

Information and Communication Technology Supply Survey: 2014

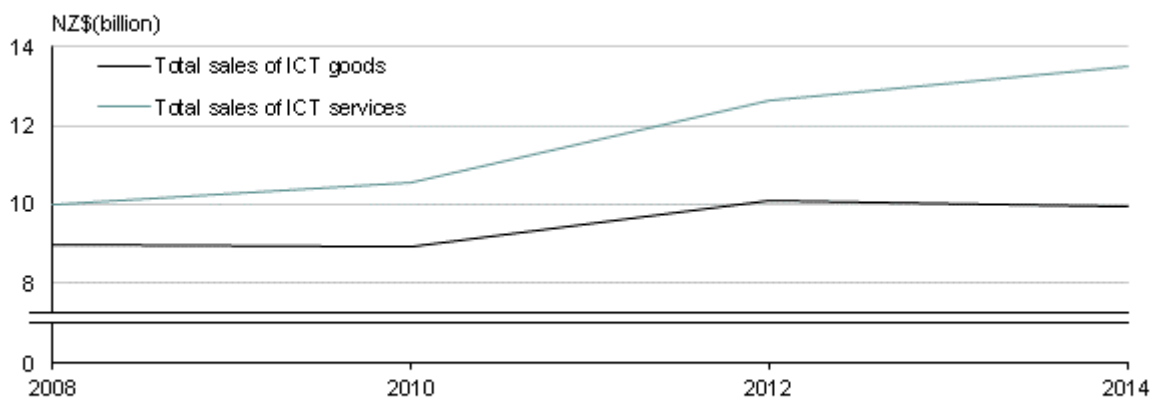
Embargoed until 10:45am – 02 April 2015

Key facts

In the 2014 year:

- Information and communication technology (ICT) goods and services were worth \$23.5 billion, 3 percent more than in 2012.
- Excluding software, sales of ICT goods decreased 4.5 percent to \$8.4 billion. Software sales increased 17 percent.
- Internet-related communication services increased 50 percent, while other communication services decreased.
- Exports of ICT services increased in value by 23 percent, driving ICT export revenue up to \$1.7 billion.
- Consumer delays in purchasing was the main barrier to ICT sales, as in 2012.

Sales of information and communication technology



Source: Statistics New Zealand

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ISSN 1178-0495
2 April 2015

Commentary

- Services drive increase in ICT sales
- Goods sales level off
- ICT services also drive exports
- Consumer delays and strength of competition main barriers to growth

Services drive increase in ICT sales

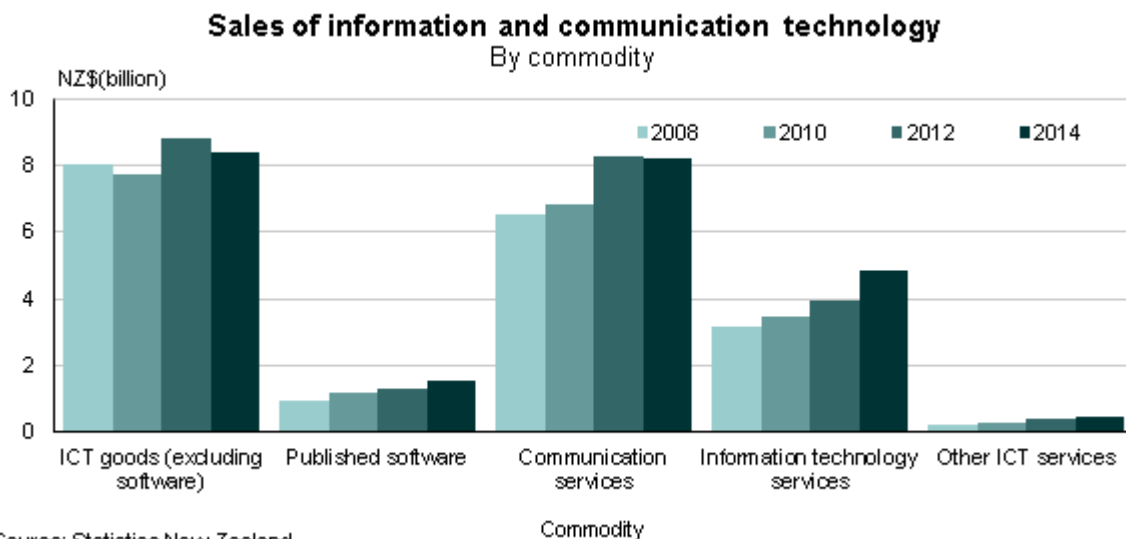
Sales of information and communication technology (ICT) goods and services were worth \$23.5 billion in 2014, up 3 percent from 2012. This rise was driven by an increase in sales of ICT services, which have been steadily growing as a proportion of ICT sector sales since 2008. Services now contribute nearly two-thirds of total ICT sector sales (\$13.5 billion).

