

# **INFORMATION TECHNOLOGY**

**AUSTRALIA**  
**PRELIMINARY**

EMBARGO: 11.30AM (CANBERRA TIME) MON 29 MAY 2000

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- For further information about these and related statistics, contact the National Information Service on 1300 135 070 or Paul Taylor on Melbourne 03 9615 7431.

## INTRODUCTION

This publication presents preliminary results, in respect of the 1998–99 financial year, from an Australian Bureau of Statistics (ABS) survey on the production and distribution of information technology and telecommunication (IT&T) goods and services by businesses in Australia. It has been released to provide timely summary information and is based on an 80% response rate at the time of preparing this publication. These preliminary results may therefore be subject to revision as a result of further responses and more comprehensive editing of the data. This is the third ABS survey of IT&T production and distribution by business with the previous collection being conducted in respect of the 1995-96 financial year. The survey scope and definitions are broadly consistent with those used in the previous survey.

Information in this publication covers the main industries involved in the production and distribution of IT&T goods and services. This industry view draws together a number of standard industries, a complete list of which can be found in paragraph 3 of the Explanatory Notes. Within these industries, it is the subset of businesses which specialise in IT&T which are the prime interest and therefore the main focus of the statistics in the publication. Also presented in this publication are comparisons between selected IT&T goods and services produced in Australia and exports and imports of those goods and services.

The definition of information technology and telecommunications (IT&T) used in these statistics is based on a set of goods and services descriptions which have been agreed by major policy and industry organisations. It essentially covers computers and communications equipment and the services which facilitate the use of this equipment. Excluded from this definition are process control computers and other equipment in which the presence of microprocessors is predominantly for the control or setting of functions. Simple calculating devices are also excluded along with television and radio broadcasting goods and services and TV and radio receivers.

The survey complements other information produced as part of the ABS IT&T statistics work program. Other publications produced to date are listed at paragraph 22 of the Explanatory Notes. More detailed information than presented in this preliminary publication will be released over the next few months in:

*Computing Services Industry, Australia, 1998–99* (Cat. no. 8669.0)

*Information Technology, Australia, 1998–99* (Cat. no. 8126.0)

*Telecommunications Services, Australia, 1998–99* (Cat. no. 8145.0)

## COMMENTS ON THIS PUBLICATION

The ABS welcomes comments and suggestions from users regarding data items for inclusion in future surveys. Comments should be addressed to the Director, Science and Technology Statistics Section, Australian Bureau of Statistics, PO Box 10, Belconnen ACT, 2616.

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Australian Statistician

## SUMMARY OF FINDINGS

### INTRODUCTION

This publication presents results, in respect of the 1998–99 financial year, from an Australian Bureau of Statistics (ABS) survey of the production and distribution of information technology and telecommunications (IT&T) goods and services by businesses in Australia. Note that financial data are presented in current price terms.

### BUSINESSES

At the end of June 1999, there were 18,469 IT&T specialist businesses in the industries surveyed. This was an increase of 36% since the last survey in 1995–96.

Of the 18,469 specialists, 14,546 (79%) were in the computer consultancy services industry, 1,398 (8%) in the computer wholesaling industry and 931 (5%) in the telecommunication services industry. The remaining 1,594 (9%) were spread across the other industries surveyed.

### EMPLOYMENT

At the end of June 1999, there were 195,580 persons working in IT&T specialist businesses, a 4% decrease since 1995–96. This 4% overall decrease in employment in IT&T specialist businesses consisted of a 42% decrease across the manufacturing industries, an 11% decrease across the wholesale industries, an 18% decrease in the telecommunications industry with an offsetting 37% increase in the computer services industries.

### INCOME

During 1998–99, the total income for IT&T specialists was \$59,421 million, an increase of 21% over 1995–96 in current price terms. Specialist businesses had IT&T income of \$56,189 million which represented 95% of total income. The largest contributors to IT&T income were businesses classified to the telecommunication services industry (\$25,138 million) which accounted for 45% of the total. The computer wholesaling industry contributed \$12,501 million (22%) and the computer consultancy services industry contributed \$8,570 million (15%).

