559	814,499
Industry					
Agriculture, forestry and fishing					
Agriculture	2,064	17	32,571	8	15,931
Services to agriculture, hunting and trapping	672	50	25,134	29	19,734
Forestry and logging	291	17	4,548	7	1,941
Commercial fishing	33	15	489	4	123
Total agriculture, forestry and fishing	3,060	24	62,742	12	37,730
Mining and quarrying	96	C	C	C	C
Manufacturing					
Food, beverage and tobacco	669	110	76,929	297	198,465
Textile, clothing, footwear and leather	411	32	13,701	661	271,736
Wood and paper product	612	41	24,261	17	10,556
Printing, publishing and recorded media	456	38	15,933	18	8,425
Petroleum, coal, chemical and associated product	453	48	21,213	141	64,016
Non-metallic mineral product	174	44	7,206	42	7,273
Metal product	945	29	27,048	72	68,353
Transport and industrial machinery and equipment	918	26	22,599	54	49,898
Other machinery and equipment	225	49	13,161	356	80,174
Other manufacturing	489	21	9,777	21	10,432
Total manufacturing	5,349	43	231,834	144	769,328
Electricity, gas and water supply ⁽⁵⁾	18	C	C	C	C
Construction	3,609	22	75,330	4	13,624
Wholesale trade					
Machinery and equipment wholesaling	666	34	23,751	75	49,665
Other wholesale trade	2,415	55	68,031	119	288,531
Total wholesale trade	3,081	29	91,782	110	338,196
Retail trade	5,772	29	194,265	24	136,542
Accommodation, cafes and restaurants	3,360	22	71,952	9	28,754
Transport and storage	1,530	44	64,791	13	20,130
Communication services	132	212	28,860	417	55,094
Finance and insurance	573	65	35,685	197	113,123
Property and business services	5,118	33	170,910	72	370,599
Education	606	29	15,588	46	28,020
Health and community services	2,097	32	61,470	4	8,528
Cultural and recreational services	597	38	21,822	87	51,801
Overall	35,004	32	1,134,870	57	2,003,175

(1) For more information on businesses included, see chapter 9.

(2) Employees is measured using rolling mean employment (RME) count.

(3) Percentages are of all New Zealand businesses in each business-size, industry or performance category. For more information on the businesses included, see chapter 9.

(4) Defined by rolling mean employment (RME) count.

(5) Results for the electricity, gas and water supply industry should be treated with caution due to the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated.

Symbol:

C Confidential

Table 16

Businesses with Cooperative Arrangements
By location of partner
 Last two financial years at August 2005 and 2007

Partner	Businesses with cooperative arrangements ⁽¹⁾							
	Overall		Located in New Zealand		Located overseas only		Located both in New Zealand and overseas	
	2005	2007	2005	2007	2005	2007	2005	2007
	Percent ⁽²⁾							
Suppliers	18	15	12	10	3	4	2	1
Customers	15	13	11	9	2	2	2	2
Competitors and other businesses from the same industry	14	10	10	8	2	2	2	1
Other businesses within the business group	13	10	9	6	3	3	1	1
Businesses from other industries	11	8	9	6	2	1	0	1
Universities and polytechnics	7	5	5	3	2	1	0	1
Crown research institutes (CRIs), other research institutes or research associations	6	4	4	3	2	1	0	1

(1) For more information on businesses included, see chapter 9.

(2) Percentages are of cooperating innovating businesses.