The largest component of ICT services by revenue is communication services (\$8.2 billion). Within this, revenue from services related to Internet access has risen by over a \$1 billion since 2010, in part due to an increase in the number of connections and size of data caps – connections are up to nearly 2 million, from 1.7 million in 2011; the number of connections with caps of 50GB or more has increased 25-fold.

See [Internet Service Provider Survey: 2014](#) for more details.

In contrast, revenue from telecommunication and program distribution services, such as phone carrier services and video broadcasting, decreased by 10 percent to \$6.2 billion. These changes may come in part from the growing demand for online telecommunications services, such as VoIP (Voice over Internet Protocol), as well as the growth of online movie and TV screening services.

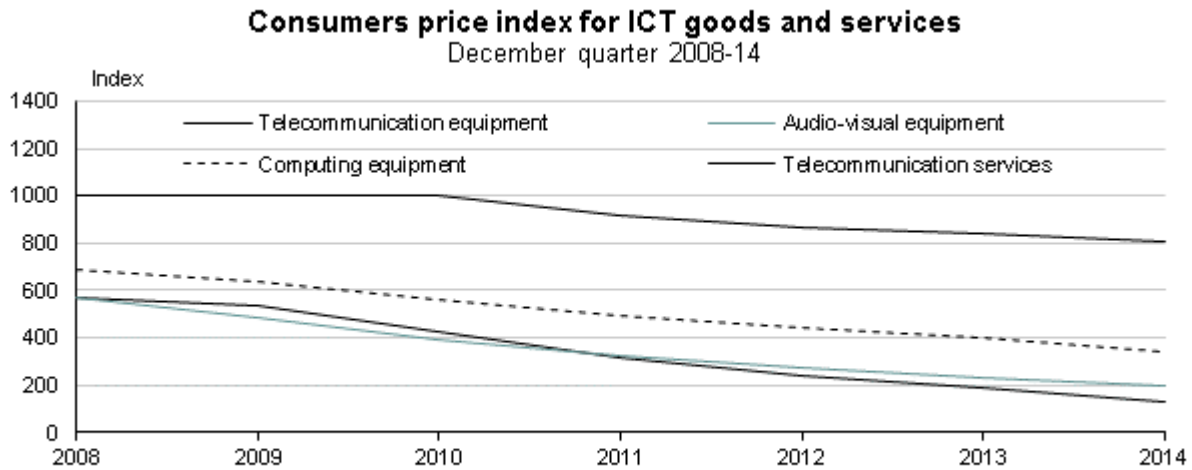
The other large component of ICT services is information technology services, which includes IT support, IT design, and IT hosting and infrastructure services. Most of this activity is carried out by businesses in the computer services and software industry, which has grown rapidly over the last eight years, and was worth \$6.1 billion in 2014, 25 percent more than in 2012.



Goods sales level off

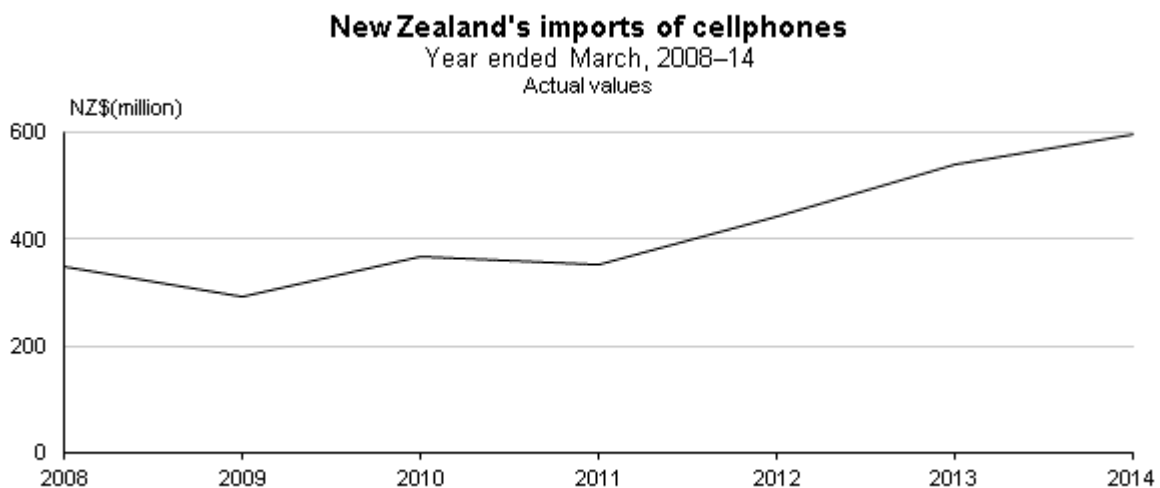
While the total sales of ICT services increased, sales of ICT goods had a small decrease in its contribution to the ICT sector – falling 2 percent since 2012 to be valued at \$9.9 billion in 2014. Published software was the category of ICT goods with the largest increase. Sales of ICT goods excluding published software decreased 4.5 percent over the two years.