IT&T income per person employed for IT&T specialist businesses was \$287,300. The industries with the largest IT&T income per person employed were the wholesaling industries (\$506,400) and the computer and business machines manufacturing industry (\$472,200). The industry with the lowest IT&T income per person employed was the information storage and retrieval industry (\$98,000).

In 1998–99 revenue from domestic production of IT&T goods and services totalled \$39,331 million, which is 69% of total IT&T income (\$56,761 million). The balance of IT&T income is attributed to the on-selling of IT&T goods and services including those imported.

Revenue from domestic production has increased by 27% since 1995–96.

### EXPENSES

Total expenses for IT&T specialist businesses during 1998–99 were \$52,447 million, an increase of 17% since 1995–96. Wages and salaries was the highest single expense (\$9,841 million), representing 19% of total expenses in 1998–99.

Wages and salaries per person employed for IT&T specialist businesses was \$50,300. The industries with the largest wages and salaries per person employed were the business machines and electrical and electronic equipment wholesaling industries (\$59,200) and the telecommunication, broadcasting and transceiving equipment manufacturing industry (\$56,900). The industries with the lowest wages and salaries per

**SUMMARY OF FINDINGS** *continued*

EXPENSES *continued*

person employed were the electronic equipment n.e.c. manufacturing industry (\$33,600) and the information storage and retrieval industry (\$34,100) .

INTERNATIONAL TRADE

Exports of selected IT&T goods and services totalled \$4,188 million in 1998–99, a 14% increase since 1995–96. Imports of these items were valued at \$13,188 million, a 27% increase since 1995–96. This represents a trade deficit for 1998-99 of \$9,000 million and compares with \$6,731 million in 1995–96. The value of exports was equivalent to 11% of the value of revenue from domestic production (\$39,331 million) for the period, while imports were equivalent to 34%.

## KEY FIGURES

<i>Industry</i>	<i>Businesses at end June</i> no.	<i>Employment at end June</i> no.	<i>IT&amp;T income</i> \$m	<i>Total income</i> \$m	<i>Wages and salaries</i> \$m	<i>IT&amp;T income per person employed</i> \$'000
<b>IT&amp;T SPECIALISTS</b>						
Manufacturing						
Computer and business machines	119	2 211	1 044.2	1 044.5	81.4	472.2
Telecommunication, broadcasting and transceiving equipment	51	4 457	1 074.9	1 362.1	253.8	241.2
Electronic equipment n.e.c.	73	2 540	471.7	499.7	85.4	185.7
Electric cable and wire	24	806	245.5	272.0	38.4	304.6
Total	268	10 014	2 836.3	3 178.4	459.0	283.2
Wholesale trade						
Computers	1 398	24 316	12 501.3	13 241.7	1 297.5	514.1
Business machines and electrical and electronic equipment n.e.c.	561	10 865	*5 315.3	6 193.8	643.6	489.2
Total	1 960	35 180	17 816.6	19 435.4	1 941.2	506.4
Telecommunication services	931	74 910	25 137.5	26 159.5	3 701.0	335.6
Computer services						
Data processing	261	7 118	np	np	np	np
Information storage and retrieval	*112	929	91.1	97.3	31.7	98.0
Computer maintenance	392	2 975	np	np	np	np
Computer consultancy	14 546	64 453	8 569.8	8 792.2	3 193.9	133.0
Total	15 310	75 476	10 398.5	10 647.9	3 739.3	137.8
<b>Total</b>	<b>18 469</b>	<b>195 580</b>	<b>56 188.9</b>	<b>59 421.2</b>	<b>9 840.5</b>	<b>287.3</b>

