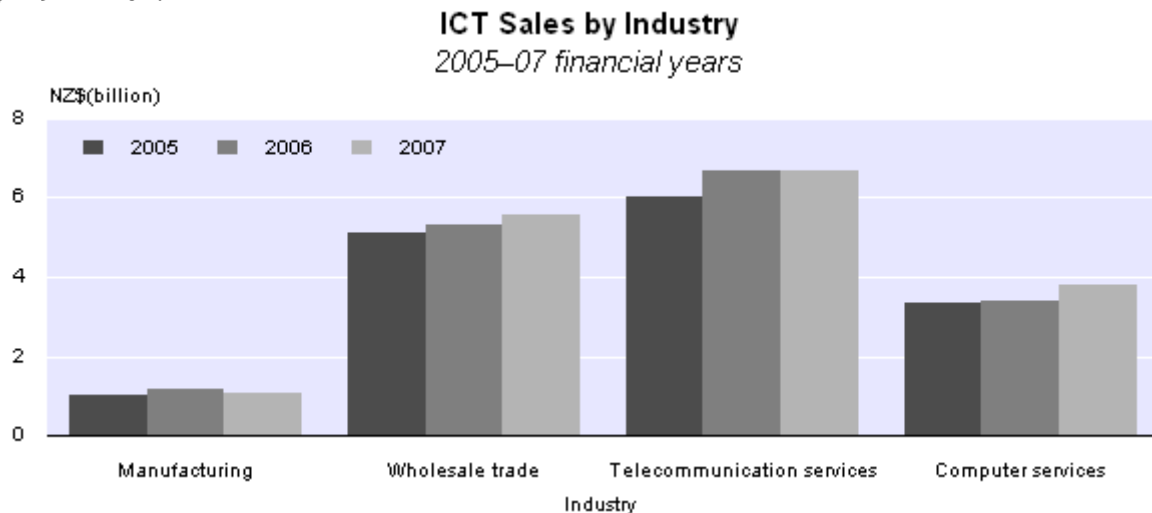


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Information and Communication Technology Supply Survey 2006/07

Highlights

- Total sales of information and communication technology (ICT) goods and services rose 3.3 percent to \$18,228 million in the 2007 financial year.
- Electronic devices and equipment remained the leading exported ICT commodity with \$304 million of sales, despite decreasing by \$219 million.
- Telecommunication and program distribution services remained the dominant ICT commodity and 93.9 percent of its sales were dominated by large firms.
- Computer services, which made up 20.9 percent of total ICT sales, increased 12 percent.



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Government Statistician

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Commentary

Background

The Information and Communication Technology (ICT) Supply Survey: 2006/07 is the third of a time series, based on OECD definitions to measure the ICT industry. The ICT Supply Survey: 2006/07 measures the sale of goods and services from businesses associated with ICT industries. The ICT Supply Survey replaced the previous Statistics New Zealand Information Technology (IT) Survey (1993–2004).

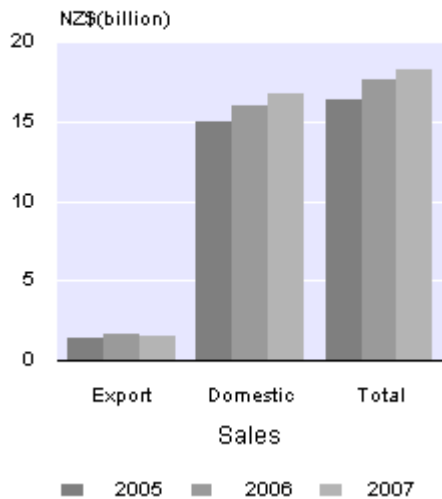
Data from the ICT Supply Survey: 2006/07 will be included in the OECD Science, Technology and Industry scoreboard (www.oecd.org/sti/scoreboard) which will be updated later in 2008.