Table 17a

Reasons for Cooperative Arrangements
Last two financial years at August 2007

	Innovating businesses ⁽¹⁾ with cooperative arrangements	Reason										
		Access new markets	Access management skills	Share costs	Access R&D ⁽²⁾	Access work practices	Access new distribution channels	Access production processes	Spread risk	Access new suppliers	Access financial resources	Other
		Percent ⁽³⁾										
Business size⁽⁴⁾												
6–19 employees	2,220	46	42	38	30	33	31	22	23	18	18	15
20–49 employees	744	39	37	29	35	34	19	29	17	19	13	18
50–99 employees	294	44	38	45	45	36	28	36	23	18	17	17
100+ employees	327	30	37	48	47	31	30	32	26	22	13	15
Industry												
Agriculture, forestry and fishing												
Agriculture	183	38	36	59	41	44	34	36	41	31	28	10
Services to agriculture, hunting and trapping	48	6	69	25	19	69	6	19	19	19	6	19
Forestry and logging	9	0	0	100	100	0	0	67	0	0	0	0
Commercial fishing	3	100	0	100	100	100	100	100	100	0	0	0
Total agriculture, forestry and fishing	246	29	41	54	39	49	28	34	38	26	23	10
Mining and quarrying	6	0	0	0	100	50	0	100	0	0	0	50
Manufacturing												
Food, beverage and tobacco	111	49	35	41	43	24	35	27	22	3	16	11
Textile, clothing, footwear and leather	54	33	67	67	83	17	33	39	33	39	33	0
Wood and paper product	78	19	58	77	23	65	42	38	42	31	62	8
Printing, publishing and recorded media	30	20	50	30	30	30	10	50	10	10	10	40
Petroleum, coal, chemical and associated product	93	35	26	26	65	23	23	35	19	19	6	16
Non-metallic mineral product	36	50	25	25	58	8	50	8	50	25	0	0
Metal product	225	20	40	56	19	31	11	67	12	25	21	8
Transport and industrial machinery and equipment	132	59	23	11	66	34	25	25	11	30	2	2
Other machinery and equipment	51	41	12	29	29	6	12	29	24	12	0	24
Other manufacturing	18	100	0	17	33	33	33	0	0	17	0	17
Total manufacturing	831	36	35	41	43	29	24	40	20	21	18	10
Electricity, gas and water supply ⁽⁵⁾	3	100	0	100	100	0	0	100	100	100	0	0
Construction	291	74	59	29	19	46	13	16	42	15	40	29
Wholesale trade												
Machinery and equipment wholesaling	45	13	20	20	53	13	40	40	0	7	7	40
Other wholesale trade	306	39	24	41	43	25	33	19	12	38	15	8
Total wholesale trade	348	36	23	40	46	25	35	21	9	34	15	11
Retail trade	270	54	29	16	20	17	49	20	7	11	8	12
Accommodation, cafes and restaurants	75	60	60	56	36	48	36	40	20	48	24	4
Transport and storage	159	51	42	70	23	40	36	9	47	36	8	26
Communication services	42	57	36	36	36	0	50	21	14	21	36	21
Finance and insurance	99	30	39	36	21	30	42	24	15	18	18	15
Property and business services	819	45	46	40	43	35	24	16	26	9	11	15
Education	84	61	50	39	18	32	32	21	11	39	18	36
Health and community services	237	15	47	13	13	48	11	29	13	3	6	30
Cultural and recreational services	75	40	24	32	12	8	40	24	4	8	4	8
Overall	3,585	43	40	38	34	33	28	25	22	19	16	16

(1) For more information on businesses included, see chapter 9.

(2) Research and development.

(3) Percentage are of innovating businesses with cooperative arrangement in each business-size or industry category.

(4) Defined by rolling mean employment (RME) count. For more information on RME, see chapter 9.

(5) Results for the electricity, gas and water supply industry should be treated with caution due to the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated. Percentages may add to over 100 percent as businesses may select more than one option.

Table 17b

Reasons for Cooperative Arrangements
Last two financial years at August 2005

	Innovating businesses ⁽¹⁾ with cooperative arrangements	Reason										
		Access new markets	Share costs	Access R&D	Access management skills	Access work practices	Access new distribution channels	Access new suppliers	Access production process	Spread risk	Access financial resources	Other
		Percent ⁽²⁾										
Business size⁽³⁾												
6–9 employees	1,416	48	19	25	30	23	23	22	29	7	10	20
10–19 employees	1,614	41	41	36	33	30	29	30	16	18	11	21
20–49 employees	846	49	36	33	34	35	22	17	23	13	14	20
50–99 employees	384	41	46	44	34	30	32	22	32	20	14	14
100 or more employees	336	34	46	49	40	36	30	24	32	23	18	15
Industry												
Agriculture, forestry and fishing	366	39	34	58	46	36	32	22	46	29	16	15
Mining and quarrying	9	0	70	50	0	70	35	0	50	35	35	15
Manufacturing												
Food, beverage and tobacco	120	40	17	59	11	12	34	6	56	15	11	22
Textile, clothing, footwear and leather	93	35	27	49	41	10	16	32	40	8	30	5
Wood and paper product	54	56	68	70	47	21	54	7	58	42	14	7
Printing, publishing and recorded media	102	49	20	23	47	18	18	19	31	24	31	39
Petroleum, coal, chemical and associated product	132	37	28	48	6	13	29	5	37	4	1	11
Non-metallic mineral product	24	57	50	64	33	38	47	17	80	21	25	21
Metal product	159	54	39	29	39	26	42	26	31	15	13	13
Transport and industrial machinery and equipment	159	32	27	74	7	12	19	13	14	4	7	18
Other machinery and equipment	36	34	52	76	7	7	24	32	59	39	7	3
Other manufacturing	84	38	13	19	10	11	8	43	49	6	0	2
Total manufacturing	960	42	30	48	23	16	28	19	38	14	13	15
Electricity, gas and water supply ⁽⁴⁾	0	0	0	0	0	0	100	0	0	100	0	0
Construction	243	61	2	6	26	56	17	20	39	17	4	48
Wholesale trade	450	47	36	42	23	25	27	28	30	15	8	19
Retail trade	564	36	29	22	46	14	6	6	20	4	8	4
Accommodation, cafes and restaurants	594	68	44	33	11	27	52	67	7	3	4	18
Transport and storage	156	44	47	20	47	35	53	21	15	14	7	6
Communication services	30	64	55	30	14	17	51	12	8	8	0	8
Finance and insurance	123	36	63	35	36	27	32	19	28	23	14	15
Property and business services	519	34	42	32	46	42	20	21	11	32	19	26
Education	144	59	31	28	17	41	26	11	10	10	13	26
Health and community services	360	21	23	13	59	53	1	13	7	3	22	37
Cultural and recreational services	81	48	49	12	22	17	39	13	22	18	19	14
Overall	4,596	44	34	34	33	29	26	24	24	14	12	19

(1) For more information on businesses included, see chapter 9.

