Australian Bureau of Statistics

2005–06

8129.0

BUSINESS USE OF INFORMATION TECHNOLOGY

AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) FRI 7 DEC 2007

CONTENTS

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Peter Hodgson on Perth (08) 9360 5367.

NOTES

INTRODUCTION

This publication presents detailed indicators on the incidence of business use of information technology and associated activities, such as Internet commerce, in Australia as collected by the 2005-06 Business Characteristics Survey (BCS).

CHANGES TO THE SURVEY VEHICLE

Previously, these information technology (IT) indicators were produced from the separate annual Business Use of Information Technology (BUIT) survey.

Collection of these data using the BCS vehicle is part of the Australian Bureau of Statistics' (ABS) Integrated Business Characteristics Strategy (IBCS). This strategy integrates the collection and quality assurance of data required for a wide variety of point in time estimates on BUIT, Innovation and a broad range of other non-financial business characteristics, as well as for input into a Business Longitudinal Database (BLD). A key output of the IBCS is the production of annual BUIT and business innovation indicators, with a more detailed set of items for each of these topics being collected every second year (i.e. in alternating years). The change of survey vehicle has impacted on the comparability of outputs in this release with those released in previous issues and users are advised to exercise caution (for more information please refer to Explanatory Notes 26 to 28).

PUBLICATION CONTENT

This release contains detailed information about IT use and associated activities such as Internet commerce and measures of IT security, and where appropriate, comparisons with available international indicators. More detailed information on most of these factors will be released in spreadsheet format via the ABS website in mid-January 2008. Other business characteristics outputs, including innovation related indicators, will be released via the ABS web site in February 2008 (please refer to Explanatory Notes 34 to 35). This release contains measures on the incidence of use of IT and innovation. More detailed analysis on the intensity and impact of these on business performance is being undertaken and will be released by the ABS over the next year (please refer to Explanatory Note 37).

OUTPUT FOR STATES AND TERRITORIES

The change of survey vehicle has impacted on the comparability of outputs in this release with those released in previous issues. The ABS is undertaking additional work to maximise the quality of IT use data at the state and territory level. It is hoped that business use of IT outputs for states and territories will be released in mid-January 2008. For more information about how changes resulting from the implementation of the IBCS have impacted on state and territory level data (please refer to Explanatory Note 17). If you wish to be notified of the release of state and territory data or other BCS releases, please send an email with your request to innovation.technology@abs.gov.au.

Brian Pink
Australian Statistician

LIST OF TABLES

CHAPTER 1 SUMMARY OF FINDINGS

INTRODUCTION

This chapter presents a summary of outputs from the 2005–06 Business Characteristics Survey (BCS) relating to business use of information technology. It focusses on the key indicators of computer use, Internet access, web presence and Internet commerce. The information provided in the Explanatory Notes must be taken into consideration when interpreting these results, particularly if making comparisons to data reported for previous periods.

BUSINESS USE OF INFORMATION TECHNOLOGY, Summary Indicators—2002–03 to 2005–06

	2002–03	*2003–04*	*2004–05*	*2005–06*(a)
Proportion of businesses which reported:(b)(c)				
Computer use *(%)*	83.0	85.2	88.6	r88.8
Internet use *(%)*	71.4	74.2	76.8	81.3
Web presence *(%)*	23.0	25.1	26.7	29.8
Proportion of businesses which:(b)(c)				
Placed orders via the Internet or web *(%)*	27.8	31.3	32.7	37.3
Received orders via the Internet or web *(%)*	13.3	12.0	12.2	20.9
Internet income *($b)*	24.3	33.3	39.6	56.7
Proportion of businesses with Internet access via broadband connections(c) *(%)*	na	41.5	62.7	82.5

na not available
r revised
(a) Revised since release of '8166.0 Summary of IT Use and Innovation in Australian Business' on 19 November 2007.
(b) Proportions are of all businesses.
(c) Proportions are of all businesses with Internet access.

INTERNET ACCESS AND WEB PRESENCE

Although the proportion of businesses using a computer appears to have stabilised, the proportion of businesses reporting Internet use continues to grow. The proportion of businesses reporting Internet use increased 4 percentage points during the year ended June 2006 and 10 percentage points overall since 2002–03.

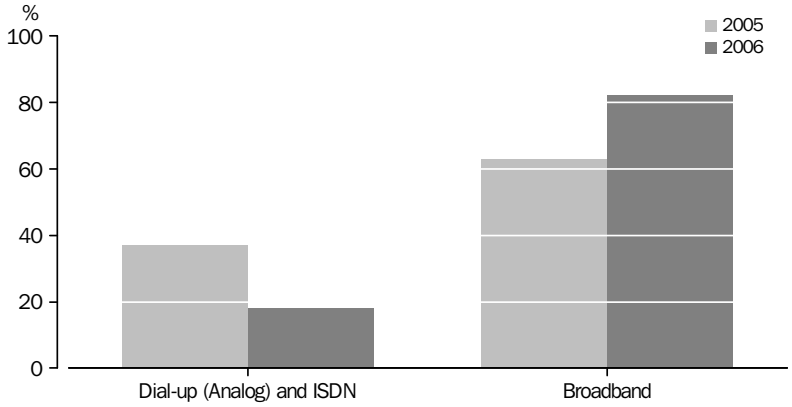
The proportion of businesses reporting having a web presence, either on their own dedicated website or as a presence on another entity's website, continued to grow, reaching 30%.

TYPE OF INTERNET CONNECTION

Businesses that reported Internet use were asked to identify the main type of Internet connection. Broadband, which is defined by the ABS as an 'always on' Internet connection with an access speed equal to or greater than 256kbps, has continued to increase and dominates business connections. The proportion of businesses that reported a broadband connection as their main Internet connection increased from 63% as at the end of June 2005 to 82% as at the end of June 2006.

TYPE OF INTERNET CONNECTION *continued*

MAIN TYPE OF INTERNET CONNECTION (a), as at 30 June



(a) Proportions are of all businesses with Internet use.

As at 30 June 2006, 30% of Australian businesses reported having a web presence either on their own website, home page or a presence on another entity's website. This is an increase of 3 percentage points over the previous year.

MAIN TYPE OF BROADBAND CONNECTION USED

Businesses using broadband as their main connection to the Internet were also asked to specify the main type of broadband connection in use at 30 June 2006. The most common broadband connection used was DSL (Digital Subscriber Line) with 80% of broadband users identifying this as the main type of broadband connection. The next most common type of broadband connection reported was Cable (15%) which includes Fibre Optic, Coaxial and Hybrid Fibre Coaxial cable.

REASONS FOR NOT USING BROADBAND

Businesses using the Internet that did not report a broadband connection were asked the reasons for not having a broadband connection. Businesses could identify more than one reason. Perceived *Unavailability in business location* (38%) was the most commonly reported reason for businesses not using broadband. This was followed by *Ongoing connection and usage costs too high* (25%), *Lack of perceived benefits of broadband* (24%) and *Broadband startup connection costs too high* (22%). Broadband had not been considered by 19% of businesses with non-broadband Internet access.

INTERNET COMMERCE

The proportion of businesses which reported placing orders via the Internet or web for any goods or services during the year ended 30 June 2006 was 37%, an increase of 4 percentage points from the previous year. The incidence of this business practice continues to increase.

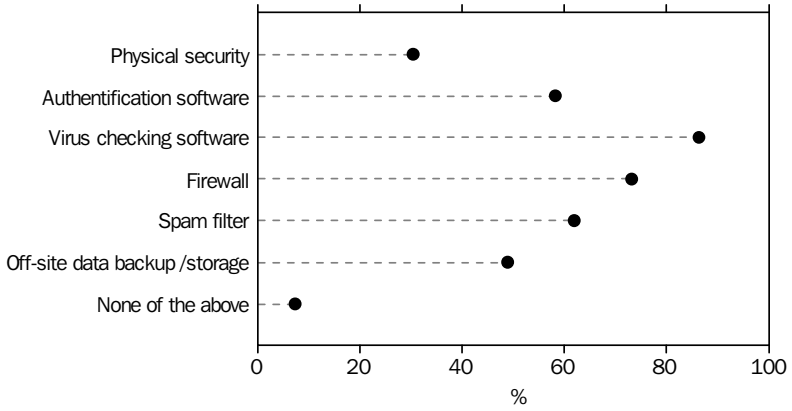
The proportion of businesses reporting receipt of orders via the Internet or web increased from 12% in 2004–05 to 21% in 2005–06. The value of Internet income associated with the receipt of orders grew by approximately 40% from $40 billion in 2004–05 to $57 billion in 2005–06.

IT SECURITY

Businesses that used a computer were asked which IT security measures they had used. Businesses could identify more than one type of measure.

The most commonly used IT security measures were *Virus checking or protection software* and *Firewall (software or hardware)* reported by 86% and 73% of businesses with IT use, respectively.

BUSINESS USE OF IT SECURITY MEASURES (a), as at 30 June 2006



(a) Proportions are of all businesses with computer use.

Nearly three quarters (74%) of businesses with computer use reported no IT security incidents or breaches while a further 7% were unsure as to whether the business had experienced any IT security incidents or breaches. Therefore, 19%, or almost one in five businesses, did report an IT incident or breach.

The most commonly reported impact of an IT security incident or breach was *Downtime of service* (57%), then *Corruption of hardware or software* (41%) and *Loss of staff productivity* (40%).

CHAPTER 2 USE OF IT BY AUSTRALIAN BUSINESSES

EMPLOYMENT SIZE

The proportion of businesses using IT during the year ended June 2006 increased with each successive employment size range for all the selected technologies in Table 2.1, with the exception of businesses which received orders via the Internet or web.

Computer use and Internet use was reported by 100% of businesses with 200 or more persons employed and 94% of these businesses also reported a web presence. For businesses employing 0-4 persons, the comparable figures are 86%, 78% and 22% respectively. For businesses which received orders via the Internet or web, the lowest proportion was for businesses with 0-4 persons employed (19%) whereas the equal highest proportion was for businesses with 20-199 persons and businesses with 200 or more persons employed (both 28%).

INDUSTRY

Internet use was highest for businesses in Finance and insurance services, at 93%, while businesses in Accommodation, cafes and restaurants and Transport and storage shared the lowest proportion of businesses with Internet use (both 66%). Variation at the industry level was most apparent for businesses with a web presence, where the highest proportion was 54% for businesses in Cultural and recreational services compared with 13% for businesses in Construction.

