INFORMATION TECHNOLOGY
AUSTRALIA

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- For further information about these and related statistics, contact the National Information Service on 1300135070 or Lynne Bismire on Melbourne 0396157977.


## INTRODUCTION

COMMENTS ON THIS PUBLICATION

ROUNDING

## ABBREVIATIONS

This publication presents 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. This is the third ABS survey of IT\&T production and distribution, 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. A separate survey of the telecommunication services industry was also conducted in respect of 1996-97.

Some of the statistics presented in this publication have been revised significantly since the 1998-99 preliminary results were released in May 2000. These revisions have resulted from the additional response after the initial release of data and amendments made to data items as a result of more intensive data editing. Some revisions have also been made to earlier years' results.

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 that generally comply with the international definition of industries that specialise in IT\&T activity. More information about the definition of IT\&T, the industries involved, and related publications can be found in paragraphs $2-5$, and 23-24 of the Explanatory Notes.

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.

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

ABS Australian Bureau of Statistics
ANZSIC Australian and New Zealand Standard Industrial Classification
f.o.b. free on board

IT\&T Information technology and telecommunications
n.e.c. not elsewhere classified

OPBT operating profit before tax
PAYE Pay As You Earn
RSE relative standard error
SAR Special Administrative Region
SE standard error

Rob Edwards
Acting Australian Statistician

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## chapter 1

SUMMARY OF FINDINGS

## INTRODUCTION

BUSINESSES

INCOME

This publication presents final 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.

Table 1.1 contains summary information from the survey. Tables $2.1-2.11$ present statistics related to IT\&T specialist businesses and tables 3.1-3.4 present more detailed statistics on the telecommunication services industry. Tables 4.1-4.4 provide international trade statistics on selected IT\&T goods and services and table 5.1 provides statistics on IT\&T specialist businesses in the recorded media manufacturing and publishing industry.

There has been significant change in the information technology and telecommunications (IT\&T) industry in Australia over the three years to 1998-99, as outlined in the summary below.

At the end of June 1999, there were 18,072 IT\&T specialist businesses in the industries surveyed. This was an increase of $34 \%$ (or 4,537 businesses) since the last survey in 1995-96, with the number of computer consultancy businesses increasing by $59 \%$ (or 5,219 businesses). There were only 1,659 other businesses in the industries surveyed and these had IT\&T income less than 50\% of their total income.

Of the 18,072 specialists, 14,056 (78\%) were in the computer consultancy services industry, $1,575(9 \%)$ in the computer wholesaling industry and $869(5 \%)$ in the telecommunication services industry. The remaining 1,572 (9\%) were spread across the other industries surveyed.

There were 199,341 persons working in IT\&T specialist businesses at the end of June 1999, a $2 \%$ decrease since 1995-96. This $2 \%$ overall decrease in employment in IT\&T specialist businesses consisted of a $39 \%$ decrease across the manufacturing industries, a $19 \%$ decrease in the telecommunication services industry with an offsetting $35 \%$ increase in the computer services industries and a $1 \%$ increase in the wholesale industries.

During 1998-99, the total income for IT\&T specialists was $\$ 62,616$ million, an increase of $28 \%$ since $1995-96$. The industries contributing to this outcome were telecommunication services with an increase in total income of 39\% since 1995-96, wholesale trade with a rise of $31 \%$, computer services with a rise of $30 \%$ and manufacturing with a fall of $31 \%$.

INCOME continued

EXPENDITURE

DOMESTIC PRODUCTION, IMPORTS AND EXPORTS

INCOME, IT\&T industries-1998-99

|  | IT\&T income | Other income | Total income |
| :---: | :---: | :---: | :---: |
| Business type | \$m | \$m | \$m |
| IT\&T specialists | 58506 | 4109 | 62616 |
| Other businesses | 609 | 9661 | 10270 |
| All businesses | 59115 | 13770 | 72885 |

Specialist businesses had IT\&T income of $\$ 58,506$ million which represented $93 \%$ of their total income. The largest contributors to IT\&T income were businesses classified to the telecommunication services industry ( $\$ 25,071$ million) which accounted for $43 \%$ of the total. The computer wholesaling industry contributed $\$ 13,918$ million (24\%) and the computer consultancy services industry contributed $\$ 8,494$ million (15\%).

Total expenses for IT\&T specialist businesses during 1998-99 were $\$ 55,420$ million, an increase of $24 \%$ since $1995-96$. Purchases was the highest single expense ( $\$ 20,556$ million), accounting for $37 \%$ of total expenses during 1998-99.