(2) Percentages are of innovating businesses with cooperative arrangements in each business-size or industry category.

(3) Defined by rolling mean employment (RME) count. For more information on the RME count, see chapter 9.

(4) Results for the electricity, gas and water supply industry should be treated with caution, because of the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual figures may differ from those stated. Percentages may add to over 100 percent as businesses may select more than one option.

Table 18

Factors Hampering Innovation
Last two financial years at August 2005 and 2007

Factor	Degree of hampering						Did not hamper	
	High		Medium		Low		2005	2007
	2005	2007	2005	2007	2005	2007		
Percentage of all businesses ⁽¹⁾								
Lack of management resources (eg time)	19	17	25	24	18	19	38	41
Costs to develop or introduce	17	17	23	20	15	15	44	48
Lack of appropriate personnel	12	11	23	21	21	21	44	47
Government regulation	15	10	12	12	18	17	55	60
Lack of marketing expertise	5	4	17	14	22	24	56	58
Lack of information	2	2	11	13	27	24	59	61
Lack of cooperation with other businesses	2	2	8	7	20	20	70	71
Access to intellectual property rights	1	1	3	4	13	15	83	80

(1) For more information on businesses included, see chapter 9.

Table 19

Factors Hampering Innovation Activity
By business size and industry
 Last two financial years at August 2007

	Total number of businesses ⁽¹⁾	Factor							
		Lack of management resources	Costs to develop or introduce	Lack of appropriate personnel	Government regulation	Lack of marketing expertise	Lack of information	Lack of cooperation with other businesses	Access to intellectual property rights
		Percent ⁽²⁾							
Business size⁽³⁾									
6–19 employees	25,608	39	36	31	21	18	15	9	5
20–49 employees	6,216	42	37	35	27	19	16	10	6
50–99 employees	1,719	46	45	41	27	19	17	11	5
100+ employees	1,458	45	46	38	25	17	18	10	7
Industry									
Agriculture, forestry and fishing									
Agriculture	2,064	36	45	27	35	17	18	10	6
Services to agriculture, hunting and trapping	672	32	38	46	39	12	15	13	5
Forestry and logging	291	27	36	26	16	12	12	13	8
Commercial fishing	33	36	18	9	36	18	9	9	0
Total agriculture, forestry and fishing	3,060	35	43	31	34	15	17	11	6
Mining and quarrying	96	22	31	25	28	13	13	6	9
Manufacturing									
Food, beverage and tobacco	669	50	62	42	35	30	19	13	4
Textile, clothing, footwear and leather	411	48	41	40	28	35	25	7	6
Wood and paper product	612	46	39	32	24	22	24	13	5
Printing, publishing and recorded media	456	38	54	25	10	20	12	6	9
Petroleum, coal, chemical and associated product	453	53	62	45	30	33	32	15	12
Non-metallic mineral product	174	36	47	33	16	10	19	10	7
Metal product	945	46	48	41	21	18	18	5	4
Transport and industrial machinery and equipment	918	46	52	38	29	25	14	9	6
Other machinery and equipment	225	39	60	37	20	29	17	16	17
Other manufacturing	489	44	55	32	17	5	10	3	2
Total manufacturing	5,349	46	52	37	24	23	19	9	6
Electricity, gas and water supply ⁽⁴⁾	18	17	33	33	50	0	17	0	0
Construction	3,609	37	30	29	14	13	9	5	4
Wholesale trade									
Machinery and equip. wholesaling	666	36	36	19	27	14	13	7	6
Other wholesale trade	2,415	38	37	33	19	20	18	12	6
Total wholesale trade	3,081	37	36	30	21	19	17	11	6
Retail trade	5,772	39	31	30	15	21	18	9	5
Accommodation, cafes and restaurants	3,360	37	33	31	29	13	8	8	9
Transport and storage	1,530	42	36	23	32	13	18	12	5
Communication services	132	43	55	34	27	14	16	16	11
Finance and insurance	573	42	39	36	24	19	19	12	5
Property and business services	5,118	44	32	37	15	17	14	8	3
Education	606	49	43	48	47	27	18	12	7
Health and community services	2,097	43	37	36	33	22	15	9	4
Cultural and recreational services	597	31	46	23	33	22	13	4	5
Overall	35,004	40	37	32	23	18	15	9	5

(1) For more information on businesses included, see chapter 9.

(2) Percentage are of New Zealand businesses with cooperative arrangement in each business-size or industry category.

(3) Defined by rolling mean employment (RME) count. For more information on RME, see chapter 9.

(4) Results for the electricity, gas and water supply industry should be treated with caution due to the small number of businesses in this category.

Note: All counts (not percentages) in this survey were randomly rounded to base 3 to protect confidentiality, so actual percentages may differ from those stated. Percentages may add to over 100 percent as businesses may select more than one option.