Businesses in Electricity, gas and water supply recorded the highest proportion for placing orders via the Internet or web (50%) and the lowest was for businesses in transport and storage (22%). Wholesale trade businesses were highest for businesses which received orders via the Internet or web, with 39% of businesses reporting this activity.

REGION

The proportion of businesses accessing the Internet was slightly higher in Capital cities (82%) than Other areas (80%). A larger variation exists when comparing the proportion of businesses in Capital cities with a web presence (33%) with businesses in Other areas (23%). Proportions of businesses placing orders via the Internet or web were 38% for businesses in Capital cities and 36% for those in Other areas. For receipt of orders via the Internet or web, 22% of businesses in Capital cities recorded this activity during the year ended June 2006, compared with 20% in Other areas.

IT SUPPORT AND EXTENT OF IT USE

For businesses using computers, the most commonly reported sources of IT support as at 30 June 2006 were contractors and consultants (35%) and non IT specialist internal staff (33%). The proportion of businesses reporting IT specialist internal staff as a source of IT support increased with each successive employment size range, from 14% (0-4 persons employed) to 78% (200 or more persons employed). Note that businesses could identify more than one source of IT support.

IT SUPPORT AND EXTENT OF IT USE *continued*

The extent to which businesses used IT was a new topic for 2005-06, designed to help to understand the degree of reliance businesses had on IT for a range of activities. Businesses were asked to rate the extent to which they used IT to perform a number of business processes including accounting, production/service operations, invoicing, stock control, marketing and human resource management. Ratings provided were 'Not at all','Low to moderate extent' and 'High extent', and were mutually exclusive to each business process.

The two processes related to financial aspects of the business, *Accounting* and *Invoicing*, were the processes where 'High extent' was the dominant response, at 70% and 67% respectively. The processes with the highest proportions reporting 'Not at all' were in *Stock control* (30%) and *Marketing* (27%). *Marketing* also recorded the highest proportion of businesses using IT to a 'Low to moderate' extent.

IT SECURITY MEASURES

The most commonly used IT security measures were *Virus checking or protection software* and *Firewall (software or hardware)* reported by 86% and 73% of businesses with IT use, respectively. The likelihood of a business using either of these IT security measures increased with each successive employment size range. Of businesses with 0-4 persons employed, 85% used *Virus checking or protection software* compared to 100% of businesses with 200 or more persons employed. Similarly, *Firewall (software or hardware)* was used by 71% of businesses with 0-4 persons employed compared to 99% of businesses with 200 or more persons employed.

IT SECURITY INCIDENTS OR BREACHES

Businesses that used a computer were asked whether any IT security incidents or breaches (that were not intercepted by the business' IT security measures) had occurred in 2005-06. The proportion of businesses that had experienced IT security incidents or breaches was 19%.

Businesses with 0-4 persons, 5-19 persons and with 20-199 persons employed, all had similar levels of IT security incidents or breaches ranging from 19% to 22%. In contrast, 32% of businesses which employed 200 or more persons had experienced IT security incidents or breaches.

IMPACT OF IT SECURITY INCIDENT OR BREACH

The type of impact that occurred most frequently overall, as well as across each employment size range, was *Downtime of service* (57%). The next most frequent impacts overall were *Corruption of hardware or software* (41%), *Loss of staff productivity* (40%) and *Corruption or loss of data* (31%).

At the employment size level, the highest proportions for *Downtime of service* (68%), *Loss of staff productivity* (57%), *Corruption of hardware or software* (45%) and *Corruption or loss of data* (36%) as a result of IT security incidents or breaches were for businesses with 20-199 persons employed. Businesses with 200 or more persons employed reported *Theft or loss of hardware* (21%) at five times the rate for businesses with 20-199 persons employed (4%) and over three times the rate for all businesses reporting this effect of an IT security incident or breach (6%).

ACTION TAKEN AS A RESULT OF SECURITY INCIDENTS OR BREACHES

Of businesses which experienced IT security incidents or breaches, the vast majority of action taken as a result was *Dealt with within the business* (76%), with variations at the employment size range from 75% (0-4 persons employed) to 89% (20-199 persons employed). For 16% of businesses there was *No action taken* as a result of IT security incidents or breaches.

2.1 BUSINESS USE OF SELECTED TECHNOLOGIES(a), by selected business characteristics

		BUSINESSES WITH			BUSINESSES WHICH	
	Number of businesses(b)	*computer use*(c)	*Internet use*	*web presence*	*placed orders via the Internet or web*	*received orders via the Internet or web*
	'000	%	%	%	%	%
Employment size						
0–4 persons	466	r85.7	77.6	21.5	33.1	18.6
5–19 persons	195	r93.4	86.3	40.7	42.4	24.3
20–199 persons	52	98.3	94.9	59.8	53.9	28.5
200 or more persons	^ 4	100.0	99.9	94.1	65.7	28.0
Industry						
Mining	3	r88.8	81.3	36.2	41.3	13.6
Manufacturing	57	r89.1	80.0	38.4	41.8	34.9
Electricity, gas and water supply	1	r95.6	88.9	50.6	49.5	18.4
Construction	116	87.7	80.3	13.0	25.2	13.3
Wholesale trade	47	96.7	91.1	46.3	41.9	38.6
Retail trade	120	83.0	72.4	28.1	35.7	18.9
Accommodation, cafes and restaurants	38	r75.9	66.5	33.9	26.0	18.8
Transport and storage	35	r78.5	^ 66.3	15.4	21.5	17.3
Communication services	8	83.2	68.1	26.3	38.9	21.0
Finance and insurance services	20	94.3	92.7	^ 49.0	^ 43.4	21.8
Property and business services	166	r94.2	89.9	36.8	49.2	24.6
Health and community services	52	r97.1	91.6	14.6	35.7	2.1
Cultural and recreational services	19	r96.0	92.4	53.8	48.4	33.8
Personal and other services	34	80.5	69.9	30.9	32.7	16.0
Region						
Capital cities	500	r89.2	81.9	32.9	37.9	21.5
Other areas	216	r87.7	80.1	22.7	36.0	19.5
Total	**716**	r**88.8**	**81.3**	**29.8**	**37.3**	**20.9**

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

r revised

(a) Proportions are of all businesses in each output category.

(b) See Explanatory Notes 29 to 30.

(c) Estimates have been revised since the release of '8166.0 Summary of IT Use and Innovation in Australian Business' released on 19 November 2007.

2.2 SOURCE OF IT SUPPORT(a)(b), by employment size

	EMPLOYMENT SIZE				
	0–4 persons	*5–19 persons*	*20–199 persons*	*200 or more persons*	*Total*
	%	%	%	%	%
Persons working for the business who were					
IT specialists	13.7	22.9	34.4	^ 78.4	18.5
Not IT specialists	34.4	30.7	33.0	^ 20.4	33.1
Total in-house	*47.3*	*52.0*	*63.4*	*90.9*	*50.2*
Supplier of software or hardware(c)	20.5	30.3	42.5	62.4	25.4
Contractors or consultants	26.0	46.0	60.0	70.7	34.8
Other	3.6	3.5	2.2	2.3	3.4

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Proportions are of all businesses that used a computer during the year ended 30 June 2006 in each output category.

(b) Businesses could identify more than one source of support.

(c) Where IT support was included as part of the purchase, lease or warranty of the software or hardware.

2.3 EXTENT OF IT USE IN BUSINESS PROCESSES(a)(b), by selected business processes

	EXTENT OF IT USE			
	Low to moderate extent	*High extent*	*Any extent*	*Not at all*
	%	%	%	%
Business process				
Accounting	21.8	70.2	92.0	5.5
Production/service operations	23.0	40.7	63.7	17.2
Invoicing	16.0	67.1	83.1	9.8
Stock control	15.1	21.4	36.5	29.9
Marketing	28.0	20.1	48.2	27.4
Human resources including payroll	19.8	51.3	71.0	16.4

(a) Businesses were asked to what extent, if any, IT was used in a range of business processes.

(b) Proportions are of all businesses that used a computer during the year ended 30 June 2006 in each output category.

2.4 BUSINESS USE OF IT SECURITY MEASURES(a)(b), by employment size

	EMPLOYMENT SIZE				
	0-4 persons	*5-19 persons*	*20-199 persons*	*200 or more persons*	*Total*
	%	%	%	%	%
Physical security	25.2	33.4	56.8	^ 83.6	30.5
Authentication software or hardware	51.1	66.5	81.9	98.0	58.3
Virus checking or protection software	84.6	87.2	95.2	99.5	86.3
Firewall (software or hardware)	70.7	74.0	86.7	99.4	73.2
Spam filter	61.0	59.6	76.2	95.6	62.0
Off-site data backup and storage	42.3	57.0	69.7	^ 81.6	49.0
None of the above measures	8.5	6.3	1.7	—	7.3

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

— nil or rounded to zero (including null cells)

(a) Proportions are of all businesses that used a computer during the year ended 30 June 2006 in each output category.

(b) Businesses could identify more than one IT security measure.

2.5 BUSINESSES EXPERIENCING AN IT SECURITY INCIDENT OR BREACH(a), by impact of incident or breach and action taken, by employment size

	EMPLOYMENT SIZE				
	0-4 persons	*5-19 persons*	*20-199 persons*	*200 or more persons*	*Total*
	%	%	%	%	%
Businesses that experienced an IT security incident or breach(a)	18.7	19.4	21.5	^ 32.0	19.2
Impact of IT security incident or breach(b)(c)					
Corruption of hardware or software	41.6	38.4	^ 45.4	^ 16.5	40.7
Corruption or loss of data	31.5	27.9	^ 35.5	^ 15.1	30.6
Downtime of service	53.5	61.7	68.4	*39.2	57.1
Website defacement	4.2	3.0	2.2	3.6	3.6
Theft or loss of hardware	5.2	8.7	4.3	^ 20.7	6.3
Theft of business, confidential or proprietary information	1.1	5.4	0.5	2.8	2.3
Loss of income	8.6	8.2	2.9	5.9	8.0
Loss of staff productivity	33.6	46.7	^ 56.8	^ 33.2	39.6
Other result	0.8	3.4	0.9	1.6	1.6
Action taken as a result of IT security incident or breach(b)(c)					
Dealt with inside the business	74.8	75.5	89.2	^ 86.3	76.4
Reported incident or breach to law enforcement agency	4.0	8.9	4.2	^ 18.5	5.6
Reported incident or breach to legal counsel to seek civil remedy	0.6	1.6	0.5	1.1	0.9
Other action	3.9	9.7	4.9	2.2	5.6
No action	19.8	12.1	8.0	1.9	16.3

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

* estimate has a relative standard error of 25% to 50% and should be used with caution

(a) Proportions are of all businesses that used a computer during the year ended 30 June 2006.