Overall, consumer price index data indicates the price of ICT goods is decreasing. This shows that the value of total goods sales is not necessarily an indicator of either prices or volumes.



Source: Statistics New Zealand

Sales of telecommunication equipment have continued to increase, against the general trend for ICT goods. From overseas trade data, we know the value of cellphone imports into New Zealand has jumped over recent years, from \$350 million in 2010 to almost \$600 million in 2014. This increase may be driven by increasing demand for smartphones.



Source: Statistics New Zealand

Computer sales have not increased at the same rate as cellphone sales, and appear to be more volatile. The number of cellphones using a data connection has gone up from 1.9 million in 2011 to 3.7 million in 2014.

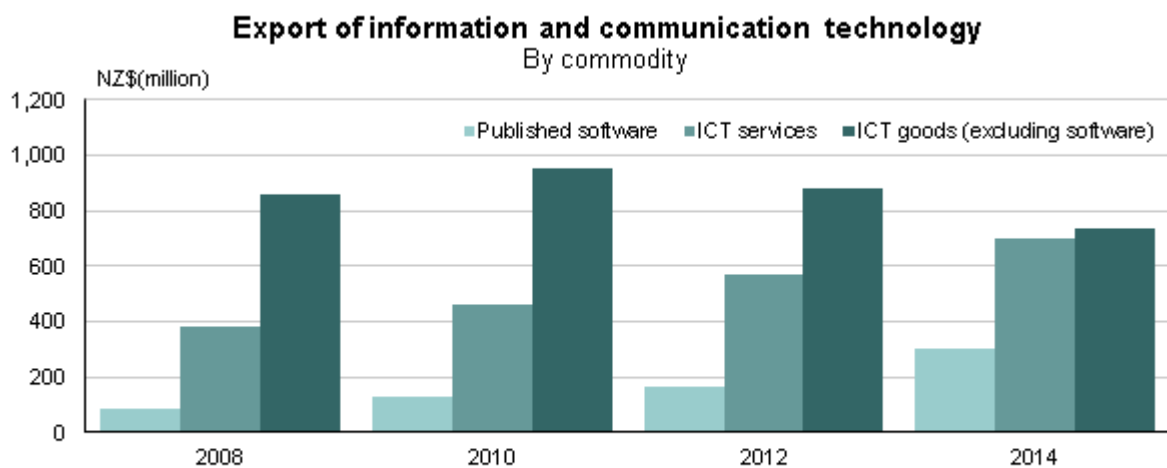
See [Internet Service Provider Survey: 2014](#) for more details.

As data plans increase in size, more of the functions traditionally associated with computers can be done on phones.

ICT services also drive exports

Sales of services rather than goods were the main driver for the increase in export sales. The total value of exports of ICT goods and services has increased 8 percent since 2012, to reach \$1.7 billion. Exports of ICT services were valued at \$697 million in 2014, a 23 percent increase from 2012. The majority of this came from information technology services, which includes IT technical support, hosting, and design services.

Published software was the only category of ICT goods to have a significant increase in export sales. New Zealand has never been a large exporter of more traditional ICT goods – overall, the manufacturing part of the ICT sector only contributes 3 percent of total ICT sales, while services contribute 63 percent.