Appendix 2

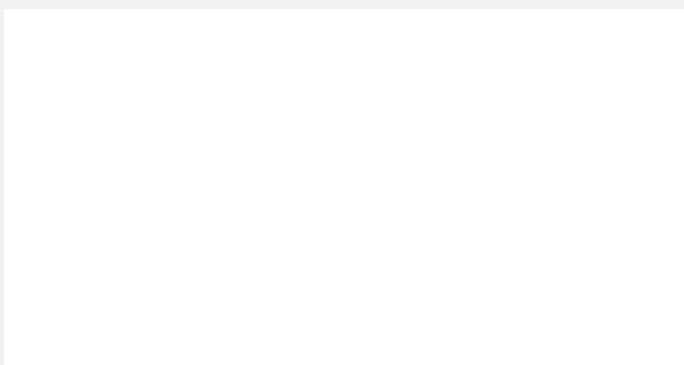


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Business Operations Survey 2007

Business Operations Survey



For Help and Information:

-  Phone: **0800 333 108**
64 9 920 9108
-  Fax: 09 920 9195
-  Email: bus@stats.govt.nz
-  Mail: Statistics New Zealand
Freepost10007
Private Bag 92003
Auckland

Are the address details above correct? If not, use the boxes below to correct any errors.

Contact name	<input type="text"/>	A0001
Business name	<input type="text"/>	A0002
PO Box number or street number and name	<input type="text"/>	A0003
Suburb	<input type="text"/>	A0004
City	<input type="text"/>	A0005

Please complete, sign and return this questionnaire in the envelope supplied.

Return date:

Purpose of this survey

The purpose of this survey is to collect information on the business operations of New Zealand businesses. The data collected by this survey is needed to quantify business behaviour, capacity and performance across a wide selection of industries. The information will help government and other organisations in developing a better understanding of enterprise capacity and performance in New Zealand.

Compulsory requirement

The taking of this survey has been approved by the Minister of Statistics and the return of this questionnaire, duly filled in and signed, is a compulsory requirement under the Statistics Act 1975.

Confidentiality of information supplied

Only people authorised by the Statistics Act 1975 are allowed to see your individual information, and they must use it only for statistical purposes. Your information will be combined with similar information to prepare summary statistics.


Geoff Bascand
Government Statistician

Section A: Business Operations

1 How to answer

- This form will be scanned and recognised by electronic equipment. Therefore please:
 - mark answers like this
 - print answers in **CAPITAL** letters and
 - keep each letter or number **within** the spaces provided
 - for example **J O N E S L T D** or **1 2 3**
- Please use a blue or black pen.
- Where actual figures are not available, please give careful estimates.
- Where there is no response, leave blank unless instructed to write **0**
- Supply whole dollar values only.

2 Only include information for the business named on the front page. Do not provide consolidated data.

- Don't include:**
- subsidiary or associated businesses
 - accounting divisions that operate entirely outside New Zealand (NZ)

3 Please keep a record of the time it takes you to complete this questionnaire. You are asked to record this at the end of the questionnaire.

- Include:**
- the time spent reading the instructions, working on the questions and obtaining information
 - the time spent by all employees in collecting and providing this information

Part i: Financial information

4 Part i should be completed by the Finance Department or the Accountant. If you don't have an Accountant on-site, then Part i should be completed by the General Manager. You may need to contact the Accountant to complete some of these questions.

5 If possible, in the questions that follow, please provide information for the last financial year.

- Note:**
- if your balance date is between 1 Jan - 30 Sep, use financial data for the year ending 2007
 - if your balance date is between 1 Oct - 31 Dec, use financial data for the year ending 2006

What is the balance date of the financial accounts which you will use for this questionnaire?

Day Month Year

6 Is the financial year information for a 12 month period?

- yes → go to **7**
- no → the period covered is Day Month Year to Day Month Year

Please mark a reason why it is not a 12 month period.

- new business
- ceased during the year
- other → please specify:

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Page 2



7 If possible, please supply GST exclusive amounts.

The amounts given in this questionnaire:

- exclude GST
- include GST

Please mark ovals like this

A0700

Revenue

8 For the last financial year, what was the total this business received from the sale of goods and services?

\$

A0801

9 For the last financial year, what was the total this business received from all other operating revenue?

- Include:**
- renting and leasing income
 - government grants received for operating purposes
 - interest and dividend revenue
- Don't include:**
- proceeds from the sale of fixed assets
 - gains on the sale of fixed assets

If any answers are 'zero' please write **0**

\$

A0901

10 For the last financial year, what did this business receive from total operating revenue?

TOTAL of **8** and **9** \$

A1001

11 Estimate from question **8** the percentage of sales that came from exports?

%

A1101

12 Estimate from question **8** the percentage of sales that came from tourism?

- Include:**
- sales of goods and services **indirectly** related to tourism but purchased by tourists eg retail sales of food, alcohol, clothing
 - sales of goods and services **directly** related to tourism eg accommodation, transport, and recreation services

- 1 zero
- 2 25% or less
- 3 50% or less
- 4 75% or less
- 5 76% - 100%
- 6 don't know

A1200

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Page 3



Expenditure

13 For the last financial year, what was the total amount this business paid for salaries / wages?

- For example:**
- employee ACC contributions
 - severance and redundancy payments
 - sick and holiday pay
 - directors' fees
 - bonus and other performance payments (eg commissions)
 - other employment related expenses

If any answers are 'zero' please write **0**

Don't include capitalised salaries / wages.