Total ICT sales

Results from the ICT Supply Survey for the 2007 financial year show that total sales of ICT goods and services were valued at \$18,228 million, with 91.6 percent (\$16,703 million) of this value being sold domestically, and 8.4 percent (\$1,525 million) being sold to export markets. This is a 3.3 percent increase in total sales, with domestic sales rising 4.2 percent and export sales down 5.3 percent from the 2006 financial year.

Sales of ICT Goods and Services

2005–07 financial years



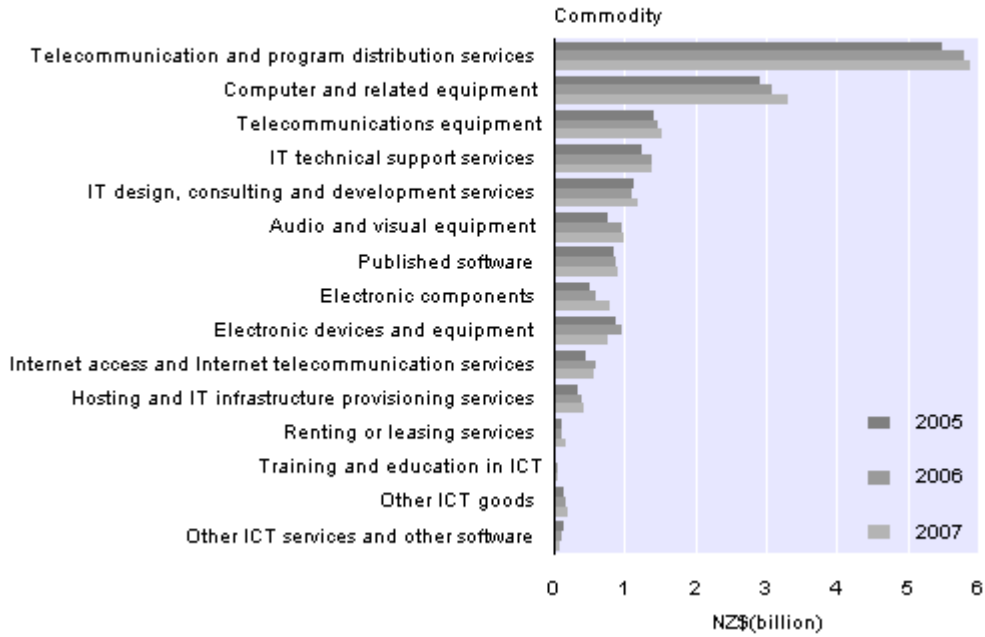
Sales of ICT commodities

For the 2007 financial year, sales of ICT services increased 2.5 percent to reach \$9,756 million, while sales of ICT goods (including published software) increased 4.3 percent to \$8,472 million.

Telecommunication and program distribution services remains the most significant commodity with a 1.5 percent increase in sales to reach \$5,891 million.

In the 2007 financial year, electronic components had the largest increase in sales, up by 29.5 percent to \$777 million. Electronic devices and equipment had the largest decrease, with sales down 19.7 percent to \$767 million in 2007.