(b) Proportions are of all businesses that experienced an IT security incident or breach during the year ended 30 June 2006.

(c) Businesses could identify more than one option.

CHAPTER 3 CHARACTERISTICS OF INTERNET AND WEB USE

TYPE OF INTERNET CONNECTION

The 2005–06 Business Characteristics Survey asked businesses which used the Internet to identify the main type of Internet connection: *Dial-up (Analog) including ISDN*, or *Broadband*. Businesses which identified broadband as the main connection type were also asked to report the main type of broadband connection. Businesses with Internet use which did not identify broadband as the main connection type were asked to provide reasons for not using broadband.

As at the end of June 2006, 82% of businesses with Internet use were using broadband as the main type of Internet connection, compared with 18% using a non-broadband Internet connection.

Broadband was the most prevalent main Internet connection type across all employment sizes and industries. The proportion of businesses which used broadband as the main Internet connection type increased with each successive employment size range, from 79% of businesses with 0–4 persons employed to 98% of businesses which employed 200 or more persons. At the industry level, Finance and insurance and Wholesale trade had the highest proportion of broadband (92% and 89% respectively), while Transport and storage and Retail trade had the lowest proportions (both 74%).

The proportion of businesses using broadband was greater in the capital cities (85%) than in other areas (76%).

MAIN TYPE OF BROADBAND CONNECTION USED

As at the end of June 2006, the most common type of broadband connection used to access the Internet was DSL, with 80% of businesses which used broadband identifying this as their main connection type. A higher proportion of smaller businesses reported DSL as their main Internet connection type with 77% of businesses with 0–4 persons employed compared to 64% of businesses with 200 or more persons employed. Cable was reported as the main broadband connection type by 15% of businesses using broadband. Businesses which employed 200 or more persons had a greater use of Cable (24%) and Other broadband connections (9%) than did businesses in other employment size ranges.

REASONS FOR NOT USING BROADBAND

In interpreting these data, users are advised to take into consideration the counts of businesses as well as the proportions for this topic. For those businesses not using broadband as the main Internet connection type at the end of June 2006, the most commonly reported reasons for not using broadband were; *Broadband unavailable in business location* (38%), followed by *Broadband ongoing connection and usage costs too high* (25%), *Lack of perceived benefit* (24%) and *Broadband start-up connection costs too high* (22%). Broadband had not been considered by 19% of businesses with a non-broadband Internet access. It should be remembered that businesses could identify more than one reason for not using broadband and responses are based on the perception of the business. For the response option *Broadband unavailable in*

REASONS FOR NOT USING BROADBAND continued

business location, no attempt is made to verify with other sources that broadband was not available at the business location.

Broadband unavailable in business location was the most common reason cited for not using broadband across all employment size ranges except for businesses that employed 20-199 persons, where *Lack of perceived benefit of broadband* was highest. The proportion of businesses in Capital cities which identified *Broadband unavailable in business location* as a reason for not using broadband (31%), was lower than for businesses in Other areas (49%).

ELECTRONIC LODGEMENTS WITH GOVERNMENT

During the year ended June 2006, 66% of businesses with Internet use undertook some form of electronic lodgements with government organisations via the Internet or web. Electronic lodgements of payments (e.g. for rates, licence fees) was the most common type of electronic lodgement activity during the year ended June 2006, with 49% of businesses which use the Internet making payments this way.

There was a strong relationship between employment size and the proportion of businesses with the Internet which used the Internet for electronic lodgements with the proportions for all types of electronic lodgements increasing with each successive employment size range.

ACTIVITIES USING THE INTERNET

Other than for *Financial activities including online payments and banking* (84%), the most commonly reported business uses of the Internet were *Enabling persons to work from home or other locations* (37%) and *Information gathering related to the range of products, services and methods provided by the business* (36%).

There was little variation at the employment size level for proportions of businesses reporting *Financial activities including online banking*, however *Enabling persons to work from home and other locations* and *Information gathering related to the range of products, services and methods provided by the business* showed a substantial increase between businesses in the lower employment size ranges (0-4 persons, 5-19 persons and 20-199 persons) compared to businesses with 200 or more persons employed.

WEB PRESENCE AND FEATURES

As at 30 June 2006, the proportion of Australian businesses which had a web presence, either with their own website or as a presence on another entity's website, was 30%. Businesses with a web presence were asked to indicate the features of their web presence. The web features listed in Table 3.5 are presented in approximately ascending order of sophistication and the proportions of businesses reporting each feature tend to decrease as the feature becomes more sophisticated. The most commonly reported feature of a web presence of a business was *Information about the business* with 96% of businesses with a web presence reporting this feature. The lowest reported feature of a web presence was *Facility to track orders* with 4% of businesses with a web presence reporting this feature. The proportions for *Online ordering* and *Online payment capabilities* were 18% and 10% respectively, which correlate well with the proportion of businesses with *Capability for secure access or transactions*, at 11%.

3.1 MAIN TYPE OF INTERNET CONNECTION(a)(b), by selected business characteristics

	CONNECTION TYPE	
	Dial-up or ISDN	*Broadband*
	%	%
Employment size		
0–4 persons	20.8	79.2
5–19 persons	13.4	86.6
20–199 persons	8.6	91.4
200 or more persons	2.3	97.7
Industry		
Mining	15.0	85.0
Manufacturing	14.7	85.3
Electricity, gas and water supply	15.1	84.9
Construction	17.7	82.3
Wholesale trade	10.6	89.4
Retail trade	25.8	74.2
Accommodation, cafes and restaurants	20.4	79.6
Transport and storage	^ 25.9	^ 74.1
Communication services	11.7	88.3
Finance and insurance services	8.1	91.9
Property and business services	15.4	84.6
Health and community services	15.4	84.6
Cultural and recreational services	17.7	82.3
Personal and other services	19.4	80.6
Region		
Capital cities	14.8	85.2
Other areas	23.9	76.1
Total	**17.5**	**82.5**

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Proportions are of all businesses which used the Internet during the year ended 30 June 2006 in each output category.

(b) Businesses identified the main type of Internet connection used as at 30 June 2006.

3.2 BUSINESSES USING BROADBAND(a)(b), by main type of broadband connection, by selected business characteristics

PROPORTION OF BUSINESSES REPORTING

	DSL	*Cable*	*Fixed Wireless*	*Mobile Wireless*	*Satellite*	*Other broadband connection*
	%	%	%	%	%	%
Employment size						
0–4 persons	77.0	17.3	2.5	1.8	0.6	0.8
5–19 persons	84.5	10.6	2.3	1.0	1.4	0.2
20–199 persons	82.2	11.6	1.5	2.0	0.5	2.1
200 or more persons	64.3	24.4	1.7	0.2	0.3	9.0
Industry						
Mining	77.8	16.5	0.7	1.5	0.9	2.6
Manufacturing	88.6	6.2	1.6	1.7	1.5	0.4
Electricity, gas and water supply	68.7	19.7	4.4	2.0	1.5	3.7
Construction	78.5	15.8	2.6	2.3	—	0.8
Wholesale trade	88.2	10.6	0.7	0.1	0.3	0.1
Retail trade	81.8	12.2	3.5	0.7	0.9	0.8
Accommodation, cafes and restaurants	83.4	8.9	3.4	2.0	2.2	0.2
Transport and storage	^ 71.1	11.8	8.5	0.3	5.5	2.8
Communication services	^ 71.3	^ 24.8	0.1	1.9	1.7	0.1
Finance and insurance services	^ 69.7	21.2	6.1	2.8	—	0.1
Property and business services	74.4	20.6	1.3	1.7	0.3	1.5
Health and community services	85.1	11.2	1.8	0.8	1.0	—
Cultural and recreational services	79.6	11.9	2.5	4.5	1.3	0.2
Personal and other services	79.8	16.6	0.1	1.9	1.6	0.1
Region						
Capital cities	78.2	16.8	2.2	1.5	0.4	0.8
Other areas	83.4	9.4	2.6	1.7	2.1	0.8
Total	**79.6**	**14.8**	**2.3**	**1.6**	**0.9**	**0.8**

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

— nil or rounded to zero (including null cells)

(a) Proportions are of all businesses which used broadband as the main type of Internet connection as at 30 June 2006 in each output category.

(b) Businesses identified the main type of broadband connection used as at 30 June 2006.

3.3 REASONS FOR NOT USING BROADBAND AS THE MAIN INTERNET CONNECTION TYPE(a)(b), by selected business characteristics

		PROPORTION OF BUSINESSES REPORTING						
	Number of businesses with non-broadband Internet connection	*Unavailable in business location*	*Startup connection costs too high*	*Ongoing connection and usage costs too high*	*Business's hardware incompatible*	*Lack of perceived benefit*	*Other reasons*	*Not considered*
	'000	%	%	%	%	%	%	%
Employment size								
0–4 persons	75	38.3	25.0	26.3	4.4	23.7	2.2	18.6
5–19 persons	^ 23	^ 39.0	12.8	^ 21.7	5.6	21.8	5.4	19.5
20–199 persons	^ 4	^ 32.2	^ 23.0	^ 27.5	4.3	^ 39.4	1.1	^ 30.8
200 or more persons	*(c)—	^ 18.8	10.5	^ 14.5	9.4	6.6	^ 17.1	*43.0
Region								
Capital cities	61	30.6	25.4	30.3	4.4	25.4	4.6	19.0
Other areas	41	^ 49.0	17.9	18.2	4.9	21.7	0.4	19.7
Total	**102**	**38.2**	**22.3**	**25.3**	**4.6**	**23.9**	**2.9**	**19.3**

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

* estimate has a relative standard error of 25% to 50% and should be used with caution

— nil or rounded to zero (including null cells)

(a) Proportions are of all businesses with Internet connection which did not use a broadband connection as at 30 June 2006.

(b) Businesses could identify more than one reason.

(c) Business count is less than 500.