Source: Statistics New Zealand

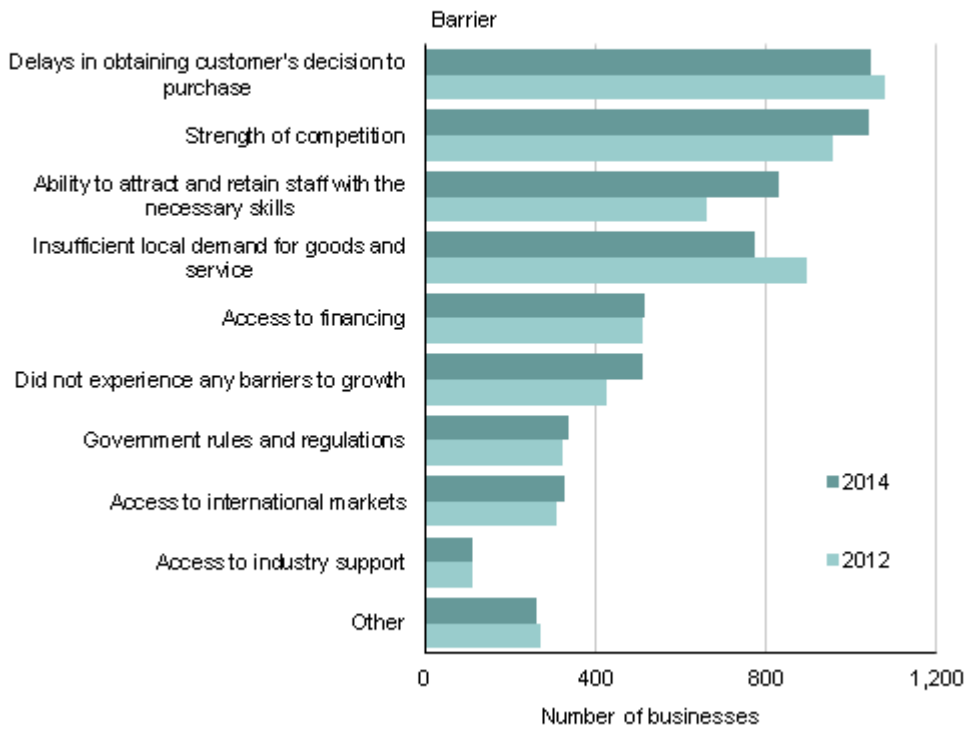
Consumer delays and strength of competition main barriers to growth

In 2014, consumer delays in purchasing were reported by ICT sector businesses as their greatest barrier to business growth, at 38 percent of businesses. The next biggest barrier, reported by 37 percent of businesses, was strength of competition. These two barriers were also the largest reported in the 2012 ICT release.

Just under one-third of businesses in the ICT supply survey reported difficulty in attracting and retaining staff. This is comparable with results from the 2014 Business Operations Survey, which reported that 35 percent of businesses with six or more employees had trouble filling job vacancies.

See [Business Operations Survey: 2014](#) for more details.

Barriers to business growth 2012 and 2014



Source: Statistics New Zealand

This release gathers data from these Statistics New Zealand sources:

- Information Communication Technology Supply Survey : 2014
- Internet Service Provider Survey: 2014
- Research and Development Survey: 2014
- Business Operations Survey: 2014
- consumer price index data
- overseas trade data.

For more detailed data see the Excel tables in the 'Downloads' box.

Definitions

About the Information and Communications Technology (ICT) Supply Survey

The ICT Supply Survey measures the sale of goods and services from businesses associated with ICT industries. The ICT Supply Survey replaced the Information Technology Survey (1993–2004).

The OECD defines ICT goods and services as those that 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.

Data from the ICT Supply Survey measures sales of:

- equipment and components (goods)
- communication services
- IT services
- software renting, training, and other ICT services.

We publish data on total, domestic, and export ICT sales; totals of specific ICT goods and services; specific industry performance; and perceived barriers to industry growth.

More definitions

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

Business Frame: register (maintained by Statistics NZ) of all economically significant businesses operating in New Zealand, from which the survey population is drawn.

Business size: large businesses are defined as those with more than 50 employees. Medium-sized businesses are those with 21 to 50 employees, and small businesses are those with fewer than 20 employees.

Employees: defined by an enterprise's rolling mean employment (RME) count. RME is a 12-month moving average of the monthly employment count figure, obtained from taxation data and related to PAYE counts.

Enterprise: a business operating in New Zealand. It can be a legally constituted body, such as a company, trust, local or central government trading organisation, an incorporated society, or self-employed individual.

Exports: goods and services sold overseas by a New Zealand company. This excludes goods sold to other New Zealand businesses who will export the goods at a later stage.