## OTHER BUSINESSES

Manufacturing						
Computer and business machines	16	120	4.7	22.0	3.8	39.3
Telecommunication, broadcasting and transceiving equipment	*6	np	np	np	np	6.5
Electronic equipment n.e.c.	134	5 079	np	1 389.9	215.1	np
Electric cable and wire	28	np	np	np	np	37.4
Total	184	7 956	125.6	2 350.1	357.2	15.8
Wholesale trade						
Computers	—	—	—	—	—	—
Business machines and electrical and electronic equipment n.e.c.	1 635	24 438	446.4	8 489.7	972.5	18.3
Total	1 635	24 438	446.4	8 489.7	972.5	18.3
Telecommunication services	—	—	—	—	—	—
Computer services	—	—	—	—	—	—
<b>Total</b>	<b>1 819</b>	<b>32 394</b>	<b>572.0</b>	<b>10 839.8</b>	<b>1 329.7</b>	<b>17.7</b>

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

np not available for publication but included in totals where applicable, unless otherwise indicated

— nil or rounded to zero (including null cells)

KEY FIGURES *continued*

<i>Industry</i>	<i>Businesses at end June</i> no.	<i>Employment at end June</i> no.	<i>IT&amp;T income</i> \$m	<i>Total income</i> \$m	<i>Wages and salaries</i> \$m	<i>IT&amp;T income per person employed</i> \$'000
ALL BUSINESSES						
Manufacturing						
Computer and business machines	135	2 331	1 048.9	1 066.6	85.2	450.0
Telecommunication, broadcasting and transceiving equipment	57	np	np	np	np	239.7
Electronic equipment n.e.c.	207	7 619	np	1 889.7	300.4	np
Electric cable and wire	52	np	np	np	np	98.3
Total	451	17 970	2 961.9	5 528.5	816.2	164.8
Wholesale trade						
Computers	1 398	24 316	12 501.3	13 241.7	1 297.5	514.1
Business machines and electrical and electronic equipment n.e.c.	2 197	35 303	*5 761.8	14 683.5	1 616.2	163.2
Total	3 595	59 618	18 263.1	27 925.2	2 913.7	306.3
Telecommunication services	931	74 910	25 137.5	26 159.5	3 701.0	335.6
Computer services	15 310	75 476	10 398.5	10 647.9	3 739.3	137.8
<b>Total</b>	<b>20 288</b>	<b>227 974</b>	<b>56 761.0</b>	<b>70 261.1</b>	<b>11 170.2</b>	<b>249.0</b>

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

## IT&amp;T SPECIALISTS, INCOME AND EXPENSES

<i>Industry</i>	<i>IT&amp;T income</i>	<i>Total income</i>	<i>Wages and salaries</i>	<i>Total expenses</i>
	\$m	\$m	\$m	\$m
1998-99				
Manufacturing				
Computer and business machines	1 044.2	1 044.5	81.4	1 025.2
Telecommunication, broadcasting and transceiving equipment	1 074.9	1 362.1	253.8	1 290.3
Electronic equipment n.e.c.	471.7	499.7	85.4	477.9
Electric cable and wire	245.5	272.0	38.4	251.4
<b>Total</b>	<b>2 836.3</b>	<b>3 178.4</b>	<b>459.0</b>	<b>3 044.7</b>
Wholesale trade				
Computers	12 501.3	13 241.7	1 297.5	12 867.0
Business machines and electrical and electronic equipment n.e.c.	*5 315.3	6 193.8	643.6	6 100.4
<b>Total</b>	<b>17 816.6</b>	<b>19 435.4</b>	<b>1 941.2</b>	<b>18 967.4</b>
Telecommunication services	25 137.5	26 159.5	3 701.0	20 697.8
Computer services				
Data processing	np	np	np	np
Information storage and retrieval	91.1	97.3	31.7	89.7
Computer maintenance	np	np	np	np
Computer consultancy	8 569.8	8 792.2	3 193.9	7 992.2
<b>Total</b>	<b>10 398.5</b>	<b>10 647.9</b>	<b>3 739.3</b>	<b>9 736.6</b>
<b>Total</b>	<b>56 188.9</b>	<b>59 421.2</b>	<b>9 840.5</b>	<b>52 446.5</b>