3.4 SELECTED BUSINESS INTERNET ACTIVITIES(a)(b), by employment size

	EMPLOYMENT SIZE				
	0-4 persons	*5-19 persons*	*20-199 persons*	*200 or more persons*	*Total*
	%	%	%	%	%
Electronic lodgement with government organisations of:					
Taxation forms(c)	33.9	39.1	54.6	^ 72.5	37.4
Claims for grants or benefits	1.9	5.0	7.0	15.5	3.4
Applications for licences or permits	11.0	15.4	16.6	16.7	12.8
Payments	45.9	52.9	60.4	66.0	49.3
Any electronic lodgements with government organisations	*61.2*	*69.2*	*82.6*	*90.6*	*65.6*
Placed orders via the Internet or web	33.1	42.4	53.9	65.7	37.3
Received orders via the Internet or web	18.6	24.3	28.5	28.0	20.9
Other selected activities:					
Financial (including online banking, invoicing, making payments)	82.1	86.0	90.4	89.5	84.0
Enabling persons to work from home or other locations	34.4	34.8	54.3	89.3	36.6
Information gathering or researching for:					
Assessing or modifying this business's range of products, services or methods	35.8	36.4	39.5	^ 57.0	36.4
Development of new or improved products, services, processes or methods	24.5	22.2	29.6	38.0	24.4
Monitoring competitors	20.1	25.7	30.0	^ 42.1	22.7
Identifying future market trends	18.6	16.4	20.9	39.1	18.3
Online training/learning	24.9	24.8	32.9	^ 49.0	25.7
Information or data exchange (eg. EDI, FTP) with:					
Customers or clients	21.8	19.2	24.7	37.0	21.4
Businesses or organisations (who are not customers or clients)	14.9	15.4	20.6	33.4	15.6

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Proportions are of all businesses which used the Internet during the year ended 30 June 2006 in each output category.

(b) Businesses could identify more than one activity.

(c) Excludes electronic lodgement of taxation form undertaken on behalf of the businesses by accountants or tax agents.

3.5 SELECTED BUSINESS WEB FEATURES(a)(b), by employment size

	EMPLOYMENT SIZE				
	0–4 persons	*5–19 persons*	*20–199 persons*	*200 or more persons*	*Total*
	%	%	%	%	%
Information about this business	95.5	95.6	97.0	99.9	95.8
Inquiry or contact facility	89.2	90.0	93.2	95.7	90.2
Online ordering	20.5	14.5	17.3	25.2	17.8
Shopping cart facilities	7.6	5.4	7.0	9.2	6.7
Online payment capabilities(c)	11.4	8.5	9.3	14.3	10.1
Capability for secure access or transactions	10.8	7.2	17.6	23.4	10.7
Account information	7.0	4.4	7.2	16.0	6.2
Facility to track orders	5.1	2.9	4.4	12.4	4.3
Personalised page for repeat customers	5.0	5.2	3.9	8.4	4.9
Automated link with back end systems	7.2	6.4	7.3	15.3	7.1

(a) Proportions are of all businesses which had a web presence as at 30 June 2006 in each output category.
(b) Businesses could identify more than one feature.
(c) Online payments capabilities for goods or services irrespective of whether ordered via the Internet or web.

CHAPTER 4 INTERNET COMMERCE

DEFINING INTERNET COMMERCE

The ABS uses the Organisation for Economic Co-operation and Development's (OECD) definition of Internet commerce as the basis for collecting data about the receipt of orders via the Internet or web (more broadly referred to as Internet or web selling). The OECD defines an Internet commerce transaction as "the sale or purchase of goods or services, whether between businesses, households, individuals, governments, and other public or private organisations, conducted over the Internet. The goods and services are ordered over the Internet, but the payment and the ultimate delivery of the good or service may be connected on or off line". For more information, please refer to Explanatory Notes 21 to 25.

ORDERS FOR GOODS OR SERVICES VIA THE INTERNET OR WEB

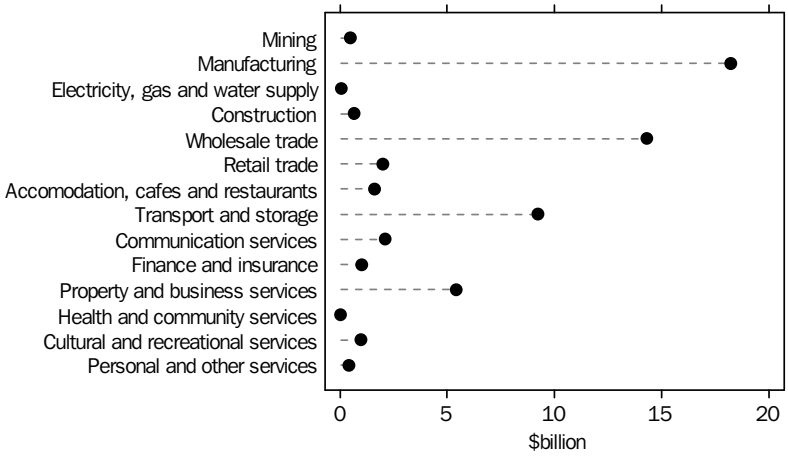
The proportion of businesses with Internet use which reported placing orders for goods and services via the Internet or web during 2005-06 was 37%, whereas 21% of businesses with Internet use reported receiving orders via the Internet or web. Given that the placement of orders via the Internet or web generally requires Internet access only, whereas receipt of orders often requires a web presence and additional support within the business, it is considered much easier to place an order than to receive an order. Therefore, the differences highlighted in these levels of usage are to be expected. While the propensity of businesses to place orders for goods or services via the Internet or web increased with each successive employment size range, from 33% of businesses with 0-4 persons employed, to double this proportion for businesses with 200 or more persons employed, the proportions for businesses receiving orders were more compressed, ranging from 19% for businesses with 0-4 persons employed to 28% for both businesses with 20-199 persons and 200 or more persons employed.

VALUE OF INTERNET INCOME

The proportion of Australian businesses receiving orders via the Internet or web increased significantly from 12% in 2004–05 to 21% in 2005–06. The estimated value of Internet income for the year ended 30 June 2006 was $57 billion. Wholesale trade had the highest proportion of businesses receiving orders via the Internet or web (39%) with the value of these orders reaching $14 billion. While the Manufacturing division had the second highest proportion of businesses receiving orders via the Internet or web at 35%, the value of these orders ($18 billion) made this industry the largest contributor to total Internet income. By contrast, Cultural and recreational services recorded an almost identical proportion of businesses receiving orders via the Internet or web, but its contribution to total Internet income was slightly less than 2%, indicating, as would be expected, much smaller transactions values than occur in Manufacturing.

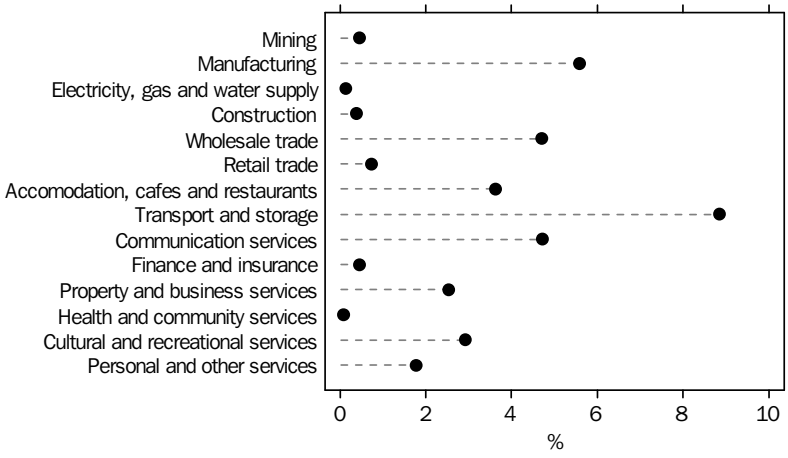
VALUE OF INTERNET INCOME *continued*

INTERNET INCOME, 2005-06



In 2005–06, Internet income represented approximately 3% of both goods and service income (G&S income) and total business income. While the MANUFACTURING division was the largest contributor to Internet income ($18 billion), this represented slightly less than 6% of both G&S income and total business income for this industry. Businesses in TRANSPORT AND STORAGE had the highest proportion of total business income coming from orders received via the Internet or web with 10% of G&S income and 9% of total business income. This reflects the growing practice of purchasing travel via the Internet or web.

INTERNET INCOME AS A PROPORTION OF TOTAL BUSINESS INCOME, 2005-06



Of all Australian businesses, 21% were estimated to have received orders via the Internet or web in 2005–06. Of these, 64% generated 5% or more of their G&S income from sales via the Internet or web. Of the businesses which received orders via the Internet or web with 0–4 persons employed, 72% indicated earning 5% or more of their G&S income from sales via the Internet or web, while 13% earned less than 1%. Each of the other employment size categories had greater proportions of businesses with Internet income being less than 1% of their income from the sale of goods and services.

VALUE OF INTERNET INCOME *continued*

The highest proportion of businesses with Internet income of 10% to less than 50% of G&S income, was for businesses with 0-4 persons employed (39%), as was the 50% or more category (14%). In contrast, 29% of businesses with 200 or more persons employed reported Internet income of 10% to 50% of G&S income, and 7% reported 50% or more.

BUSINESS SYSTEMS SUPPORTING THE RECEIPT OF ORDERS

Businesses which received orders via the Internet or web were asked to identify ways in which these orders were received. Businesses could identify more than one way of receiving orders. *Email not linked to a web site* was the most common method with 73% of businesses receiving orders this way. Orders received via *Email linked to a website* was reported by 36% of businesses, while 15% of businesses received orders through a *Website with an online order form* and 9% received orders through a *Website shopping cart facility*.

Businesses which received orders via the Internet or web were also asked to specify the types of automated links between systems used to receive orders and other business systems as at 30 June 2006. Of these businesses, 74% indicated their systems used to receive orders did not have automated links to any other business system. The most common automated links reported were links to *Invoicing and payment systems of the business* (13%) and links to *Customer's business systems* (11%).

BENEFITS OF RECEIVING ORDERS VIA THE INTERNET OR WEB

Businesses were asked to specify what benefits, if any, they received as a result of receiving orders via the Internet or web. Businesses could identify more than one benefit. For businesses receiving orders via the Internet or web in 2005–06, being able to achieve *Faster business processes* and *Keeping pace with competitors* were the two most commonly reported benefits, at 49% and 39% respectively. Interestingly, 22% of businesses receiving orders via the Internet or web indicated they did not achieve any benefits.