\$

A1301

14 For the last financial year, what was the total amount this business paid in interest?

- For example:**
- interest paid to banks, affiliated companies, and interest finance leases
 - use-of-money interest to the Inland Revenue Department (IRD)

\$

A1401

15 For the last financial year, what did this business record in the book of accounts for depreciation and amortisation?

- Include:**
- depreciation of fixed assets
 - depreciation on finance lease assets operated by this business
 - amortisation of intangible assets

\$

A1501

16 For the last financial year, what was the total amount this business paid for all other operating expenditure?

- For example:**
- purchase of goods and services from suppliers
 - renting and leasing costs
- Don't include:**
- salaries and wages
 - purchase of fixed assets
 - interest and finance costs
 - depreciation or amortisation
 - losses on sales of fixed assets

\$

A1601

17 For the last financial year, what was the total operating expenditure of this business?

TOTAL of **13**, **14**, **15** and **16** \$

A1701

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Page 4



Fixed assets

18 As at the end of the last financial year, what was the closing book value of fixed assets, as reported in this business's financial accounts?

Include all fixed assets operated by this business under finance lease arrangements (hire purchases).

		closing book value at the end of the last financial year	
land and buildings	\$		
computer hardware and software	\$		
plant, machinery and equipment	\$		
all other fixed assets (including motor vehicles)	\$		
TOTAL fixed assets	\$		

A1801

A1802

A1803

A1804

A1805

Total assets and liabilities

19 As at the end of the last financial year, what was the closing book value of total assets, as reported in this business's financial accounts?

- Include:**
- current assets (eg cash and deposits, debtors, stocks)
 - fixed assets
 - intangibles (eg goodwill, brands and trademarks)
 - other non-current assets (eg shares in associated and subsidiary companies, other shares, long-term loans)

\$

A1901

20 As at the end of the last financial year, what was the closing book value of total liabilities, as reported in this business's financial accounts?

- Include:**
- current liabilities (eg bank overdraft, creditors, provisions)
 - loans
 - other non-current liabilities (eg convertible securities)
- Don't include** equity / shareholders' funds.

\$

A2001

New investment

21 For the last financial year, did this business invest in its expansion?

- Include:**
- purchase of one or more businesses or assets (eg land, buildings, equipment)
 - development or introduction of new or significantly improved goods, services or processes
 - entry into new markets

- Don't include:**
- increases in turnover for existing business
 - ongoing operational expenses

- 1 yes → go to **22**
- 2 no → go to **23**
- 3 don't know → go to **23**

A2100

22 Over the last financial year, what did this expansion cost?

\$

A2201

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Section B: Innovation

1 • Section B should be completed by the General Manager.

2 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.

New goods or services

3 During the last 2 financial years, did this business introduce onto the market any new or significantly improved goods or services? B0300

Don't include the selling of new goods or services wholly produced and developed by other businesses.

Please mark ovals like this

₁ yes → go to **4**

₂ no → go to **7**

4 Mark all that apply. Were any of those new or significantly improved goods or services:

- developed by this business B0401
- developed by this business in partnership with others B0402
- obtained from others and significant improvements were made by this business B0403
- obtained from others and no significant improvements were made by this business B0404

5 Mark one oval for each item listed. Were any of those new or significantly improved goods or services:

	yes	no	don't know	
new to NZ	<input type="radio"/> ₁	<input type="radio"/> ₂	<input type="radio"/> ₃	B0501
new to the world	<input type="radio"/> ₁	<input type="radio"/> ₂	<input type="radio"/> ₃	B0502

6 For the last financial year, please estimate the percentage of sales for this business that came from those new or significantly improved goods or services. B0600

- ₁ zero
- ₂ 10% or less
- ₃ 20% or less
- ₄ 30% or less
- ₅ 40% or less
- ₆ 41% - 100%
- ₇ don't know



New operational processes

- 7** During the last 2 financial years, did this business implement any new or significantly improved operational processes (ie methods of producing or distributing goods or services)? B0700
- ₁ yes → go to **8**
- ₂ no → go to **10**

- 8** Mark all that apply. Were any of those new or significantly improved operational processes:
- developed by this business B0801
 - developed by this business in partnership with others B0802
 - obtained from others and significant improvements were made by this business B0803
 - obtained from others and no significant improvements were made by this business B0804

- 9** Were any of those new or significantly improved operational processes required because of the introduction of new goods or services? B0900
- ₁ yes
- ₂ no

New organisational / managerial processes

- 10** During the last 2 financial years, did this business implement any new or significantly improved organisational / managerial processes (ie significant changes in this business's strategies, structures or routines)? B1000
- ₁ yes → go to **11**
- ₂ no → go to **12**

- 11** Mark all that apply. Were any of those new or significantly improved organisational / managerial processes:
- developed by this business B1101
 - developed by this business in partnership with others B1102
 - obtained from others and significant improvements were made by this business B1103
 - obtained from others and no significant improvements were made by this business B1104

New marketing methods

- 12** During the last 2 financial years, did this business implement any new or significantly improved sales or marketing methods which were intended:
- to increase the appeal of goods or services for specific market segments
 - to gain entry to new markets
- ₁ yes → go to **13**
- ₂ no → go to **14**



13 Mark all that apply. Were any of those new or significantly improved sales or marketing methods:

- developed by this business B1301
- developed by this business in partnership with others B1302
- obtained from others and significant improvements were made by this business B1303
- obtained from others and no significant improvements were made by this business B1304

Activities to support innovation

14 Mark all that apply for each item listed. During the last 2 financial years, did this business do any of the following?