1995-96				
Manufacturing				
Computer and business machines	1 874.7	1 934.5	192.3	1 910.0
Telecommunication, broadcasting and transceiving equipment	1 564.7	1 659.7	351.2	1 347.0
Electronic equipment n.e.c.	91.1	99.1	27.8	97.5
Electric cable and wire	1 035.6	1 072.5	155.6	1 040.0
<b>Total</b>	<b>4 566.1</b>	<b>4 765.8</b>	<b>727.0</b>	<b>4 394.5</b>
Wholesale trade				
Computers	11 944.8	12 254.9	1 314.4	11 741.5
Business machines and electrical and electronic equipment n.e.c.	4 733.3	5 070.9	552.7	4 926.9
<b>Total</b>	<b>16 678.1</b>	<b>17 325.8</b>	<b>1 867.1</b>	<b>16 668.4</b>
Telecommunication services	17 937.5	18 733.7	4 134.6	15 933.6
Computer services				
Data processing	885.2	924.7	226.0	873.0
Information storage and retrieval	165.0	180.0	44.5	187.3
Computer maintenance	894.8	902.7	217.1	855.1
Computer consultancy	5 850.1	6 080.4	2 031.6	5 725.5
<b>Total</b>	<b>7 795.0</b>	<b>8 087.8</b>	<b>2 519.1</b>	<b>7 640.9</b>
<b>Total</b>	<b>46 976.7</b>	<b>48 913.1</b>	<b>9 247.8</b>	<b>44 637.4</b>

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

np not available for publication but included in totals where applicable, unless otherwise indicated

IT&T SPECIALISTS, INCOME AND EXPENSES *continued*

	<i>IT&amp;T income</i>	<i>Total income</i>	<i>Wages and salaries</i>	<i>Total expenses</i>
<i>Industry</i>	\$m	\$m	\$m	\$m
1992-93				
Manufacturing				
Computer and business machines	np	np	np	np
Telecommunication, broadcasting and transceiving equipment	1 752.4	1 802.7	323.2	1 730.1
Electronic equipment n.e.c.	229.8	290.4	55.0	270.1
Electric cable and wire	404.6	412.3	43.7	316.4
<b>Total</b>	np	np	np	np
Wholesale trade				
Computers	4 820.2	4 931.5	581.6	4 828.5
Business machines and electrical and electronic equipment n.e.c.	np	np	np	np
<b>Total</b>	np	np	np	np
Telecommunication services	np	np	np	np
Computer services				
Data processing	144.2	147.9	52.6	132.3
Information storage and retrieval	102.6	103.8	22.6	93.0
Computer maintenance	1 082.3	1 085.2	223.2	1 007.0
Computer consultancy	2 701.7	2 763.8	909.0	2 517.0
<b>Total</b>	4 030.3	4 100.2	1 207.4	3 749.0
<b>Total</b>	<b>26 837.5</b>	<b>27 448.5</b>	<b>5 994.1</b>	<b>24 830.3</b>

np not available for publication but included in totals where applicable, unless otherwise indicated