REASONS FOR NOT RECEIVING ORDERS VIA THE INTERNET OR WEB

Reasons why businesses did not receive orders via the Internet or web in 2005–06 were asked of businesses which used the Internet or had a web presence but did not receive orders in this way. Businesses could identify more than one reason. The most commonly reported reasons for not receiving orders over the Internet or web was *Goods or services produced by this business unsuitable* (57%), followed by *Prefer to maintain current model* (38%) and *Lack of customer demand* (13%).

4.1 INTERNET INCOME AS A PERCENTAGE OF TOTAL GOODS AND SERVICES INCOME(a)(b), by selected business characteristics

	PERCENTAGE OF GOODS AND SERVICES INCOME					
	0 to less than 1	*1 to less than 2*	*2 to less than 5*	*5 to less than 10*	*10 to less than 50*	*50 or more*
	%	%	%	%	%	%
Employment size						
0–4 persons	12.7	9.2	5.8	18.9	39.3	14.1
5–19 persons	20.4	15.2	8.6	16.5	30.1	9.3
20–199 persons	23.0	16.4	10.1	18.1	27.0	5.4
200 or more persons	18.4	14.9	11.3	19.9	28.9	6.6
Industry						
Mining	^ 11.6	^ 9.7	2.8	^ 13.7	^ 42.0	^ 20.3
Manufacturing	21.7	9.0	3.0	15.8	^ 38.6	11.9
Electricity, gas and water supply	^ 19.2	^ 14.9	^ 10.5	^ 11.4	^ 30.7	^ 13.2
Construction	12.0	^ 11.5	^ 18.6	^ 28.3	^ 29.5	0.2
Wholesale trade	^ 17.3	18.3	6.3	16.2	^ 39.0	2.8
Retail trade	^ 23.1	^ 27.3	4.4	^ 18.8	^ 17.6	8.7
Accommodation, cafes and restaurants	11.2	10.3	2.9	^ 15.2	^ 47.5	^ 13.0
Transport and storage	2.5	^ 10.4	^ 10.9	^ 20.4	^ 43.3	^ 12.6
Communication services	6.1	5.8	^ 9.6	^ 9.6	^ 39.0	^ 29.9
Finance and insurance services	^ 7.6	6.9	^ 18.0	^ 24.7	^ 30.9	^ 12.0
Property and business services	12.7	3.6	3.8	16.3	41.4	22.2
Health and community services	** 68.9	0.5	** 29.5	0.4	^ 0.8	—
Cultural and recreational services	14.3	7.3	10.4	16.4	^ 43.1	8.5
Personal and other services	^ 25.0	^ 15.7	^ 12.7	^ 17.3	^ 25.7	3.6
Total	**16.2**	**11.8**	**7.1**	**18.0**	**35.1**	**11.7**

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

— nil or rounded to zero (including null cells)

(a) Proportions are of all businesses which received orders via the Internet or web during the year ended 30 June 2006 in each output category.

(b) Estimates related to Internet income should be used with caution. See Explanatory Notes 21 to 25.

4.2 METHODS OF RECEIVING ORDERS AND SUPPORTING BUSINESS SYSTEMS(a), by employment size

	EMPLOYMENT SIZE				
	0–4 persons	*5–19 persons*	*20–199 persons*	*200 or more persons*	*Total*
	%	%	%	%	%
Method of receiving orders via the Internet or web(b)					
Email not linked to website	74.1	72.6	68.8	39.6	72.9
Website with linked email facility	34.6	38.6	40.6	37.6	36.5
Website with online order form	13.8	13.6	22.1	48.7	14.8
Website with shopping cart	8.7	9.1	11.3	22.7	9.2
Other	2.3	4.3	3.7	5.6	3.1
Automated links between systems used to received orders and other business systems(c)					
Suppliers' business systems	8.3	11.6	10.7	14.3	9.6
Customers' business systems	9.3	11.9	13.5	19.1	10.6
Own business systems for reordering replacement supplies	1.7	4.2	4.7	14.0	2.8
Own business systems for invoicing and payment	12.8	12.5	14.5	27.0	13.0
Own business systems for production or service operations	4.1	9.6	7.1	20.8	6.2
Own business systems for logistics, including electronic delivery	5.4	5.1	6.6	14.9	5.5
Own business systems for marketing operations	4.8	10.4	10.1	11.1	7.1
No automatic links with other business systems	76.5	71.2	66.2	52.2	73.7

(a) Proportions are of all businesses which received orders via the Internet or web during the year ended 30 June 2006.
(b) Businesses could identify more than one method.
(c) Businesses were asked to identify all automated links.

4.3 BENEFITS OF RECEIVING ORDERS VIA THE INTERNET OR WEB (a)(b), by employment size

	EMPLOYMENT SIZE				
	0–4 persons	*5–19 persons*	*20–199 persons*	*200 or more persons*	*Total*
	%	%	%	%	%
Benefits achieved					
Lower transaction costs	25.0	30.8	32.5	53.9	27.7
Increased sales	30.9	24.4	22.2	33.2	28.1
Faster business processes	51.3	45.4	45.4	60.0	48.9
Keeping pace with competitors	35.6	41.5	45.3	61.1	38.6
Other benefits	4.3	2.8	4.8	3.4	3.9
Any benefits achieved	*79.7*	*74.4*	*78.4*	*86.3*	*78.0*
No benefits achieved	20.3	25.6	21.6	13.7	22.0

(a) Proportions are of all businesses which received orders via the Internet or web during the year ended 30 June 2006.
(b) Businesses could identify more than one benefit.

4.4 REASONS FOR NOT RECEIVING ORDERS VIA THE INTERNET OR WEB (a)(b), by employment size

	EMPLOYMENT SIZE				
	0–4 persons	*5–19 persons*	*20–199 persons*	*200 or more persons*	*Total*
	%	%	%	%	%
Goods or services produced by this business unsuitable	55.2	60.5	60.2	69.3	57.2
Lack of customer demand	12.4	13.4	14.4	9.1	12.8
Security concerns	3.3	4.7	6.1	6.1	4.0
Costs to develop and maintain the technology too high	9.7	9.6	8.1	8.1	9.5
Lack of skilled employees to develop, maintain and use the technology	7.2	9.8	4.8	2.1	7.7
Timing eg. techology currently under development or in future work program	2.8	5.2	6.1	8.9	3.8
Prefer to maintain current business model eg. face to face	39.9	37.2	30.7	25.0	38.3
Other reasons	8.5	5.1	8.2	5.9	7.5

(a) Proportions are of all businesses with Internet use or web presence but did not receive orders via the Internet or web during the year ended 30 June 2006.

(b) Businesses could identify more than one reason.

CHAPTER 5 INTERNATIONAL COMPARISONS

INTRODUCTION

In recent years, there has been considerable progress in the measurement of IT use and e-commerce by National Statistical Offices, particularly through the efforts of the Organisation for Economic Co-operation and Development (OECD) and the Working Party on Indicators for the Information Society. Although there are differences in the scope and content of surveys covering these topics, some comparisons between Australian statistics and those of other countries can be made. This chapter presents some comparisons of business use of IT for Australia and selected other countries.

Australian data are from the 2005–06 Business Characteristics Survey (BCS) and have been adjusted to show data for businesses with 10 or more employees only. All other data are provided courtesy of the OECD. These data were originally published in the *OECD Science, Technology and Industry Scoreboard, 2007* (available from the publications section of the OECD website <www.oecd.org>). More information about differences in sources of data are shown in Explanatory Notes 32 and 33.

INTERNET USE AND WEBSITES

The proportions of businesses using the Internet, with broadband connections and with a web presence for selected countries are shown in Table 5.1. In most cases these proportions are of all employing businesses which employed 10 or more persons. The proportion of businesses using the Internet range from 80% in Hungary to 99% in Iceland. Australia's level of Internet use is toward the upper end of the range at 94%. The proportion of businesses using broadband connections varied from 46% in Mexico to 95% in Iceland, with Australia again toward the upper end of the range with 90%. The proportion of businesses with a web presence varied from a high of 86% in Sweden and Japan to a low of 35% in Portugal with Australia toward the middle of the range at 55%. Care should be taken in interpreting these figures with differing definitions of what constitutes a broadband connection and web presence having an effect - see Explanatory Notes 32 and 33 for more information.

INTERNET COMMERCE

The proportion of businesses receiving orders via the Internet or web by all the selected countries was never higher than the proportion placing orders, although Denmark and Mexico both recorded equal proportions for receiving and placing orders. The range for receiving orders was from a high of 37% for New Zealand to a low of 2% for Mexico with Australia at the upper end with 27%. The range for placing orders was from a high of 62% for Canada to a low of 2% for Mexico, with Australia near the top at 49%.

5.1 BUSINESS USE OF THE INTERNET AND WEBSITES(a), Australia and selected countries

	PROPORTION OF BUSINESSES WITH 10 OR MORE PERSONS EMPLOYED WHICH:		
	have Internet access	*have broadband access*(b)	*have own website*
	%	%	%
Australia(c)(d)	**93.5**	**89.7**	**54.8**
Iceland	99.2	95.2	75.3
Finland	99.0	88.9	80.0
Switzerland	98.0	85.0	82.0
Denmark	97.9	82.7	83.4
Japan	97.6	na	85.6
Austria	97.5	69.5	77.7
Netherlands	96.8	81.7	78.9
Sweden	96.2	88.9	86.3
Korea	95.9	94.2	56.5
Czech Republic	95.1	69.3	70.0
Canada	94.9	92.2	67.5
Germany	94.7	73.1	73.3
Belgium	94.7	84.5	68.6
New Zealand	94.5	82.0	59.3
France	94.5	86.5	61.3
Ireland	94.4	60.7	63.7
Norway	94.3	86.1	72.1
Greece	93.7	57.7	60.4
Luxembourg	93.5	76.0	60.4
Slovak Republic	93.5	60.8	61.1
United Kingdom	93.4	77.4	75.3
EU25	**93.2**	**74.5**	**63.6**
Italy	92.9	69.6	56.7
Spain	92.6	87.1	46.5
Mexico	90.0	45.6	52.5
Poland	88.8	46.4	53.3
Portugal	82.9	65.9	35.0
Hungary	79.9	61.3	42.1

na not available

(a) Refer to Explanatory Notes 33 to 34 for more detailed information relating to the reference period, scope and source for each country.