Sales of ICT by Commodity
2005–07 financial years

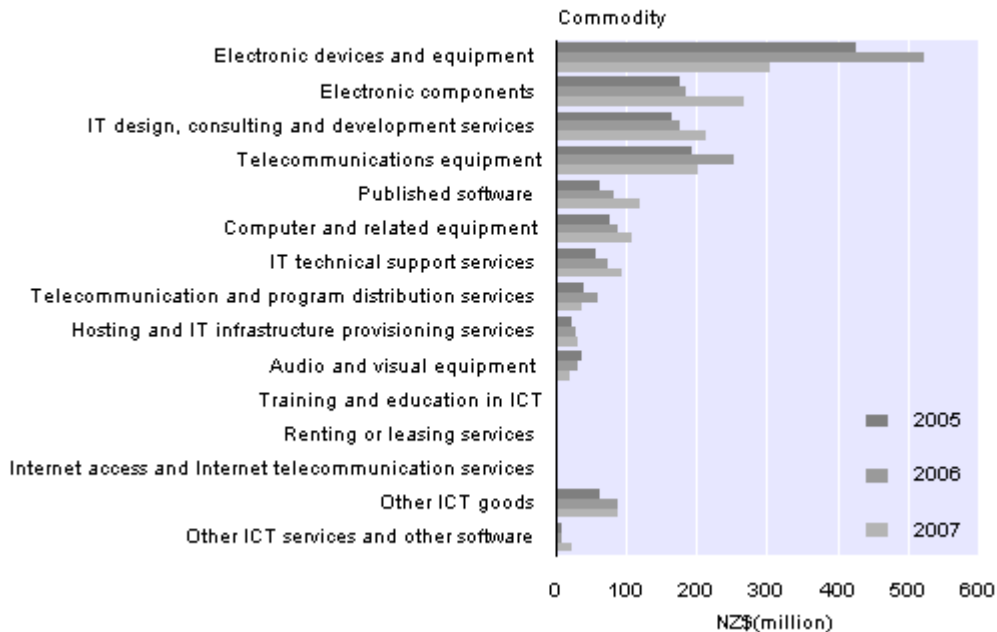


Export sales of ICT commodities

For the 2007 financial year, sales of ICT goods were 73.1 percent (\$1,115 million) of the total export value (\$1,525 million), while ICT services were 26.9 percent (\$410 million) of the total.

Even though export sales of electronic devices and equipment decreased \$219 million to reach \$304 million in 2007, it still remains the highest-value exported commodity category, with 19.9 percent of the total export value.

Export Sales of ICT by Commodity 2005–07 financial years



Electronic components and IT design, consulting and development services overtook telecommunication equipment, ranking second and third largest commodities with export sales, respectively.

ICT sales, by industry

This is the first time that Statistics New Zealand released figures of ICT sales by industry. Historical data were also published based on the dataset collected in 2004/05 and 2005/06 financial years.

ICT manufacturing sales decreased 10.8 percent, to \$1,054 million. ICT manufacturing includes computer and business machine manufacturing, telecommunication, broadcasting and transceiving equipment manufacturing, electronic equipment manufacturing, electric cable and wire manufacturing, professional and scientific manufacturing, and medical and scientific manufacturing.

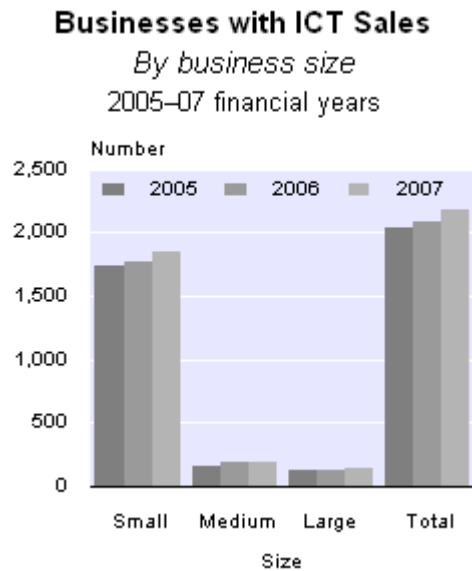
ICT related wholesale trade increased 4.7 percent, from \$5,296 million in the 2006 financial year to \$5,546 million in the 2007 financial year. The ICT wholesale trade industry includes computer wholesaling, business machine wholesaling, electrical and electronic equipment wholesaling, and professional equipment wholesaling.

Telecommunication services, the largest ICT sales industry, remained relatively steady with a small increase of 0.1 percent in the 2007 financial year.

Computer services had the largest increase in sales and represented 20.9 percent of total ICT sales (\$3,810 million out of total ICT sales of \$18,228 million). Computer services includes data processing services, information storage and retrieval services, computer maintenance services, computer consultancy services, and plant hiring and leasing.