Goods and services pricing: the data we report from the ICT Supply Survey 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.

ICT commodities: categories of goods and services used in the ICT Supply Survey questionnaire. ICT goods commodities are defined by the internationally recognised Harmonized System (HS), as follows:

- Telecommunications equipment
 - telephone and data switching and transmission equipment
 - telephones, facsimile machines, answering machines
 - 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)
 - 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 Internet service provider (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.

Rolling mean employment (RME): average size of the enterprise employment count over the past 12 months. This number is sourced from taxation data.

Sales: revenue in New Zealand dollars.

Related links

Upcoming releases

This is the last time we are collecting the ICT Supply Survey in this form. We are investigating producing a more comprehensive set of statistics on the ICT sector using other survey and non-survey data sources. We are still deciding the timetable for release of this data.

[The release calendar](#) lists all information releases by date of release.

[Subscribe to information releases](#) by completing the online subscription form.

Past releases

[Information and Communication Technology Supply Survey – information releases](#) has links to our previous releases.

Related information

[Household Use of Information and Communication Technology](#) for 2012 was released on 22 April 2013. This survey is collected every three years, and provides information on the access households and individuals have to ICT.

[Internet Service Provider Survey](#) for 2014 was released on 14 October 2014. This annual collection provides information from Internet service providers (ISPs) about the Internet access they provide to households and businesses.

[Consumers price index](#) for December 2014 was released on 21 January 2015. The CPI measures the changing price of a fixed basket of goods and services purchased by New Zealand households. The selection and relative importance of the goods and services in the CPI basket represents the overall expenditure pattern of New Zealand households.

[Business Operations Survey](#) for 2014 was released on 20 March 2015. Business Use of Information and Communication Technology Survey runs every second year as a module in the annual BOS collection, and provides information on the current state of ICT use by businesses, as well as considerations, activities, and outcomes.

[Overseas Merchandise Trade](#) for February 2015 was released on 25 March 2015. OMT statistics provide statistical information on the importing and exporting of merchandise goods between New Zealand and other countries.

[Research and Development Survey](#) for 2014 was released on 27 March 2015. This survey measures the level of R&D activity, employment, and expenditure by business sector enterprises, government departments, government-owned trading entities, and universities.

Data quality

Period specific information

This section contains data information that has changed since the last release.

- [Response rate](#)
- [Population comparability](#)
- [Reference period](#)

General information

This section contains information that does not change between releases.

- [Data source](#)
- [Accuracy of the data](#)
- [Interpreting the data](#)
- [Timing of published data](#)
- [Confidentiality](#)
- [More information](#)

Period-specific information

Response rate

The target response rate for ICT Supply Survey 2014 was 75 percent, and we achieved an overall response rate of 77 percent.

We identified some businesses as key units if their response to a survey question was considerable in the previous survey period, or if GST figures suggested they would significantly affect the results in the current year. Our target response rate was 100 percent for businesses identified as key units. In practice, we achieved a 99 percent response rate.

Data from one key business was not collected; however, analysis of other available information showed that historical imputation would sufficiently reflect their activity for the 2014 survey period.

Population comparability

The ICT Supply Survey population has not been changed in 2014. There was a slight difference for 2008, 2010, and 2012. Before 2010, the survey population included enterprise units we sourced from the New Zealand Software Association (NZSA) and New Zealand Trade and Enterprise (NZTE), but they have been excluded since 2010 due to minimal contribution towards totals at the industry level. From 2010 onwards, the survey population has included units with fewer than two employees where previously it did not. From 2012 onwards, the survey included enterprises from three more Australia New Zealand Standard Industry Classification 2006 (ANZSIC06) codes. We've made no additional changes to the population since 2012.

Reference period

The reference period for the latest survey was the 2013/14 financial year. Businesses with balance dates falling between 1 January and 30 September supplied data for the year ending

2014. Businesses with balance dates falling between 1 October and 31 December supplied financial data for the year ending 2013.

General information

Data source

We collect data using a paper-based questionnaire, the Information and Communication Technology (ICT) Supply Survey. We post the survey to businesses in the target population once every two years.

This is the last time we are collecting the ICT Supply Survey. We are investigating producing a more comprehensive set of statistics on the ICT sector using other survey and non-survey data sources. We are still deciding the timetable for release of this data.

Target population

The target population for the survey is all economically significant resident New Zealand businesses involved in producing and/or supplying information and communication technology (ICT) goods and services. The target population for 2014 was 3,638. This was 265 more than in 2012.