(b) Most countries define broadband in terms of technology (e.g. ADSL, cable, etc.) rather than speed.

(c) Australian data in this table are from the 2005-06 Business Characteristics Survey, however, scope has been adjusted to provide estimates for businesses with 10 or more persons employed only.

(d) Website includes a presence on another entity's website.

5.2 BUSINESS INTERNET COMMERCE ACTIVITIES(a)(b), Australia and selected countries

PROPORTION OF BUSINESSES WITH 10 OR MORE PERSONS EMPLOYED WHICH RECEIVED ORDERS VIA THE INTERNET OR WEB		PROPORTION OF BUSINESSES WITH 10 OR MORE PERSONS EMPLOYED WHICH PLACED ORDERS VIA THE INTERNET OR WEB	
Country	*%*	*Country*	*%*
Australia	**26.6**	**Australia**	**48.6**
New Zealand	36.7	Canada	61.6
Denmark	33.9	New Zealand	58.8
United Kingdom	30.4	Switzerland	57.0
Norway	27.5	Ireland	52.8
Switzerland	25.0	United Kingdom	50.6
Sweden	23.9	Norway	48.8
Netherlands	23.3	Germany	47.6
Ireland	22.7	Sweden	44.4
Iceland	22.0	Iceland	37.6
France	18.4	Austria	36.5
Germany	18.1	Denmark	33.9
Austria	15.4	Korea	32.5
Japan	15.2	Netherlands	31.8
Belgium	14.8	Luxembourg	30.3
Finland	13.6	Finland	23.1
Canada	12.5	France	20.7
Luxembourg	11.5	Japan	20.1
Poland	9.3	Czech Republic	16.9
Hungary	8.6	Belgium	15.9
Spain	8.4	Poland	15.6
Czech Republic	8.2	Spain	14.7
Korea	7.5	Portugal	14.4
Greece	7.3	Greece	11.2
Portugal	7.1	Hungary	10.8
Italy	2.8	Italy	9.7
Mexico	2.2	Mexico	2.2

(a) The definition of Internet selling and purchasing varies between countries, with some explicitly including orders placed by conventional email (e.g. Australia and Canada) and others explicitly excluding such orders (e.g. Ireland, the United Kingdom and some other European countries). Most countries explicitly use the OECD concept of Internet commerce, that is, goods or services are ordered over the Internet but payment and/or delivery may be off line.

(b) Refer to Explanatory Notes 33 to 34 for more information about the reference period, scope and source for each country.

EXPLANATORY NOTES

INTRODUCTION

1 This release presents key indicators on business use of information technology (BUIT), as collected by the 2005–06 Business Characteristics Survey (BCS). Previously, these IT use indicators were produced from the separate annual Business Use of IT survey.

CHANGES TO THE SURVEY VEHICLE

2 Collection of these data using the BCS vehicle is part of the Australian Bureau of Statistics' (ABS) Integrated Business Characteristics Strategy (IBCS). This strategy integrates the collection and quality assurance of data required for a wide variety of point in time estimates on BUIT, Innovation and a broad range of other non-financial business characteristics, as well as for input into a Business Longitudinal Database (BLD). A key output of the IBCS is the production of annual BUIT and business innovation indicators, with a more detailed set of items for each of these topics being collected every second year (i.e. in alternating years). The change of survey vehicle has impacted on the comparability of outputs in this release with those released in previous issues. More information is available later in these Explanatory Notes.

3 The BCS is the survey vehicle for the IBCS and is an annual survey. The 2005–06 BCS is the first fully integrated collection and had a focus on BUIT. The 2006–07 BCS will collect detailed innovation information.

4 The purpose of this release is to provide users with detailed results for the BUIT indicators relating to 2005–06 reference period. While this release is almost 18 months after the reference period, this relatively late timing is the result of a phased in approach taken to the introduction of this new collection. The 2005–06 BCS was dispatched in March 2007. By the 2008–09 reference year, the survey is expected to be dispatched immediately after the end of the reference period and the release of key indicators is expected to take place approximately 6 months after this with detailed results for the annual topic shortly thereafter.

5 As a result of implementing IBCS, there has been some impact on comparability of the BUIT data included in this release with that resulting from the previous separate collection. Some of this is as a result of integration including changes to scope and the composition of the sample. Users of these statistics are advised to read these Explanatory Notes carefully to ensure they are aware of, and understand, the impacts.

STATISTICAL UNITS USED

6 Statistical units are those entities from which statistics are collected, or about which statistics are compiled. In ABS economic statistics, the statistical unit is generally the business. The ABS Business Register (ABSBR) is used to record information about statistical units and is used to create the frames for most ABS economic collections.

7 The ABS uses an economic statistics units model on the ABSBR to describe the characteristics of businesses, and the structural relationships between related businesses. Within large, complex and diverse business groups, the units model is used also to define reporting units that can provide data to the ABS at suitable levels of detail.

8 This units model allocates businesses to one of two sub-populations:

STATISTICAL UNITS USED *continued*

- Most businesses and organisations in Australia need to obtain an Australian Business Number (ABN). They are then included on the whole-of-government register of businesses, the Australian Business Register (ABR), which is maintained by the Australian Taxation Office (ATO). Most of these businesses have simple structures; therefore, the unit registered for an ABN will satisfy ABS statistical requirements. For these businesses, the ABS has aligned its statistical units structure with the ABN unit. The businesses with simple structures constitute the ATO maintained population (ATOMP), and the ABN unit is used as the statistical unit for all ABS economic collections.
- For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS maintains its own units structure through direct contact with the business. These businesses constitute the ABS maintained population (ABSMP). This population consists typically of large, complex and diverse businesses. For businesses in the ABSMP, statistical units comprise the Enterprise Group, the Enterprise and the Type of Activity Unit (TAU). The range of activities across the Enterprise Group can be very diverse. The TAU represents a grouping of one or more business entities within the Enterprise that cover all of the operations within an industry sub-division and for which a basic set of financial data, production and employment can be reported.

9 Together these two sub-populations (of ABN units and TAUs) make up the ABSBR population, from which the BCS sample is taken.

10 The current economic statistics units model was introduced into the ABS in mid 2002, to better use the information available as a result of The New Tax System (TNTS), for more information please refer to *Information Paper: Improvements in ABS Economic Statistics [Arising from the New Tax System*], (cat. no. 1372.0).

SCOPE AND COVERAGE

11 The businesses that contribute to the statistics in this publication are classified:

- by institutional sector, in accordance with the Standard Institutional Sector Classification of Australia (SISCA), which is detailed in Standard Economic Sector Classifications of Australia (SESCA) (cat. no. 1218.0)
- by industry, in accordance with the Australian and New Zealand Standard Industrial Classification (ANZSIC), 1993 edition (cat. no. 1292.0).

12 The scope of the business use of IT estimates in this publication consists of all business entities in the Australian economy, except for:

- SISCA 3000 General government
- SISCA 6000 Rest of the world
- ANZSIC Division A Agriculture, forestry and fishing
- ANZSIC Division M Government administration and defence
- ANZSIC Division N Education
- ANZSIC Sub-division 97 Private households employing staff
- ANZSIC Class 7340 Financial asset investors
- ANZSIC Class 7412 Superannuation funds
- ANZSIC Class 9610 Religious organisations

13 This scope largely matches that of the previous BUIT surveys with the exception of ANZSIC classes 7340 and 7412.

14 The frame for the Business Characteristics Survey is a subset of the ABS Business Register and includes employing business only. These are defined as those business which register for the ATO's Pay As You Go Withholding (PAYGW) scheme. It is not unusual for some of these 'employing businesses' to have zero employment at various times during the reporting period. The frame is updated quarterly to take account of new businesses, businesses which have ceased employing, changes in employment levels, changes in industry and other general business changes. Businesses which have

SCOPE AND COVERAGE *continued*

ceased employing are identified when the ATO cancels their Australian Business Number(ABN) and/or PAYGW registration. In addition, businesses with less than 50 employees which did not remit under the PAYGW scheme in each of the previous five quarters are removed from the frame. The estimates in this publication include an allowance for the time it takes a newly registered business to be included in the survey frame.

SURVEY METHODOLOGY

15 The sample design for this survey is complex due to serving dual purposes, which include collection of characteristics data for the ABS Business Longitudinal Database and production of point in time estimates for a range of non-financial business characteristics. While there are scope differences between the BLD and point in time estimates, the intention is to maximise the number of businesses selected for which the data collected can contribute to both purposes. More information about the BLD is contained in the *Discussion paper: The first iteration of the Business Longitudinal Database*, 2004-05 (cat. no. 8164.0). The explanation given in the following paragraphs has been simplified to provide a summary explanation of the design of the sample used to produce the estimates included in this release. If you require further information on the survey methodology for the BCS, please email your query to innovation.technology@abs.gov.au.

16 Collection of data included in this release was undertaken based on a random sample of approximately 8,800 businesses using a mail out questionnaire. The sample was stratified by industry and an employment based size indicator. All businesses on the ABS Business Register identified as having 200 or more employees were included in the sample.

17 Apart from the scope differences, the main change in the sample design of the 2005–06 BCS compared to the most recent BUIT survey is the loss of state or territory as a stratification variable. The loss of state or territory stratification may impact on the quality of state or territory estimates that are expected to be included in future related releases for the 2005–06 BCS.

18 In an effort to reduce load on individual businesses, standard practice in most ABS business surveys is to each year, rotate out one third of sampled businesses. This normally results in around 66% of sampled businesses being common between cycles and minimises impact on outputs resulting from new businesses being included. In previous BUIT surveys, higher rates of rotation have impacted on the comparability of estimates for some output classifications. As the 2005–06 BCS was the first integrated collection and incorporated a new sample design, it was not possible to control the rate of sample rotation.

19 To minimise this potential effect, efforts were made to maximise the overlap of businesses selected in the 2005–06 BCS sample with those included previous BUIT surveys. However, to meet all of the requirements for the dual purpose of the BCS (i.e. both longitudinal and point in time), only relatively low levels of overlap were ultimately possible. There were also resource and provider load constraints impacting on this. Approximately 16% of businesses included in the sampled component of the 2004–05 BUIT survey are common to the sampled component of the 2005–06 BCS. The impacts of this relatively low level of sample overlap on comparability with previously released BUIT data are outlined later in these Explanatory Notes. The common sample rate for subsequent surveys will be higher.