	REVENUE FROM DOMESTIC PRODUCTION		IMPORTS (CUSTOMS VALUE) (a)		EXPORTS (F.O.B.) (a)	
	1995-96	1998-99	1995-96	1998-99	1995-96	1998-99
	\$m	\$m	\$m	\$m	\$m	\$m
Computer and telecommunication hardware, equipment, cables, etc						
Mainframe data processing machines	np	122.6	454.1	448.9	159.9	185.0
Laptop, notebook & similar portable computers	np	33.4	np	490.1	np	15.6
PCs & similar desktop computers	628.6	692.8	1 121.1	1 063.8	139.7	30.6
Laser & other printing systems	**21.4	*8.1	388.4	403.2	np	40.8
Other input-output devices & peripherals (including scanners, keyboards, monitors, etc)	*18.6	*10.2	625.3	643.7	70.0	np
Consumables (including removable storage media)	85.0	39.3	52.6	86.5	11.7	20.4
Other computer and communication hardware (excluding storage media)	429.5	174.4	4 275.3	4 618.4	1 458.9	1 249.2
Telephone & telegraph equipment (excluding parts)	767.7	501.4	41.3	161.9	71.5	20.3
Mobile communications						
Mobile, cellular & car phones	np	30.6	590.6	769.4	np	np
CB & other mobile radio transceiving equipment	np	114.4	65.6	74.6	np	np
Total	126.1	145.0	656.2	844.0	np	np
Other telecommunications and transceiving equipment	627.0	np	1 150.8	1 859.5	567.0	624.1
Cables						
Insulated optical fibre cable	np	258.4	33.5	30.0	36.1	14.0
Co-axial cable and other co-axial electric conductors	np	78.1	98.1	76.0	23.5	43.2
Total	(b)433.4	(b)336.5	131.6	106.0	59.6	57.2
Unspecified	np	np	—	—	—	—
Total	4 799.8	3 525.4	8 896.7	10 726.0	2 538.3	2 243.2
Income from the provision of computer services						
Customised software services and solutions (excluding maintenance)(c)	2 997.4	3 172.4	na	na	na	na
Software maintenance services	676.7	856.2	na	na	na	na
Hardware consultancy services (excluding maintenance)	911.1	345.6	na	na	na	na
Other computer consultancy services	410.8	749.6	na	na	na	na
Hardware maintenance services	1 466.5	637.8	na	na	na	na
Other computer services	1 913.0	5 073.7	na	na	na	na
Unspecified	na	141.6	na	na	na	na
Total	8 375.4	10 976.9	481.1	996.6	288.6	714.8
Income from the provision of telecommunication services	17 773.0	24 828.5	(d)1 040.3	(d)1 465.0	(d)860.6	(d)1 230.0
<b>Total</b>	<b>(b)30 948.2</b>	<b>(b)39 330.8</b>	<b>10 418.1</b>	<b>13 187.6</b>	<b>3 687.5</b>	<b>4 188.0</b>

np not available for publication but included in other categories and totals, unless otherwise indicated

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

— nil or rounded to zero (including null cells)

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

na not available

(a) Import and export data are compiled by the ABS from information submitted by exporters, importers or their agents to the Australian Customs Service. Exports include both exports of Australian produce and re-exports of goods of foreign origin. Because of the sheer volume of transactions involved, it is inevitable that there will be some errors, misclassifications and approximations in the statistics. Due to changes in import and export commodity classifications, data for 1998-99 are not strictly comparable with 1995-96 data. Please contact ABS for further information.

(b) Excludes revenue from production of communication cables that are not associated with IT&T.

(c) Customised software services and solutions may include some packaged software incidental to the main activity of the business.

(d) Includes both postal and telecommunication services data. Telecommunication services data are not separately available for publication.

## EXPLANATORY NOTES

### INTRODUCTION

**1** This publication presents preliminary results, in respect of the 1998–99 financial year, from an Australian Bureau of Statistics (ABS) survey on the production and distribution of information technology and telecommunication (IT&T) goods and services by businesses in Australia. It has been released to provide timely summary information and is based on an 80% response rate at the time of preparing this publication. These preliminary results may be subject to revision as a result of further responses and more comprehensive editing of the data. Also included in this publication are:

- import and export data compiled by the ABS from information submitted by exporters, importers or their agents to the Australian Customs Service. Exports include both exports of Australian produce and re-exports of goods of foreign origin; and
- data from the ABS survey of International Trade in Services.

**2** A final publication, *Information Technology, Australia 1998–99* (Cat. no. 8126.0) will be released in September 2000 and will provide final and more detailed statistics. Related publications are listed in paragraphs 22 and 23 of the Explanatory Notes.