Total income from the domestic production of IT\&T goods and services was $\$ 39,864$ million in 1998-99, an increase of $28 \%$ since 1995-96. Computer services and telecommunication services recorded increases of $41 \%$ and $40 \%$ respectively, however, production of packaged software and manufactured IT\&T goods declined by $43 \%$ and $24 \%$ respectively over the three year period. The decline in domestic production of packaged software and manufactured IT\&T goods was offset by an increase in imports of these products.

Exports (including re-exports) of selected IT\&T goods and services totalled $\$ 4,386$ million in 1998-99, an 11\% increase since 1995-96. Imports of these items were valued at $\$ 13,534$ million, a $26 \%$ increase since 1995-96. This represents a trade deficit for 1998-99 of $\$ 9,148$ million and compares with $\$ 6,765$ million in 1995-96.

It should be noted that the imports and exports details include amounts for re-exports, which are goods imported into Australia and subsequently exported in the same condition, or after undergoing minor operations which leave them essentially unchanged. After excluding these re-export goods from the IT\&T imports and exports details, the value of exports was equivalent to $8 \%$ of income from domestic production in 1998-99, while imports were equivalent to $31 \%$.

## 1.1 summary of operations



SUMMARY OF OPERATIONS continued

|  | Businesses <br> at end <br> June | Employment at end June | IT\&T income | Total income | Wages and salaries | Wages and salaries per person employed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Industry | no. | no. | \$m | \$m | \$m | \$'000 |
| ALL BUSINESSES |  |  |  |  |  |  |
| Manufacturing |  |  |  |  |  |  |
| Computer and business machines | 136 | 2915 | 1131.1 | 1274.4 | 111.8 | 38.4 |
| Telecommunication, broadcasting and transceiving equipment | 73 | np | np | np | np | 53.2 |
| Electronic equipment n.e.c. | 252 | 7734 | np | 1768.5 | 316.4 | 40.9 |
| Electric cable and wire | 52 | np | np | np | np | 50.0 |
| Total | 513 | 19517 | 3103.3 | 5794.1 | 887.9 | 45.5 |
| Wholesale trade |  |  |  |  |  |  |
| Computers | 1575 | 27212 | 13918.3 | 15748.4 | 1560.6 | 57.4 |
| Business machines and electrical and electronic equipment n.e.c. | 2043 | 35948 | 6768.9 | 14785.7 | 1685.3 | 46.9 |
| Total | 3617 | 63160 | 20687.1 | 30534.1 | 3245.9 | 51.4 |
| Telecommunication services | 869 | 74467 | 25071.4 | 26083.0 | 3687.1 | 49.5 |
| Computer services | 14731 | 74395 | 10253.1 | 10474.0 | 3710.7 | 49.9 |
| Total | 19730 | 231539 | 59115.0 | 72885.2 | 11531.6 | 49.8 |

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

## CHAPTER 2

 IT\&T SPECIALISTS
## EMPLOYMENT

SOURCES OF INCOME

This section of the publication presents information about businesses which specialised in the production and distribution of IT\&T goods and services during 1998-99.

There were 199,341 persons working in IT\&T specialist businesses at the end of June 1999, a $2 \%$ decrease since $1995-96$. This $2 \%$ overall decrease in employment in IT\&T specialist businesses consisted of a 39\% decrease across the manufacturing industries, a $19 \%$ decrease in the telecommunication services industry with an offsetting $35 \%$ increase in the computer services industries and a $1 \%$ increase in the wholesale industries.

The majority (89\%) of the 199,341 persons employed in IT\&T specialist businesses worked on a permanent full-time basis, with the computer services industry having the largest proportion (8\%) of permanent part-time employees and the manufacturing industry having the largest proportion (9\%) of casual/temporary employees.

Male staff accounted for $67 \%(133,749)$ of the persons employed in IT\&T specialist businesses, almost all of whom (93\%) worked full time. Of the 10,739 persons who worked on a part-time basis, $77 \%(8,290)$ were females. Males employed as computing and technical staff accounted for $40 \%(80,106)$ of total employment in IT\&T specialist businesses. Over half (54\%) of the males employed as computing and technical staff were in the computer services industry.

In 1998-99, the total income of the 18,072 IT\&T specialist businesses was $\$ 62,616$ million, of which $93 \%$ ( $\$ 58,506$ million) was IT\&T income. In 1995-96 and 1992-93, total IT\&T income for IT\&T specialists was $\$ 46,977$ million and $\$ 26,889$ million respectively. The largest contributors to IT\&T income were businesses classified to the telecommunication services industry ( $\$ 25,071$ million) which accounted for $43 \%$ of the total. The computer wholesaling industry contributed $\$ 13,918$ million ( $24 \%$ ) and the computer consultancy services industry contributed $\$ 8,494$ million ( $15 \%$ ).