Note:

- To innovate means to develop or introduce new or significantly improved: goods or services; operational processes; organisational / managerial processes or marketing methods.
- It is acceptable to mark both 'done to support innovation' and 'done, though not to support innovation', if applicable

	done to support innovation	done, though not to support innovation	not done	don't know
acquisition of machinery and equipment	<input type="radio"/> B1401	<input type="radio"/> B1402	<input type="radio"/> B1403	<input type="radio"/> B1404
acquisition of computer hardware and software	<input type="radio"/> B1411	<input type="radio"/> B1412	<input type="radio"/> B1413	<input type="radio"/> B1414
acquisition of other knowledge (eg licences, patents or other intellectual property)	<input type="radio"/> B1421	<input type="radio"/> B1422	<input type="radio"/> B1423	<input type="radio"/> B1424
implementing new business strategies or management techniques	<input type="radio"/> B1431	<input type="radio"/> B1432	<input type="radio"/> B1433	<input type="radio"/> B1434
organisational restructuring	<input type="radio"/> B1441	<input type="radio"/> B1442	<input type="radio"/> B1443	<input type="radio"/> B1444
design (eg industrial, graphic or fashion design)	<input type="radio"/> B1451	<input type="radio"/> B1452	<input type="radio"/> B1453	<input type="radio"/> B1454
marketing the introduction of new goods or services	<input type="radio"/> B1461	<input type="radio"/> B1462	<input type="radio"/> B1463	<input type="radio"/> B1464
market research	<input type="radio"/> B1471	<input type="radio"/> B1472	<input type="radio"/> B1473	<input type="radio"/> B1474
significant changes to marketing strategies	<input type="radio"/> B1481	<input type="radio"/> B1482	<input type="radio"/> B1483	<input type="radio"/> B1484
employee training	<input type="radio"/> B1491	<input type="radio"/> B1492	<input type="radio"/> B1493	<input type="radio"/> B1494

15 For the last financial year, please estimate this business's combined expenditure on product development and related activities:

If any answers are 'zero' please write **0**

research & development (copy any answer from question 24 in Section A)	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	B1501
design	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	B1502
marketing and market research	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	B1503
other (eg prototyping, trials, commercialisation)	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	B1504
TOTAL product development and related activities	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	B1505



Abandoned or not yet completed activities

16 Mark one oval for each item listed. During the last 2 financial years, did this business abandon any activity that was intended to result in the development or introduction of new or significantly improved:

	yes	no	don't know	
goods or services	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1601
operational processes	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1602
organisational / managerial processes	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1603
marketing methods	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1604

17 Mark one oval for each item listed. During the last 2 financial years, did this business start but not yet complete any activities to develop or introduce any new or significantly improved:

	yes	no	don't know	
goods or services	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1701
operational processes	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1702
organisational / managerial processes	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1703
marketing methods	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1704

18 Where to next?

	yes	no
Did you answer 'yes' to 3 ?	<input type="radio"/>	<input type="radio"/>
Did you answer 'yes' to 7 ?	<input type="radio"/>	<input type="radio"/>
Did you answer 'yes' to 10 ?	<input type="radio"/>	<input type="radio"/>
Did you answer 'yes' to 12 ?	<input type="radio"/>	<input type="radio"/>
Did you answer 'done to support innovation' to any part of 14 ?	<input type="radio"/>	<input type="radio"/>
Did you answer 'yes' to any part of 16 or 17 ?	<input type="radio"/>	<input type="radio"/>

If you answered 'no' to all of the questions above, go to question **26** on page 20. Otherwise continue to the next page (page 17).



Reasons

19 Mark one oval for each item listed. During the last 2 financial years, what were the reasons that this business tried to innovate?

Note: to innovate means to develop or introduce new or significantly improved: goods or services; operational processes; organisational / managerial processes or marketing methods.

	yes	no	don't know	
to improve productivity	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1901
to increase revenue	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1902
to reduce costs	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1903
to increase responsiveness to customers	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1904
to increase market share	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1905
to establish / exploit new market opportunities	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1906
to improve work safety standards	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1907
to reduce energy consumption	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1908
to reduce environmental impact	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1909
to replace goods or services being phased out	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B1910

Sources of ideas or information

20 Mark one oval for each item listed. During the last 2 financial years, did this business find any of the following important as a source of ideas or information for innovation?

Note: to innovate means to develop or introduce new or significantly improved: goods or services; operational processes; organisational / managerial processes or marketing methods.

	yes	no	don't know	
new staff (those appointed in the last 2 years)	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2001
existing staff	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2002
other businesses within the business group (eg subsidiaries or parent companies)	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2003
customers	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2004
suppliers	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2005
competitors and other businesses from the same industry	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2006
businesses from other industries (not including customers or suppliers)	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2007
professional advisors, consultants, banks or accountants	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2008
books, journals, patent disclosures or Internet	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2009
conferences, trade shows or exhibitions	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2010
industry or employer organisations	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2011
universities or polytechnics	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2012
Crown Research Institutes, other research institutes, or research associations	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2013
government agencies	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	B2014



Co-operative arrangements

21 In the following questions **co-operative arrangements** mean actively participating with another organisation or individual, in activities for the purpose of **innovation**.