### SURVEY SCOPE AND METHODOLOGY

**3** The survey results are based on a stratified random sample of the businesses recorded on the ABS Business Register and classified to one of the following classes of the Australian and New Zealand Standard Industrial Classification (ANZSIC):

- Class 2841, Computer and business machine manufacturing;
- Class 2842, Telecommunication, broadcasting and transceiving equipment manufacturing;
- Class 2849, Electronic equipment manufacturing;
- Class 2852, Electric cable and wire manufacturing;
- Class 4613, Computer wholesaling;
- Class 4614, Business machine wholesaling n.e.c.;
- Class 4615, Electrical and electronic equipment wholesaling n.e.c.;
- Class 7120, Telecommunication services;
- Class 7831, Data processing services;
- Class 7832, Information storage and retrieval services;
- Class 7833, Computer maintenance services; and
- Class 7834, Computer consultancy services.

**4** The ABS Business Register, in general, excludes businesses which do not have any employees. However, a sample of businesses recorded on the Telecommunication Industry Ombudsman list of employing and non-employing Internet Service Provider (ISP) businesses was also included in the survey.

### IMPROVEMENTS TO COVERAGE

**5** Data in this publication have been adjusted to allow for lags in processing new businesses to the ABS business register, and the omission of some businesses from the business register. The majority of businesses affected and to which the adjustments apply are small in size.

**6** Adjustments have been made to include new businesses in the estimates in the periods in which they commenced operations, rather than when they were processed to the business register. Adjustments of this type will continue to be applied in future periods.

**7** Further adjustments have been made for businesses which had been in existence for several years, but, for various reasons, were not previously added to the ABS register. The ABS is remedying these omissions.

## EXPLANATORY NOTES *continued*

### IMPROVEMENTS TO COVERAGE *continued*

**8** For more information on these adjustments, please refer to the ABS publication Information Paper: *Improvements to ABS Economic Statistics, 1997* (Cat. no. 1357.0).

### STATISTICAL UNIT

**9** The unit for which statistics were reported in the survey was the management unit. The management unit is the highest-level accounting unit within a business or organisation, having regard to the required level of industry homogeneity, for which accounts are maintained. In most cases it coincides with the legal entity owning the business (i.e. company, partnership, trust, etc.). In the case of large diversified businesses, however, there may be more than one management unit, each coinciding with a 'division' or 'line of business'. A division or line of business is recognised where separate and comprehensive accounts are compiled for it.

### CLASSIFICATION BY INDUSTRY

**10** This publication presents statistics classified according to the *Australian and New Zealand Standard Industrial Classification (ANZSIC) 1993* (Cat. no. 1292.0). Each business unit has been classified to a single industry on the basis of its main income earning activity, irrespective of whether the unit also generates income from related or unrelated secondary activities.

### RELIABILITY OF ESTIMATES

**11** The estimates presented in this publication are subject to sampling and non-sampling error.

#### *Sampling error*

**12** A sample of 4,850 management units was selected for this survey. Consequently, the estimates in this publication are subject to sampling variability, that is, they may differ from figures that would have been obtained if all units had been included in the survey. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of units was included.

**13** There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if a census had been conducted, and approximately 19 chances in 20 that the difference will be less than two SEs.

**14** Sampling variability can be measured by the relative standard error (RSE) which is obtained by expressing the SE as a percentage of the estimate to which it refers. The RSE 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.

**15** The table overleaf contains estimates of RSEs for a selection of statistics presented in this publication.

## EXPLANATORY NOTES *continued*

### RELATIVE STANDARD ERRORS, KEY FIGURES—ALL BUSINESSES

<i>Industry</i>	<i>Businesses at end June</i>	<i>Employment at end June</i>	<i>IT&amp;T income</i>	<i>Total income</i>	<i>Wages and salaries</i>	<i>IT&amp;T income per person employed</i>
	%	%	%	%	%	%
Manufacturing						
Computer and business machines	13	6	8	7	5	6
Telecommunication, broadcasting and transceiving equipment	8	np	np	np	np	2
Electronic equipment n.e.c.	8	5	np	5	3	12
Electric cable and wire	3	np	np	np	np	3
Total	5	2	4	2	2	3
Wholesale trade						
Computers	10	6	8	8	5	6
Business machines and electrical and electronic equipment n.e.c.	11	7	27	12	7	25
Total	8	5	10	7	5	9
Telecommunication services	7	1	1	1	1	1
Computer services	2	2	3	3	3	1
<b>Total</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