ICT business, by industry and business size

In the 2006/07 ICT Supply Survey population, 2,181 enterprises with two or more employees sold ICT goods and services, an increase of 93 enterprises from the 2005/06 population. Of these, 1,842 (84.5 percent) were classified as small, an increase of 81 enterprises. There were also 198 medium-sized ICT businesses (9.1 percent of total), an increase of 3 enterprises; and 141 large businesses (6.5 percent of total), an increase of 9 enterprises.



For the 2007 financial year, the number of enterprises with ICT sales in the computer consultancy services industry increased by 105, to 1,155 enterprises. This was 53 percent of the total population of enterprises with ICT sales (2,181).

For the purpose of the ICT Supply Survey a small business is defined as having two to less than 20 rolling mean employees (RME), a medium-sized business as having 20 to less than 50 RME, and a large business as having 50 or more RME.

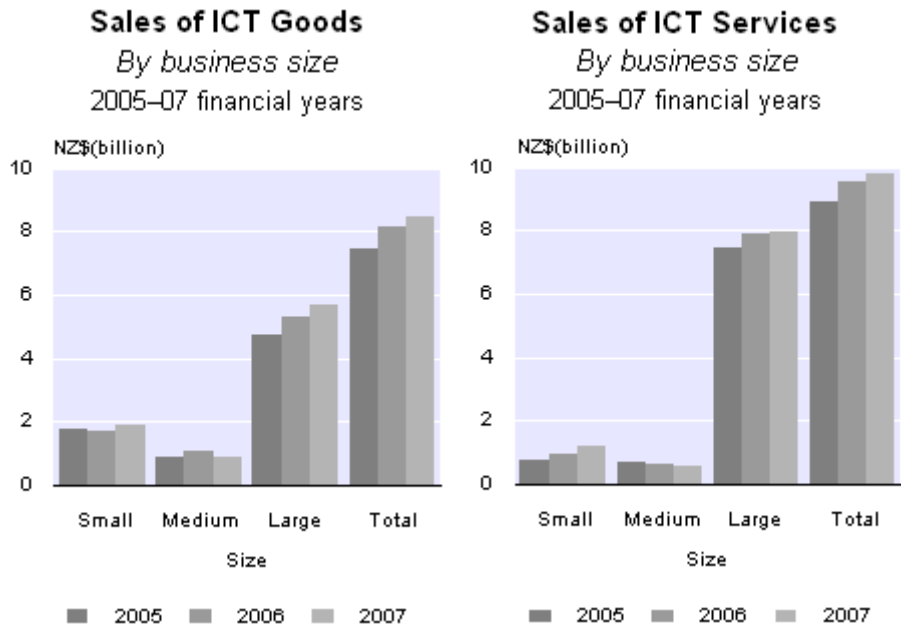
ICT sales, by business size

In total sales of ICT goods and services, the larger enterprises were once again dominant in the 2007 financial year, accounting for \$13,625 million (74.7 percent) of total ICT sales. Medium-sized businesses contributed \$1,485 million (8.1 percent) and small businesses \$3,118 million (17.1 percent).

For the 2007 financial year, sales of ICT goods from small businesses increased \$150 million to reach \$1,883 million. Sales for medium-sized businesses decreased \$152 million (to \$918 million) while sales for large businesses recorded an increase of \$350 million (to \$5,671 million).

In 2007, sales of ICT services from medium-sized businesses decreased \$88 million to \$566 million, while small and large businesses experienced increased sales of \$279 million and \$45 million, respectively.