Note:

- this includes collaborative arrangements for the purpose of innovation
- each party should bring its own knowledge or expertise to the co-operation
- partners do not necessarily derive immediate commercial benefit from the co-operation

Don't include: any arrangement where development work is contracted out without this business taking any active part in it.

22 During the last 2 financial years, did this business have any **co-operative arrangements for the purpose of innovation?**

B2200

Note: to innovate means to develop or introduce new or significantly improved: goods or services; operational processes; organisational / managerial processes or marketing methods.

- ₁ yes → go to **23**
- ₂ no → go to **26**

23 Mark all that apply for each item listed. During the last 2 financial years, with what types of businesses or institutions did this business have those co-operative arrangements?

	NZ	overseas	no co-operation
customers	<input type="radio"/> B2301	<input type="radio"/> B2302	<input type="radio"/> B2303
suppliers	<input type="radio"/> B2311	<input type="radio"/> B2312	<input type="radio"/> B2313
businesses from other industries (not including customers or suppliers)	<input type="radio"/> B2321	<input type="radio"/> B2322	<input type="radio"/> B2323
competitors and other businesses from the same industry	<input type="radio"/> B2331	<input type="radio"/> B2332	<input type="radio"/> B2333
other businesses within the business group (eg subsidiaries or parent companies)	<input type="radio"/> B2341	<input type="radio"/> B2342	<input type="radio"/> B2343
universities or polytechnics	<input type="radio"/> B2351	<input type="radio"/> B2352	<input type="radio"/> B2353
Crown Research Institutes, other research institutes, or research associations	<input type="radio"/> B2361	<input type="radio"/> B2362	<input type="radio"/> B2363

24 Mark all that apply. During the last 2 financial years, in which **activities** did this business engage in co-operative arrangements, as defined in question **21** to **23**?

- joint marketing or distribution B2401
- joint production B2402
- joint R&D B2403
- joint prototype development B2404
- joint training B2405
- other B2406



25 Mark all that apply. During the last 2 financial years, for what reasons did this business engage in co-operative arrangements, as defined in question **21** to **23**?

- | | | |
|-----------------------|-------------------------------------|-------|
| <input type="radio"/> | sharing costs | B2501 |
| <input type="radio"/> | spreading risk | B2502 |
| <input type="radio"/> | access to R&D | B2503 |
| <input type="radio"/> | access to production processes | B2504 |
| <input type="radio"/> | access to management skills | B2505 |
| <input type="radio"/> | access to new distribution channels | B2506 |
| <input type="radio"/> | access to work practices | B2507 |
| <input type="radio"/> | access to financial resources | B2508 |
| <input type="radio"/> | access to new markets | B2509 |
| <input type="radio"/> | access to new suppliers | B2510 |
| <input type="radio"/> | other | B2511 |



Other factors

26 Mark all that apply. Which of the following does this business or the parent company use to protect intellectual property?

Note: intellectual property refers to the ownership of ideas and control over the use of those ideas.

- patents B2601
- copyrights B2602
- trademarks B2603
- registration of design B2604
- secrecy B2605
- confidentiality agreement B2606
- reaching the market first B2607
- goods, services or processes too complex to copy B2608
- none of the above B2609

27 Mark one oval for each item listed. During the last 2 financial years, to what degree did the following factors hamper this business's ability to innovate?

Note: to innovate means to develop or introduce new or significantly improved: goods or services; operational processes; organisational / managerial processes or marketing methods.

	hampered innovation to a:				
	high degree	medium degree	low degree	did not hamper	
costs to develop or introduce	<input type="radio"/> ₁	<input type="radio"/> ₂	<input type="radio"/> ₃	<input type="radio"/> ₄	B2701
lack of information	<input type="radio"/> ₁	<input type="radio"/> ₂	<input type="radio"/> ₃	<input type="radio"/> ₄	B2702
lack of marketing expertise	<input type="radio"/> ₁	<input type="radio"/> ₂	<input type="radio"/> ₃	<input type="radio"/> ₄	B2703
lack of co-operation with other businesses	<input type="radio"/> ₁	<input type="radio"/> ₂	<input type="radio"/> ₃	<input type="radio"/> ₄	B2704
access to intellectual property rights (eg licensing of patents or copyrights)	<input type="radio"/> ₁	<input type="radio"/> ₂	<input type="radio"/> ₃	<input type="radio"/> ₄	B2705
lack of appropriate personnel	<input type="radio"/> ₁	<input type="radio"/> ₂	<input type="radio"/> ₃	<input type="radio"/> ₄	B2706
lack of management resources (eg time)	<input type="radio"/> ₁	<input type="radio"/> ₂	<input type="radio"/> ₃	<input type="radio"/> ₄	B2707
government regulation	<input type="radio"/> ₁	<input type="radio"/> ₂	<input type="radio"/> ₃	<input type="radio"/> ₄	B2708