### RELIABILITY OF ESTIMATES *continued*

#### *Non-sampling error*

### REFERENCE PERIOD

### BUSINESSES CEASED DURING THE YEAR

**16** As an example of the above, an estimate of the total income of IT&T specialist businesses in the computer and business machines manufacturing industry is \$1044.5 million and the RSE is 7%, giving a standard error of \$73.1 million. Therefore, there would be two chances in three that, if all units had been included in the survey, a figure in the range of \$971.4 million to \$1117.6 million would have been obtained, and 19 chances in 20 (i.e. a confidence interval of 95%) that the figure would have been within the range of \$898.3 million to \$1190.7 million.

**17** Where the RSE of an estimate included in this publication exceeds 25%, it has been annotated with an asterisk (\*) as a warning to users. Where the RSE of an estimate exceeds 50%, it has been annotated with a double asterisk (\*\*).

**18** Errors other than those due to sampling may occur because of deficiencies in the register of units from which the sample was selected, non-response and imperfections in reporting by respondents. Inaccuracies of this kind are referred to as non-sampling errors and they may occur in any collection, whether it be a census or a sample. Every effort has been made to reduce non-sampling error to a minimum by careful design and testing of questionnaires, efficient operating procedures and systems and appropriate methodology.

**19** Data contained in the tables in this publication relate to all businesses which operated in Australia at any time during the year ended 30 June 1999. Counts of businesses and organisations, however, include only those that were operating at 30 June 1999.

**20** A very small number of organisations ceased operations during the 1998–99 reference period. As is normal ABS procedure, the contributions of these organisations were included in the survey output.

## EXPLANATORY NOTES *continued*

### ACKNOWLEDGMENT

**21** ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated; without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the Census and Statistics Act 1905.

### RELATED PUBLICATIONS

**22** The most recent issue of other ABS publications on the use and production of information technology and telecommunication goods and services in Australia are listed below:

*Business Use of Information Technology, Australia, 1997–98* (Cat. no. 8129.0)

*Computing Services Industry, Australia, 1995–96* (Cat. no. 8669.0)

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*Information Technology, Australia, 1995–96* (Cat. no. 8126.0)

*Telecommunication Services, Australia, 1996–97* (Cat. no. 8145.0)

*Use of the Internet by Householders, Australia, November 1999* (Cat. no. 8147.0)

*Year 2000 Problem, Australia, June 1999* (Cat. no. 8152.0)

**23** More detailed information than presented in this preliminary publication will be released over the next few months in:

*Computing Services Industry, Australia, 1998–99* (Cat. no. 8669.0) - expected release August 2000

*Information Technology, Australia, 1998–99* (Cat. no. 8126.0) - expected release September 2000

*Telecommunication Services, Australia, 1998–99* (Cat. no. 8145.0) - expected release September 2000

### ROUNDING

**24** Where figures have been rounded discrepancies may occur between the sum of component items and the total.

### ABBREVIATIONS

ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
IT&T	Information technology and telecommunications