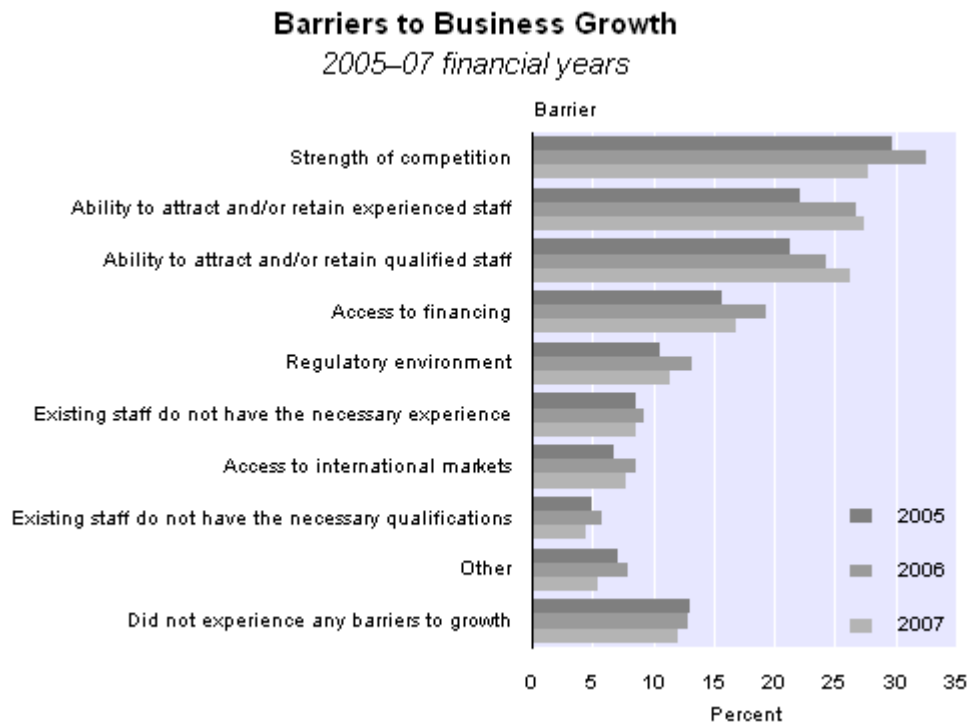
For telecommunication and program distribution services, 93.9 percent of its total sales was dominated by large businesses, the highest compared with other large businesses in other categories.



ICT industry barriers to growth

For the ICT Supply Survey 2006/07, strength of competition remains the greatest barrier to business growth, at 27.8 percent. However, comparing 2007 with 2006, there was a 14.5 percent decrease in the number of enterprises reporting this as a barrier.

The ability to attract and/or retain experienced staff (27.5 percent) and the ability to attract and/or retain qualified staff (26.3 percent) categories were the second and third greatest barriers reported, increasing by 8 percent and 2.9 percent, respectively.



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Technical notes

Background to the Information and Communication Technology Supply Survey release

The Information and Communication Technology (ICT) Supply Survey: 2006/07 is the third of a time series, based on OECD definitions to measure the ICT industry. The need for a new survey is recognition that these two technology categories are converging at a fast rate and are also becoming widespread.

Statistics in this release are drawn from the ICT Supply Survey: 2006/07. The objectives of this survey are to provide information on the total income, export income and domestic income from sales of ICT in New Zealand.

IT Survey 1993–2004

Although the previous Statistics New Zealand IT Survey (1993–2004) measured some of the commodities included in the new ICT Supply Survey, they are not directly comparable. The ICT Supply Survey has a much wider population base. It now includes businesses associated with the electronics and other ICT industries that were not in scope for the IT Survey. Commodity classifications are also different between the two surveys. There is a greater variety of commodities in the new ICT Supply Survey and existing commodity classifications have been redefined.

Reference period

The reference period for the survey was the 2007 financial year. For enterprises with balance dates falling between 1 January and 30 September, this is financial data for the year ending 2007. For enterprises with balance dates falling between 1 October and 31 December, this is financial data for the year ending 2006.