32 Mark all that apply. What was the nature of the goods or services produced overseas?

- manufacture of parts and components C3301
- manufacture of finished goods C3302
- product assembly C3303
- services used by this business C3304
- services supplied to this business's customers C3305
- none of the above C3306

33 Mark all that apply. Why is this business involved in overseas production?

- to lower production costs C3301
- to reduce transport costs to final market(s) C3302
- to gain access to technology not available domestically C3303
- to gain access to specialist skills not available domestically C3304
- to improve access to suppliers, distributors or clients C3305
- to increase scale and capacity C3306
- to grow business via greater ownership of supply chain / closer relationships with customers C3307
- to avoid overseas tariffs and regulatory restrictions on exports from NZ C3308
- other C3309

34 Mark one oval. In the last financial year which was the main market for the goods or services produced by this business overseas?

- primarily sold in the country in which they are produced C3400
- primarily sold in other overseas markets
- primarily sold in NZ

Strategies for overseas production of goods or services

35 Mark all that apply. Which strategies to assist with overseas production of goods or services have been used by this business?

- locating NZ staff overseas C3501
- employing local staff in management or supervisory positions overseas C3502
- employing staff from overseas in NZ C3503
- managing overseas production of goods or services from NZ C3504

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Barriers to overseas production of goods or services

36 Mark all that apply. In the last 3 financial years, which of the following had a negative impact on this business's overseas production activities?

- limited understanding of overseas business and legal frameworks C3601
- limited access to finance for overseas production C3602
- language and cultural difficulties C3603
- exchange rate volatility C3604
- exchange rate level C3605
- difficulty monitoring overseas operations C3606
- limited experience with establishing overseas production arrangements C3607
- limited access to skilled workforce overseas C3608
- higher transportation costs and logistical complexities C3609
- loss of control over proprietary technology C3610
- inadequate infrastructure overseas C3611

Withdrawal from overseas production of goods or services

37 Within the last 3 financial years has this business stopped any production activities in a particular overseas location?

- yes → go to 38 C3700
- no → go to 39

38 Mark all that apply. Why did this business stop overseas production of goods or services?

- difficulties with legal / regulatory environment C3801
- increase in labour costs C3802
- increase in other costs of production C3803
- difficulty monitoring / maintaining product quality C3804
- profitability lower than expected C3805
- relocated to alternative overseas location C3806
- relocated to NZ C3807
- other C3808

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Part v: Purchases from overseas

39 Mark all that apply. In the last financial year which of the following has this business directly purchased from overseas?

Include only purchases of goods or services available from overseas suppliers with little or no input from this business into their design and developments.
Don't include goods purchased in NZ by this business that were imported by other businesses.

- finished goods for resale in NZ C3901
- raw materials, components or equipment used by this business in NZ C3902
- services used by this business (eg accounting, back-office functions) C3903
- services supplied to customers C3904
- licenses / franchises / technology C3905
- other C3906
- none of the above → go to 41 C3907

→ go to 40

40 Mark all that apply. In the last financial year why did this business source goods or services from overseas?

- no domestic supplier of required goods or services C4001
- technologies not available domestically C4002
- overseas sources are able to supply required quantities faster C4003
- cheaper sources available overseas C4004
- higher quality sources available overseas C4005
- overseas sources able to respond more flexibly to requirements C4006
- new business contacts or alliances C4007
- existing NZ suppliers moved overseas C4008
- other C4009

Follow-up study

41 The Ministry of Economic Development (MED) are interested in doing a follow-up study based on Section C of this questionnaire. The study would involve contacting a small number of the businesses which have responded to this survey to get deeper information about specific types of international engagement. The information collected will be used to gain an understanding of business behaviours in order to improve future business policy advice.

To make the follow-up study useful, MED will need the information given in this questionnaire as well as contact details of your business (eg name, address, email, phone, fax). Only if you give consent can Statistics New Zealand pass on your individual information with contact details attached.

Yes, I agree to take part in the follow-up study and have my identified business information passed to the Ministry of Economic Development. Please mark YES and sign. C4100

yes → _____
 (Signature of person consenting)

No, I do not agree to take part in the follow-up study and I do not consent to having my identified business information passed on to the Ministry of Economic Development. Please mark NO and sign.

no → _____
 (Signature of person refusing consent)

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Other details

42 How long did it take to complete this questionnaire? C4201

Include:

- The time spent reading the instructions, working on questions and obtaining information
- The time spent by all employees in collecting and providing this information

hrs mins

43 Please make any comments that would help Statistics New Zealand interpret the information that you have given. C4300

44 Who should we contact if we have any queries about the information you have given? If necessary, please correct errors or provide details in the white boxes below each item.

Name _____ C4401

Position _____ C4402

Email _____ C4403

Phone _____ → C4404

Fax _____ → C4405

Cellphone _____ → C4406

I declare that this questionnaire has been completed to the best of my knowledge.

Signature _____ Date Day Month Year C4407

Thank you for your time and effort.

The main results of all our surveys are available at www.stats.govt.nz

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www.stats.govt.nz

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