REFERENCE PERIOD

20 The reference period for most of the characteristics items included in the 2005-06 Business Characteristics Survey is the year ended 30 June 2006. Financial data relates to the most recent financial year ended on or before 30 September 2006.

DEFINING "INTERNET ORDERS" AND "INTERNET INCOME"

21 In both the BCS and past BUIT surveys, the ABS has used the Organisation for Economic Co-operation and Development (OECD) definitions of e-commerce transactions when collecting data on Internet orders and Internet income. The OECD defines an Internet transaction as the sale or purchase of goods or services conducted over the Internet. The goods and services are ordered over the Internet, but the payment and the ultimate delivery of the good or service may be conducted on or off-line. Internet income is, therefore, defined as income resulting from goods and services ordered over the Internet.

22 ABS experience in collecting data for receipt of orders via the Internet and Internet income highlights the difficulty of defining an Internet commerce transaction in a way which is (i) understood by businesses, and (ii) suits all forms of Internet commerce. For instance, for some businesses, the Internet transaction initiates and completes the purchase, while for others the Internet transaction finalises details of a purchase which was initiated by a non-Internet based agreement or contract. In order to apply consistent treatment in the collecting and editing Internet orders and Internet income data, over several cycles of the BUIT survey the ABS refined the definition of an "Internet order" to include only those transactions where the final commitment to purchase occurs via the Internet or web. An important element of the definition remains that payment and the ultimate delivery of the good or service is not relevant, that is, either or both may be conducted off-line. This definition still holds for the 2005–06 BCS and the Internet orders and Internet income data presented in this release. The definition has also been adopted by the OECD for inclusion in the *ICT Use by Businesses: Revised OECD Model Survey*.

23 It then follows that the concept of Internet income presented in this release relates to income resulting from orders received via the Internet or web for goods or services, where an order is a commitment to purchase. Like previous BUIT surveys, the 2005–06 BCS has highlighted issues which affect the quality and interpretation of estimates of Internet income and the proportion of businesses receiving orders for goods and services via the Internet or web. Readers should consider these issues when using these estimates.

24 Some orders for goods and services are initiated over the Internet and are then subject to ongoing payments. Ongoing payments may occur over a long period of time and via non-Internet based media. For consistency in compiling the income measure and to ensure that it covers all income flowing from the initial order over the Internet, the ABS would ideally like to include ongoing payments via the Internet, but recognises that most businesses are unable to track these payments. Estimates of Internet income resulting from the 2005–06 BCS and previous BUIT surveys may be understated due to this measurement issue.

25 As in previous BUIT surveys, many businesses in the 2005–06 BCS did not maintain records on the basis of the Internet income measure as defined and, therefore, needed to estimate its value. For some large businesses, the estimation of Internet income continues to be difficult and in some instances responses were inconsistent with those of previous surveys. While the ABS has reduced this error through analysis of responses and consultation with businesses, this form of error cannot be completely eliminated.

IMPACT ON BUSINESS USE OF IT OUTPUTS ARISING FROM THE IMPLEMENTATION OF THE IBCS

26 From 1999–2000 to 2004–05, the BUIT survey was conducted on an annual basis. Prior to 1999–2000, the BUIT survey was only conducted twice, in respect of the 1993–94 and 1997–98 financial years. The survey had a set of core items for which data was collected each year. The remainder of survey content was dynamic and updated each survey cycle to reflect emerging and changing uses of IT. Annual collection of core items continues through the BCS vehicle, however the remainder of BUIT content (i.e. the dynamic component) is collected biennially rather than annually.

IMPACT ON BUSINESS USE OF IT OUTPUTS ARISING FROM THE IMPLEMENTATION OF THE IBCS *continued*

27 Collection of items through a different survey vehicle alone can have some impact on resulting data due to context effect, e.g. having multiple topics covered in one survey form can often change the interpretation of questions based on the context set by earlier topics and questions, compared to an entire survey on a single topic. Changes to question wording can also change the way a question is interpreted. Testing of survey forms aims to ensure such effects are minimised. A majority of the BUIT survey content was moved to the BCS vehicle with no change to question wording. Quality assurance of key BUIT outputs indicates that the change of survey vehicle including a predominantly new sample has had minimal impact on the estimates at the Australian level. However, the impact on estimates at lower levels of output, such as by employment size and industry, has been more noticeable.

28 As noted in previous issues of *Business Use of Information Technology* (cat. no. 8129.0) estimates of IT use by industry are affected by the nature, number and size of the businesses classified to the individual division. Some industry divisions have large numbers of smaller businesses which can have very different IT use to that of larger businesses. For example, the activity and number of businesses included in the Communication services division ranges from a small number of very large businesses that provide telephony or Internet services (these have high levels of IT use) to a large number of small postal delivery contractors (these have low levels of IT use). The outcome of this diverse range of business activity along with the distribution of the industry's population can be that results for some industry appear to be at odds with what could be expected. As a result of the smaller than usual sample overlap in the 2005-06 BCS, this effect is possibly more pronounced, particularly for estimates by industry or industry by employment size. Comparisons for BUIT output with that published in previous issues of *Business Use of Information Technology* (cat. no. 8129.0) below the Australian level should only be made with caution.

BUSINESS COUNTS IN THIS RELEASE AND COMPARABILITY WITH OTHERS PUBLISHED BY THE ABS

29 Estimates of the number of businesses operating in Australia can be derived from a number of sources within the ABS. They may relate to a particular point in time or may be presented as an average annual figure. However, these estimates will not always show the same results. Variations will occur because of differing data sources, differing scope and coverage definitions between surveys, as well as variations due to sampling and non-sampling error. More information about business counts can be found in the information paper *A Statistical View of Counts of Businesses in Australia* (cat. no. 8162.0).

30 The Business Characteristics Survey is not designed to provide high quality estimates of numbers of businesses for any of the output classifications (for example, state and territory or industry) and the number of businesses in this publication are only included to provide contextual information for the user. A more robust source of counts of Australian businesses is available from *Counts of Australian Businesses, including Entries and Exits, Jun 2003 to Jun 2006* (cat. no. 8165.0).

OUTPUT CLASSIFICATIONS

31 For output purposes, businesses are classified to employment size ranges based on actual data reported in the survey. For other output groups (industry, capital city/other areas) the classification is drawn from information held about the business on the ABS Business Register.

COMPARISONS WITH OTHER COUNTRIES

32 Data relating to other countries has been provided courtesy of the OECD Science, Technology and Industry Scoreboard, 2007 which is compiled biannually by the OECD from individual country reports. Australian data are from the 2005–06 BCS and the scope has been adjusted to show estimates only for businesses with 10 or more persons employed. See paragraph 3 of these Explanatory Notes for more information about the scope of the 2005–06 BCS.

COMPARISONS WITH OTHER COUNTRIES *continued*

33 There are different definitions, reference periods and scope for the data included in this table including:

- The ABS defines broadband as an 'always on' Internet connection with an access speed equal to or greater than 256kbps. Most other countries define broadband in terms of access technology (e.g. ADSL, Cable, etc) rather than speed. However, Iceland only includes connections with a bandwidth equal to or greater than 2Mbps.
- Estimates are for businesses with 10 or more employees unless otherwise stated. For most European countries, the following industries are included: Manufacturing, Construction, Wholesale and retail, Hotels and restaurants, Transport, storage & communication, Real estate, renting and business activities and Other community, social and personal service activities. For Canada, Agriculture, fishing, hunting and trapping, and Construction - specialist contractors are excluded. For Japan, data refer to enterprises with 100 or more employees and exclude: Agriculture, forestry, fisheries and Mining. Korea includes: Agriculture & Fisheries, Light Industry, Heavy Industry, Petrochemicals, Construction, Distribution, Finance and Insurance, and Other services. For Mexico, data refer to enterprises with 50 or more employees and include: Manufacturing, Services and Construction. For New Zealand, data exclude Government administration and defence, and Personal and other services; the NZ survey also excludes businesses with fewer than 6 employees (calculated by Rolling Mean Employment) and those with turnover of less than NZD 30 000. For Switzerland, data refer to enterprises with 5 or more employees, and include Manufacturing, Construction, Electricity, gas and water, and Services industries.
- For Table 5.1 - data for Switzerland, Japan and Korea was collected in 2005. For Mexico, data was collected in 2003. For Ireland, data includes Statistical Classification of Economic Activities in the European Community (NACE92 - Recreational, cultural and sporting activities). For United Kingdom, data includes NACE55 - Hotels and restaurants).
- For Table 5.2 - data for Switzerland, Japan and Korea was collected in 2005. For Mexico, data was collected in 2003.

UPCOMING RELATED RELEASES

34 Upcoming ABS data releases from the 2005–06 Business Characteristics Survey and a brief description of these are listed below:

- *Business Use of Information Technology, Australia, 2005-06* (cat no 8129.0) datacubes. These datacubes will include detailed (including some cross classified) industry and employment size data by topic. Any state or territory data which can be released will be included in these datacubes.
- *Selected Characteristics of Australian Business, 2005–06* (cat. no. 8167.0). This is a new release scheduled for February 2008. It will include summary characteristics data for a selection of topics including business cooperative arrangements, performance measures, barriers, government financial assistance, finance sought, markets and competition, innovation rates and IT usage. It is possible that there may be additional outputs relating to business characteristics (with some cross classification of characteristics variables) released as data cubes.

MOST RECENT RELATED RELEASES

35 The most recent issues of other ABS releases on the use and production of information and communication technologies (ICT) in Australia are listed below:

- *Patterns of Internet Access in Australia, 2006* (cat no. 8146.0.55.001)
- *Household Use of Information Technology, Australia, 2005–06* (cat. no. 8146.0)
- *Information and Communication Technology, Australia, 2004–2005* (cat.no. 8126.0)
- *Internet Activity, Australia, March 2007* (cat. no. 8153.0)
- *Summary of IT Use and Innovation in Australian Business, 2005–06* (cat no. 8166.0)
- *Use of Information Technology on Farms, Australia, 2004–05* (cat. no. 8150.0)

MOST RECENT RELATED RELEASES *continued*

36 Recent ABS releases which provide additional information related to the Integrated Business Characteristics Strategy and the Business Longitudinal Database are listed below:

- *Discussion Paper: The first iteration of the Business Longitudinal Database, 2004–05* (cat. no. 8164.0)
- *Innovation and Technology Update (Newsletter), June 2007* (cat. no. 8101.0)

ABS WEBSITE

37 Other information relating to IT and innovation, particularly updates about additional analytical work in respect of the intensity and impact of IT and innovation, can be found on the ABS website <www.abs.gov.au>; see the Innovation, Science and Technology Home page under Themes/Industry.