Population

The ICT Supply Survey is a census of all enterprise units with 2.0 or more rolling mean employees (RME) engaged in ICT activity in New Zealand. RME is the average size of the enterprise employment count over the past 12 months. The population for the ICT Supply Survey: 2006/07 was 2,752 enterprises.

All units with greater than 2.0 RME, and classified on the Statistics NZ Business Frame to the following ANZSIC codes, are included in the survey:

C283900 Professional and scientific equipment manufacturing not elsewhere classified (nec)

Units mainly engaged in manufacturing draughting, meteorological, surveying or other professional or scientific instruments or equipment nec, or watches, clocks or other timing instruments.

C284100 Computer and business machine manufacturing

Units mainly engaged in manufacturing computers or business machines.

C284200 Telecommunication, broadcasting and transceiving equipment manufacturing

Units mainly engaged in manufacturing telecommunications, broadcasting or transceiving equipment.

C284900 Electronic equipment manufacturing nec

Units mainly engaged in manufacturing radio receiving sets (except radio transceivers or radio telegraphic receivers), television receiving sets, sound reproducing and/or recording equipment, headphones, hearing aids or electronic equipment or components nec.

C285200 Electric cable and wire manufacturing

Units mainly engaged in manufacturing electric or telephone cable, wire or strip, including stranded, braided or insulated non-ferrous wire, cable or strip.

F461200 Professional equipment wholesaling

Units mainly engaged in wholesaling scientific, medical or other professional equipment.

F461300 Computer wholesaling

Units mainly engaged in the wholesaling of computers or computer peripheral equipment.

F461400 Business machine wholesaling nec

Units mainly engaged in the wholesaling of office or business machines or equipment nec.

F461500 Electrical and electronic equipment wholesaling nec

Units mainly engaged in the wholesaling electrical or electronic equipment nec.

J712000 Telecommunication services

Units mainly engaged in providing telecommunication services to the public by wire, cable or radio.

L783100 Data processing services

Units mainly engaged in providing data processing services. Also included are units mainly engaged in providing time-sharing services.

L783200 Information storage and retrieval services

Units mainly engaged in providing information storage and retrieval services (other than library and bibliographic services).

L783300 Computer maintenance services

Units mainly engaged in providing computer maintenance or repair services.

L783400 Computer consultancy services

Units mainly engaged in providing computer consultancy services, computer systems analysis or computer programming services.

A keyword search was used on the Statistics NZ Business Frame to find ICT units from the following two ANZSIC codes. These units also had to have greater than 2.0 RME to be included in the survey:

C283200 Medical and surgical manufacturing

Units mainly engaged in manufacturing medical, surgical or dental equipment, including dentures.

L774300 Plant hiring or leasing

Units mainly engaged in the leasing, renting or hiring of industrial machinery, plant or equipment (except transport equipment) without operators, from stock physically held for that purpose.

In addition, enterprises are also added if they have greater than 2.0 RME and are a member of one of the following lists:

- New Zealand Software Association (NZSA)
- New Zealand Trade and Enterprise (NZTE)

Also included are any other enterprises that have more than 2.0 RMEs and are known to be significant participants in the ICT industry outside the above sources and which are not classified on the Statistics NZ Business Frame to any of the above ANZSIC codes. Known information communication and technology retailers were also added to the population.

Data collection

The ICT Supply Survey: 2006/07 is a postal survey to all organisations meeting the population criteria.

Response rate

A target overall response rate of 75 percent was specified in terms of the number of enterprise units from the survey population. Key businesses were also identified and targeted with a

response rate of 95 percent. These key businesses were identified as those having the highest total GST sales in the 2007 financial year, or which were significant contributors to commodity or export totals in the ICT Supply Survey: 2005/06.

An overall response rate of 78 percent was achieved, including 94 percent of key businesses.

Imputation

Imputation is used to obtain data in cases of unit or item non-response. Unit non-response occurs where an enterprise does not return the questionnaire. Item non-response occurs where a returned questionnaire is incomplete. The same imputation methods are used for handling both unit and item non-response.