Total income for IT\&T specialist manufacturers amounted to $\$ 3,306$ million in 1998-99. The main components of manufacturing income were from the sale of PCs and similar desktop computers (\$747 million), other telecommunications and transceiving equipment (\$569 million), and telephone and telegraph equipment, excluding parts (\$523 million).

Total income for IT\&T specialist wholesalers was $\$ 22,752$ million. The major sources of this income were from the sale of computer hardware, excluding parts and components ( $\$ 7,260$ million) and communications hardware, excluding parts and components ( $\$ 5,542$ million).

Total income for telecommunication services specialists was $\$ 26,083$ million in 1998-99.

SOURCES OF INCOME continued

In 1998-99, total income for IT\&T specialist businesses classified to the computer services industry was $\$ 10,474$ million. The main components of this income were from the provision of bundled computer services ( $\$ 3,354$ million), non-bundled customised software and solutions ( $\$ 2,556$ million), and computer processing services (\$1,106 million).

In 1998-99, expenses for IT\&T specialist businesses totalled $\$ 55,420$ million. In 1995-96 and 1992-93, total expenses for these businesses was $\$ 44,637$ million and $\$ 24,950$ million respectively.

Purchases was the highest single expense ( $\$ 20,556$ million), accounting for $37 \%$ of total expenses during 1998-99. Purchases in the wholesale industries accounted for $81 \%$ ( $\$ 16,646$ million) of total purchases.

The second most significant item of expenditure was labour costs, which accounted for $20 \%$ ( $\$ 10,920$ million) of total expenses.

The telecommunication services industry contributed $\$ 20,602$ million (37\%) to total IT\&T specialist expenses in 1998-99. The computer wholesaling industry was the second largest contributor to expenses with $\$ 15,142$ million (27\%).

Wages and salaries per person employed for IT\&T specialist businesses was $\$ 51,200$. The industries with the largest wages and salaries per person employed were the business machines and electrical and electronic equipment n.e.c. wholesaling industry ( $\$ 60,600$ ) and the computer wholesaling industry $(\$ 57,400)$. The industries with the lowest wages and salaries per person employed were the electronic equipment n.e.c. manufacturing industry $(\$ 35,100)$ and the information storage and retrieval industry $(\$ 35,200)$.

During 1998-99, IT\&T specialist businesses generated earnings before interest and tax of $\$ 8,467$ million, and an operating profit before tax of $\$ 7,501$ million. In both cases, the telecommunication services industry contributed the major proportion, generating $75 \%$ ( $\$ 6,372$ million) of total earnings before interest and tax, and $74 \%$ ( $\$ 5,549$ million) of total operating profit before tax.

The operating profit margin in 1998-99 was $12.2 \%$, which was an increase on the operating profit margin of $9.5 \%$ recorded in 1995-96. Most businesses (54\%) achieved an operating profit margin between $0-24 \%$, with $28 \%$ of businesses incurring an operating loss before tax.

New South Wales had the largest number of IT\&T specialist businesses in 1998-99. There were 7,735 of these businesses operating in New South Wales ( $43 \%$ of all IT\&T specialist businesses), which accounted for $42 \%$ of all employment and $44 \%$ of wages and salaries within the IT\&T industries.

Victoria, with 5,803 IT\&T specialist businesses, made the second largest contribution to employment and wages and salaries and, together with New South Wales, accounted for $75 \%$ of businesses, $72 \%$ of employment and $75 \%$ of wages and salaries.

Small businesses employing fewer than 20 persons made up $96 \%(17,327)$ of the 18,072

IT\&T specialist businesses in 1998-99. These businesses, however, accounted for only $24 \%$ of employment and $12 \%$ of total income.

There were 155 IT\&T specialist businesses with employment of 100 persons or more, accounting for $1 \%$ of IT\&T specialist businesses. These large businesses accounted for $65 \%$ of employment and $76 \%$ of total income. The average income of these large businesses during 1998-99 was $\$ 307.6$ million.