ICT goods and services are goods and services that 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.

These definitions are broad, including goods such as computers, cameras, medical equipment, and scanning equipment, as well as components such as conductors, power supplies, and printed circuits. Services include providing customised software and systems development, telecommunication services, Internet access, cloud computing, and IT support.

See the [Definitions](#) section for more details.

Survey population

All enterprises with a rolling mean employment (RME) of two or more, or having more than \$1 million GST sales, are surveyed within selected ANZSIC06 codes.

These ANZSIC06 codes are:

C241900	Other professional and scientific equipment manufacturing
C242100	Computer and electronic office equipment manufacturing
C242200	Communication equipment manufacturing
C242900	Other electronic equipment manufacturing
C243100	Electric cable and wire manufacturing
F349100	Professional and scientific goods wholesaling
F349200	Computer and computer peripheral wholesaling
F349300	Telecommunication goods wholesaling
F349400	Other electrical and electronic goods wholesaling

G426000	Department stores
G422200	Computer and computer peripheral retailing
J542000	Software publishing
J562200	Cable and other subscription broadcasting
J570000	Internet publishing and broadcasting
J580100	Wired telecommunications network operation
J580200	Other telecommunications network operations
J580900	Other telecommunications services
J591000	Internet service providers and web search portals
J592100	Data processing and web hosting services
J592200	Electronic information storage services
M700000	Computer system design and related services
S942200	Electronic (except domestic appliance) and precision equipment repair and maintenance

For ANZSIC06 codes that contain businesses that may or may not be in scope of the population, we select only those that include ICT-relevant keywords in their 'main activities', 'enterprise names', and 'income sources' for the population. This ensures that we survey only enterprises that are involved in ICT activities. This process is applied to the following ANZSIC codes:

L663900	Other goods and equipment rental and hiring (not elsewhere classified)
C241200	Medical and surgical equipment manufacturing

Accuracy of the data

This section outlines the methodology used for dealing with non-response in the ICT Supply Survey.

Measurement errors

The ICT Supply Survey results may be subject to measurement errors. Customers need to consider these when analysing the survey results.

Measurement errors include mistakes by respondents when completing the questionnaire, variation in respondents' interpretation of the questions asked, and errors made during data processing. In addition, we apply imputation methodologies to cope with questions left unanswered by some respondents. These methods are not without error.

We adopt procedures to minimise these types of errors, but they may still occur and are not quantifiable.

Unit non-response

Unit non-response occurs where an enterprise does not return the questionnaire.

We use a weight adjustment method to rate up the responding firms to compensate for the non-responding enterprises. This is done within groups of enterprises with similar properties. These properties include the number of employees and ANZSIC06 code.

Item non-response

Item non-response occurs where a returned questionnaire is incomplete.

We contact large enterprises and ask them to provide more data in the case of incomplete questionnaires. If this is unsuccessful, we use historical imputation. This involves bringing over data from a previous cycle, and scaling this data based on changes to available administrative or other survey data over the same period.

For small enterprises, we use random donor imputation for both categorical and numerical items. This method uses the data from a randomly chosen respondent with similar characteristics.

Sampling error

The ICT Supply Survey is a census. As such, there is no sampling error.

Interpreting the data

The sales of goods and services are indicative of total revenue activity in the economy. We make no adjustment to account for the resale of goods or services purchased by one business from another business within the population.

We present sales revenue by commodity and by industry. The commodity breakdown is supplied by respondents. A business may be engaged in selling multiple goods and services, hence an enterprise's revenue may be split across several commodities.

Data presented by industry refers to breakdowns of revenue by ANZSIC06 code. In these tables, we allocate the entire ICT revenue of a business to its industry sector, regardless of whether it is active in other business activities.

Timing of published data

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

Confidentiality

Confidentiality measures have been put in place to ensure the anonymity of respondents, and to safeguard against any individual data being released.

More information

See [Information and Communication Technology Supply Survey](#) for more information.

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

Liability

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Tables

The following tables are available in Excel format from the 'Downloads' box. If you have problems viewing the files, see [opening files and PDFs](#).

1. Information and communication technology sales of goods and services
- 2a. Sales of information and communication technology, by commodity and sales type
- 2b. Percentage sales of information and communication technology goods and services, by commodity and sales type
3. Sales of information and communication technology, by industry
- 4a. Number of businesses with information and communication technology sales, by industry
- 4b. Businesses with information and communication technology sales by percentage, by industry
5. Barriers to business growth

Next releases

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