Historical imputation is used to impute key enterprises and enterprises with sales greater than \$10 million in the 2005/06 financial year. This involves bringing over data from a previous cycle, and scaling this data based on changes to available auxiliary data over the same period.

For non-key enterprises, random donor imputation is used to impute both categorical and numerical items. This method uses the data from a randomly chosen respondent in the same imputation cell. Imputation cells group enterprises with similar characteristics together and are usually defined by industry and RME.

Non-sampling error

Non-sampling error occurs for reasons such as respondent error, frame quality and errors in processing. While every effort is made to minimise these types of error, they may still occur. It is not possible to quantify their effect.

Statistics New Zealand has used standard procedures in attempting to control non-sample error. This includes pilot testing of questionnaires and survey quality control procedures.

Data quality

ICT supply survey measures financial information by ICT commodities (see definition below). Given the nature of the information collected, there are limitations on the level of accuracy that can be expected from the ICT supply survey data as following:

- For bundled products, for example, a computer preloaded with software, respondents are asked to split the value of sales between the appropriate categories. When they cannot split the bundle between categories, respondents are asked to decide which item in the bundle is of the highest value and enter the total sales value from the bundle into the appropriate category.
- Businesses do not always record their sales by commodities, thus it is hard to split financial values across different commodities.
- Some questions can be interpreted differently by respondents, based on their understanding of ICT. This means that results at both the aggregate level and at the commodity level can vary across businesses and across financial years based on how these questions are interpreted.

Confidentiality

Data published from the ICT Supply Survey must conform to the provisions of the Statistics Act 1975, which requires that all statistical information published by Statistics NZ shall be arranged in such a manner as to prevent any particulars belonging to any respondent from being identifiable. Cell suppression has been used to prevent the disclosure of sensitive information.

Concepts and terms

ANZSIC

The Australian and New Zealand Standard Industrial Classification (ANZSIC).

Business Frame

A register of all economically significant businesses operating in New Zealand, maintained by Statistics New Zealand from which the survey population is drawn.

Enterprise

A single business entity operating in New Zealand either as a legally constituted body, such as a company, trust, local or central government trading organisation, incorporated society, or self employed individual.

Rolling mean employment (RME)

The average size of the enterprise employment count over the past 12 months. This number is sourced from the Statistics New Zealand Business Frame which is updated on a monthly basis by employers.

Business size

Small business: between 2 and less than 20 RME

Medium business: RME between 20 and less than 50

Large business: 50 or more RME.

OECD definition of ICT goods and services

ICT goods and services fulfil or enable the function of information processing and communication by electronic means. Alternatively, ICT goods may also use electronic processing to detect, measure and/or record physical phenomena or control a physical process.

ICT commodity definition

The following is a list of ICT commodity categories used in the ICT Supply Survey questionnaire, and examples relating to each category. ICT goods commodities are defined by the internationally recognised Harmonized System (HS).

Telecommunications equipment

- telephones, facsimile machines, answering machines
- telephone and data switching and transmission equipment
- radio frequency (RF) and fixed-line equipment
- radio and television transmitting equipment
- television cameras and radar apparatus
- burglar alarms, fire alarms or similar
- optical and coaxial fibre cables
- telecommunications aerials, connectors and conductors.

Computer and related equipment

- computers and other data processing machines
- computer printers, scanners, other peripheral units
- magnetic or optical storage units (eg CD- or DVD-drives)
- servers, routers, switches, structural cabling systems
- barcode scanners, EFTPOS machines
- computer parts and accessories (including printer cartridges; not including covers, carrying cases or similar).

Audio and visual equipment

- radio and television sets
- monitors, video recorders, video or digital cameras, projectors
- CD players, DVD players/recorders, MP3 players
- microphones, earphones, loudspeakers, amplifiers
- magnetic tapes or disks and other unrecorded media.