## GLOSSARY

<b>Businesses at end June</b>	The number of management units operating at the end of June 1999. A management unit is the highest level accounting unit within a business, having regard for industry homogeneity, for which accounts are maintained.
<b>Employment at end June</b>	This item includes working proprietors and partners, working directors, and other employees (including casual employees) working for a business during the last pay period in June. Employees absent on paid or prepaid leave are included.
<b>Exports (f.o.b.)</b>	The value of exports is the free on board (f.o.b.) transaction value of the goods expressed in Australian dollars. The f.o.b. value includes the value of packaging (other than containerisation) and excludes freight and insurance costs for the overseas route.
<b>Imports (customs value)</b>	The value of imports is the Australian Customs value. Goods are valued at the point of containerisation, or the port of shipment, or the customs frontier of the exporting country, whichever comes first. The customs value is generally the same as the transaction value unless Australian Customs considers the value reported to be an unfair estimate of market value. This can occur when the transaction is between related companies.
<b>Information Technology and Telecommunications (IT&amp;T)</b>	Information technology and telecommunications (IT&T) refers to the services and technologies that enable information to be accessed, stored, processed, transformed, manipulated and disseminated, including the transmission or communication of voice and/or data over a variety of transmission media. Transmission media include telephone, facsimile, Internet data lines, satellite, microwave, radio, etc.
<b>IT&amp;T goods and services</b>	IT&T goods and services are defined to include: <ul style="list-style-type: none"> <li>■ computer hardware, communications hardware, parts, components and consumables;</li> <li>■ packaged and customised software;</li> <li>■ computer and data processing services;</li> <li>■ information storage and retrieval services;</li> <li>■ installation and cabling services;</li> <li>■ hardware and software maintenance services;</li> <li>■ computer consultancy services such as hardware and software appraisal, facilities management, network management, etc.; and</li> <li>■ telecommunication services such as Internet services, data services, telephony and mobile phone services.</li> </ul>
<b>IT&amp;T income</b>	This item includes income from computer goods and services, telecommunication services, packaged software, the sale of computer and communication hardware and wholesale sales. Wholesale sales includes commissions, rent, leasing and hiring income from computer and communication hardware, other royalties, and repair and installation services income.
<b>IT&amp;T specialists</b>	This item refers to those businesses whose IT&T income (as defined above) is 50% or more of the total income of the business.
<b>Other computer consultancy services</b>	This includes disaster recovery services (including Year 2000) and quality assurance planning and review services.
<b>Other computer hardware</b>	This includes parts and accessories for computers, main memory, storage units (excluding removable storage media), printed circuits, electronic components and parts for electronic components.
<b>Other computer services</b>	This includes telecommunication facilities management (e.g. management of PABX and external links, small business systems), computer facilities management, ongoing outsource provider arrangements and external service

## GLOSSARY *continued*

<b>Other computer services</b> <i>continued</i>	providers, installation and cabling services for computers, computer processing services, information storage and retrieval services and other computer services.
<b>Other telecommunications and transceiving equipment</b>	This includes cord and cordless telephone sets, telephone clock radios, teleprinters, facsimiles, modems and multiplexors and parts for all these items.
<b>Other telecommunications services</b>	This item includes inter-carrier charges, leased lines and sales of capacity to other carriers and service providers, video conferencing services, other multimedia telecommunications services, value added voice services (e.g. 1800, 1900 phone calls) and repair and maintenance of telecommunications equipment and infrastructure.
<b>Revenue from domestic production</b>	This includes income from the sale of computer and communication hardware manufactured in Australia, from packaged software developed in Australia, and from the provision of computer and communication services.
<b>Selected computer services</b>	This item includes computer consultancy services, facilities management and processing services, commercial database services and computer hardware servicing, repairs and maintenance.
<b>Total expenses</b>	The sum of all expense items. This includes labour costs, purchases of goods and materials, rent, leasing and hiring expenses, royalties expenses, telecommunication services, repair and maintenance, advertising expenses and any other operating expenses incurred.
<b>Total income</b>	The sum of all income items. This includes IT&T income, rent, leasing and hiring income, funding from government, interest income and other operating and non-operating income.
<b>Unspecified</b>	This represents uncategorised income which can be attributed to any of the components under the relevant heading in the table.
<b>Wages and salaries</b>	This item refers to payments accruing to all employees during the financial year including provisions for employee entitlements, severance, termination and redundancy payments. Drawings of working proprietors and working partners of unincorporated practices are excluded.

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2814300007984  
ISBN 0 642 54259 7

RRP \$15.50

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Produced by the Australian Bureau of Statistics