DATA AVAILABLE ON REQUEST

38 As well as the statistics included in this publication, the ABS may have relevant data available on request. The availability of more detailed data are subject to confidentiality and quality checks and may incur costs. Inquiries should be made to the National Information and Referral Service on 1300 135 070.

ROUNDING

39 Estimates of proportions shown in the tables are rounded to one tenth of a percentage point. Where figures have been rounded, discrepancies may occur between the sum of the component items and the total. In addition, percentages have been calculated using the unrounded figures.

COMMENTS

40 The ABS welcomes comments and suggestions from users regarding ICT and innovation statistics. These comments should be addressed to the Director, Innovation and Technology Business Statistics Centre, Australian Bureau of Statistics, GPO Box K881, Perth, WA, 6842, or email innovation.technology@abs.gov.au.

ABBREVIATIONS

ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ATM	asynchronous transfer mode
ATO	Australian Taxation Office
DSL	digital subscriber line
EDI	electronic data interchange
Gbps	gigabits per second
ICT	information and communication technology
ISDN	integrated service digital network
IT	information technology
kbps	kilobits per second
Mbps	megabits per second
OECD	Organisation for Economic Co-operation and Development
PAYGW	pay-as-you-go withholding
RSE	relative standard error
SISCA	Standard Institutional Sector Classification of Australia
TNTS	The New Tax System

TECHNICAL NOTE

DATA QUALITY

INTRODUCTION

1 When interpreting the results of a survey it is important to take into account factors that may affect the reliability of the estimates. Estimates in this publication are subject to both non-sampling and sampling errors.

NON-SAMPLING ERRORS

2 Non-sampling errors may arise as a result of errors in the reporting, recording or processing of the data and can occur even if there is a complete enumeration of the population. These errors can be introduced through inadequacies in the questionnaire, treatment of non-response, inaccurate reporting by respondents, errors in the application of survey procedures, incorrect recording of answers and errors in data capture and processing.

3 The extent to which non-sampling error affects the results of the survey is difficult to measure. Every effort is made to reduce non-sampling error by careful design and testing of the questionnaire, efficient operating procedures and systems, and the use of appropriate methodology.

4 Some of the items collected in the Business Characteristics Survey are dynamic in nature and the concepts measured are subject to evolution and refinement over time. This is most evident in the items related to innovation where substantial change has been made to previously collected innovation statistics. As noted in the Explanatory Notes, changes have been made to the questions, survey scope and survey procedures; it is not possible to measure the impact of all of these changes on data quality.

5 The 2005-06 Business Characteristics Survey had a response rate of over 97%.

SAMPLING ERROR

6 The difference between estimates obtained from a sample of businesses, and the estimates that would have been produced if the information had been obtained from all businesses, is called sampling error. The expected magnitude of the sampling error associated with any estimate can be estimated from the sample results. One measure of sampling error is given by the standard error (SE), which indicates the degree to which an estimate may vary from the value that would have been obtained from a full enumeration (the 'true' figure). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about nineteen chances in twenty that the difference will be less than two standard errors.

7 An example of the use of standard error on the total proportion of businesses with Internet use is as follows. From Table 2.1, the estimated proportion of total businesses with Internet use was 81.3%. The standard error of this estimate was 0.85%. There would be about two chances in three that a full enumeration would have given a figure in the range 80.5% to 82.1%, and about nineteen chances in twenty that it would be in the ranges 79.6% to 83.0%. Detailed standard errors are available on request.

8 In this publication, indications of sampling variability are measured by relative standard errors (RSEs). The relative standard error is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer also to the size of the estimate. Relative standard errors are shown in the Relative Standard Error table in this section.

SAMPLING ERROR *continued*

9 To annotate proportion estimates, a value of 50% has been used in the calculation of RSE rather than the estimated proportion from the survey data. This avoids inconsistencies between the way very low and very high proportions are annotated. Relative standard errors for estimates in this publication have been calculated using the actual standard error and the survey estimate (referred to as x) in the following manner:

RSE%(x) = (SE(x)*100)/50

10 Using the previous example, the standard error for the estimated proportion of businesses with Internet use was 0.85%. Multiplied by 100 and then divided by 50 gives an RSE calculated on this basis of 1.7%. It is these figures that appear in the table appended to this chapter.

11 For the tables in this publication, estimates with RSEs between 10% and 25% are annotated with the symbol '^'. These estimates should be used with caution as they are subject to sampling variability too high for some purposes. Estimates with RSEs between 25% and 50% are annotated with the symbol '*', indicating that the estimates should be used with caution as they are subject to sampling variability too high for most practical purposes. Estimates with an RSE greater than 50% are annotated with the symbol '**', indicating that the sampling variability causes the estimates to be considered too unreliable for general use.

12 For estimates of proportion the symbol '^' means that the estimate from full enumeration could lie more than a decile away so the estimate should be used with caution. For example a proportion estimate of 30% annotated with '^' means the full enumeration value could lie beyond the range 20% to 40%. The symbol '*' means the estimate from full enumeration could lie more than a quartile away and is subject to sampling variability too high for most practical purposes. A proportion estimate of 30% annotated with '*' means the full enumeration value could lie beyond the range 5% to 55%. Proportion estimates annotated with the symbol '**' have a sampling error that causes the estimates to be considered too unreliable for general use.

RELATIVE STANDARD ERRORS OF BUSINESS USE OF TECHNOLOGIES , by selected business characteristics for the year ended 30 June 2006

		BUSINESSES REPORTING			BUSINESSES WHICH	
	Number of businesses	*computer use*	*Internet use*	*a web presence*	*placed orders via the Internet or web*	*received orders via the Internet or web*
	%	%	%	%	%	%
Employment size						
0–4 persons	1.6	2.1	2.5	2.2	2.7	1.9
5–19 persons	3.6	2.2	2.8	3.5	3.9	3.2
20–199 persons	4.3	1.9	2.8	5.0	4.7	4.2
200 or more persons	10.9	—	—	3.8	9.6	7.2
Industry						
Mining	3.0	6.0	7.6	7.5	9.0	4.6
Manufacturing	1.6	4.1	5.2	6.0	6.7	5.3
Electricity, gas and water supply	2.0	3.5	5.0	6.4	7.3	6.5
Construction	1.3	4.2	5.3	3.2	4.7	4.0
Wholesale trade	1.0	2.7	3.9	7.8	7.6	8.0
Retail trade	1.2	3.8	5.0	4.7	4.6	4.6
Accommodation, cafes and restaurants	1.6	6.1	6.6	5.4	5.1	5.0
Transport and storage	2.9	8.6	10.1	5.8	7.1	7.5
Communication services	3.3	7.0	9.1	8.6	8.8	7.4
Finance and insurance services	6.8	5.3	5.8	11.4	11.2	9.3
Property and business services	1.3	2.1	2.6	4.4	4.7	4.2
Health and community services	2.1	3.2	4.8	5.3	7.7	2.3
Cultural and recreational services	2.3	3.4	4.4	8.2	8.9	7.9
Personal and other services	1.5	6.7	7.6	6.3	6.4	5.2
Region						
Capital cities	1.3	1.6	2.1	2.3	2.6	1.8
Other areas	3.2	2.6	3.1	2.7	3.8	2.9
Total	**0.5**	**1.3**	**1.7**	**1.7**	**2.1**	**1.5**

— nil or rounded to zero (including null cells)

GLOSSARY

Back end systems	Computer systems (e.g. for accounting, stock control or ordering) used to manage non-Internet aspects of a business.
Broadband	Defined by the ABS as an 'always on' Internet connection with an access speed equal to or greater than 256kbps.
Cable	Describes those technologies including coaxial cable, fibre optic cable and hybrid fibre coaxial cable which are capable of transmitting data at speeds of up to 10Gbps.
Dial-up (analog)	Connection to the Internet via modem and dial-up software utilising the public switched telecommunications network.
DSL (Digital Subscriber Line)	More properly referred to as xDSL as this covers several digital technologies (e.g. Asymmetric DSL or ADSL and Symmetric DSL or SDSL) for fast two-way data connections over the public switched telecommunications network.
Fixed Wireless Internet access	Point to point microwave link, generally building to building or tower to building which allows subscribers within the receiving building to access the Internet. Sender and receiver must be within line of sight and no more than 22 kilometres apart.
Frame Relay	Communications protocol used to ensure that data is delivered correctly over a packet-switching system transmitting at up to 2Mbps.
Internet	A world-wide public computer network. Organisations and individuals can connect their computers to this network and exchange information across a country and/or across the world. The Internet provides access to a number of communication services including the World Wide Web and carries email, news, entertainment and data files.
Internet Income	Income resulting from orders received via the Internet or web for goods or services.
ISDN (Integrated Services Digital Network)	A digital access technique for both voice and data. Digital alternative to an analog public switched telephone service and carries data or voltages consisting of discrete steps or levels, as opposed to continuously variable analog data. ISDN enables digital transmission over the public switched telecommunications network.
Mobile Wireless Internet access	Mobile Internet access via 'hotspots' using a microwave connection often referred to as WiFi. Most commonly utilised by laptop users although it is also becoming increasingly popular within homes and businesses with multiple PCs.
Non dial-up	Refers to permanent and 'always on' connections to the Internet.
Order	A commitment to purchase goods or services.
Other broadband	Includes ATM and Frame Relay.
Satellite/communications satellite	A satellite stationed in geosynchronous orbit that acts as a microwave relay station, receiving signals sent from a ground based station, amplifying them, and retransmitting them on a different frequency to another ground-based station. Satellites can be used for high-speed transmission of computer data.
Secure access/transactions	A web site has a capability for secure access or transactions when it allows customers to submit orders for goods, requests for services and credit/debit card details over a secure link that cannot be accessed by unauthorised persons. Secure Sockets Layer (SSL) is a common protocol used in this type of web site as it enables encryption of data such as credit card details and customer information sent over the Internet.

Web presence Web presence includes a web site, home page or presence on another entity's web site. A web site or home page is an electronic document that is accessed via a unique address on the World Wide Web. The document provides information in a textual, graphical or multimedia format. Web presence excludes online listings.

Wireless Includes fixed wireless, mobile wireless and satellite Internet connections.

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