Electronic components

- electrical transformers, conductors, power supplies or parts thereof
- capacitors, resistors, inductors, printed circuits
- semiconductor devices including diodes, transistors, and integrated circuits
- television picture tubes, microwave tubes, other tubes or parts
- electronic subassemblies and parts thereof
- magnetic stripe cards, recorded or unrecorded.

Electronic devices and equipment

- navigation apparatus and devices
- scientific instruments and appliances

- industrial measurement and process control equipment
- electro-diagnostic medical equipment (eg ECG, MRI, ultrasound, CT, X-ray etc)
- electronic gas, liquid and electricity meters
- marine and aeronautical instruments and devices
- electronic calculating and accounting devices and office machinery.

Published software

- off-the-shelf (packaged) software developed for wide distribution and produced for multiple sale or licensing
- limited end-user licences as part of packaged software
- licensing services for the right to use computer software
- PC and gaming console games.

Telecommunication and program distribution services

- carrier services
- fixed or mobile services
- private network and data transmission services
- telecommunication repair and maintenance services
- audio/video broadcasting on a subscription or pay-to-view basis.

Internet access and Internet telecommunication services

- connections to, and carriage of, traffic on the Internet
- carrier services of Internet traffic by one ISP for another ISP
- telecommunication services on the Internet.

IT technical support services

- IT hardware repair and maintenance, routine testing of hardware
- providing technical expertise to solve IT-related problems
- maintenance and troubleshooting of software or hardware
- provision of software patches and upgrades
- management and monitoring of a client's IT infrastructure (ie hardware, software, networks)
- day-to-day management and operation of a client's computer system
- transforming information from one format or media to another
- data or disaster recovery services.

IT design, consulting and development services

- design and development of IT solutions
- creating and/or implementing software applications, custom programming, customisation and integration of packaged software
- developing and implementing client-specific networks
- developing client-specific computer systems.

Hosting and IT infrastructure provisioning services

- website or email hosting with or without integration of applications (online storefronts, order processing, data warehousing)
- supporting, hosting and managing business processes for a client (financial transaction/credit card processing, payroll processing, personnel administration, logistics services, help desks, call centre)
- provision of leased software applications from a centralised, hosted and managed computing environment
- data storage and management services, co-location services
- video and audio streaming services, computer time share.

Renting or leasing services

- computers, printers, peripheral units
- telephones, fax machines, pagers, cellphones
- radio and television equipment
- scientific, measuring or control apparatus.

Training and education in ICT

- post-school technical and vocational education
- in-house training services
- other education and training services.

Sales

Sales in New Zealand dollars for each ICT category.

Exports

Excludes goods sold to other New Zealand businesses who will export the goods at a later stage.

Sales to New Zealand end-users

Sales to those purchasers who buy goods for their own use, rather than for selling.

Sales to other New Zealand customers

Sales not classed as exports or sales to New Zealand end-users. This category includes sales to businesses that sell the ICT goods or services.

Goods and services pricing

The data reported in the ICT Supply Survey: 2006/07 is collected and reported in nominal dollar values at time of sale. These nominal sales figures combine price and volume movements. Price movements of these goods and services may disguise the volume or quantity change in goods and services sold.

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

Next release ...

Information and Communication Technology Supply Survey: 2007/08 will be released in April 2009.

Tables

The following tables are printed with this Hot Off The Press and can also be downloaded from the Statistics New Zealand website in Excel format. If you do not have access to Excel, you may use the [*Excel file viewer*](#) to view, print and export the contents of the file.

- 1.01 Information and communication technology sales of goods and services, by financial year
- 1.02 Information and communication technology sales of goods and services, by financial year, percent
- 2.01 Sales of information and communication technology, by commodity and sales type, by financial year
- 2.02 Sales of information and communication technology, by commodity and sales type, percent
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- 6.02 Barriers to business growth, by business size, percent