### 2.1 HISTORICAL DATA (a), IT\&T Specialists

|  | Businesses <br> at end <br> June | Employment at end June | IT\&T income | Total income | Total expenses | Operating profit before tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Industry | no. | no. | \$m | \$m | \$m | \$m |
| 1998-99 |  |  |  |  |  |  |
| Manufacturing |  |  |  |  |  |  |
| Computer and business machines | 122 | 2461 | 1126.8 | 1146.4 | 1125.8 | 37.4 |
| Telecommunication, broadcasting and transceiving equipment | 68 | 5125 | 1204.3 | 1507.7 | 1419.2 | 66.4 |
| Electronic equipment n.e.c. | 77 | 1959 | 330.9 | 344.8 | 340.8 | **2.1 |
| Electric cable and wire | 27 | 997 | 280.5 | 307.3 | 286.1 | 28.0 |
| Total | 294 | 10542 | 2942.4 | 3306.2 | 3172.0 | 133.8 |
| Wholesale trade |  |  |  |  |  |  |
| Computers | 1575 | 27212 | 13918.3 | 15748.4 | 15141.8 | 678.9 |
| Business machines and electrical and electronic equipment n.e.c. | 602 | 12725 | 6320.9 | 7004.0 | 6850.5 | *303.6 |
| Total | 2177 | 39936 | 20239.2 | 22752.4 | 21992.2 | 982.5 |
| Telecommunication services | 869 | 74467 | 25071.4 | 26083.0 | 20601.5 | 5549.2 |
| Computer services |  |  |  |  |  |  |
| Data processing | 239 | 7174 | np | np | np | np |
| Information storage and retrieval | *101 | 908 | 93.9 | 99.8 | 89.6 | **10.0 |
| Computer maintenance | 335 | 2519 | np | np | np | np |
| Computer consultancy | 14056 | 63794 | 8494.0 | 8680.4 | 7938.5 | 759.1 |
| Total | 14731 | 74395 | 10253.1 | 10474.0 | 9654.4 | 835.6 |
| Total | 18072 | 199341 | 58506.1 | 62615.5 | 55420.2 | 7501.2 |
| 1995-96 |  |  |  |  |  |  |
| Manufacturing |  |  |  |  |  |  |
| Computer and business machines | 237 | 5,755 | 1,875 | 1,935 | 1,910 | 91 |
| Telecommunication, broadcasting and transceiving equipment | 134 | 7,335 | 1,565 | 1,660 | 1,347 | 285 |
| Electronic equipment n.e.c. | *57 | 836 | 91 | 99 | 98 | *8.6 |
| Electric cable and wire | *46 | 3,369 | 1,036 | 1,073 | 1,040 | 54 |
| Total | 473 | 17,295 | 4,566 | 4,766 | 4,395 | 437 |
| Wholesale trade |  |  |  |  |  |  |
| Computers | 2,326 | 26,599 | 11,945 | 12,255 | 11,742 | 581 |
| Business machines and electrical and electronic equipment n.e.c. | 653 | 13,030 | 4,733 | 5,071 | 4,927 | 291 |
| Total | 2,979 | 39,629 | 16,678 | 17,326 | 16,668 | 873 |
| Telecommunication services | 410 | 91,701 | 17,938 | 18,734 | 15,934 | 2,782 |
| Computer services |  |  |  |  |  |  |
| Data processing | 387 | , 291 | 885 | 925 | 873 | 52 |
| Information storage and retrieval | *31 | 994 | 165 | 180 | 187 | **-7.1 |
| Computer maintenance | 418 | 5,032 | 895 | 903 | 855 | 54 |
| Computer consultancy | 8,837 | 43,711 | 5,850 | 6,080 | 5,726 | 356 |
| Total | 9,673 | 55,028 | 7,795 | 8,088 | 7,641 | 455 |
| Total | 13,535 | 203,653 | 46,977 | 48,913 | 44,637 | 4,547 |

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

* 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
(a) Total estimates for 1992-93 include the Plant hiring or leasing industry (ANZSIC Class 7743).


## 2.1

HISTORICAL DATA(a), IT\&T Specialists continued

|  | Businesses at end June | Employment at end June | IT\&T income | Total income | Total expenses | Operating profit before tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Industry | no. | no. | \$m | \$m | \$m | \$m |
| 1992-93 |  |  |  |  |  |  |
| Manufacturing |  |  |  |  |  |  |
| Computer and business machines | 120 | np | np | np | np | $n \mathrm{p}$ |
| Telecommunication, broadcasting and transceiving equipment | *69 | 7705 | 1752.4 | 1802.7 | 1730.1 | 93.8 |
| Electronic equipment n.e.c. | *31 | 1452 | 229.8 | 290.4 | 270.1 | *-3 834.0 |
| Electric cable and wire | *28 | 1087 | 404.6 | 412.3 | 316.4 | 124.3 |
| Total | 248 | np | np | np | np | np |
| Wholesale trade |  |  |  |  |  |  |
| Computers | 1488 | 15556 | 4820.2 | 4931.5 | 4828.5 | 167.1 |
| Business machines and electrical and electronic equipment n.e.c. | 394 | np | np | np | np | np |
| Total | 1882 | np | np | np | np | np |
| Telecommunication services | 189 | $n \mathrm{p}$ | np | np | $n \mathrm{n}$ | $n \mathrm{p}$ |
| Computer services |  |  |  |  |  |  |
| Data processing | 262 | 2049 | 144.2 | 147.9 | 132.3 | 15.5 |
| Information storage and retrieval | *67 | 636 | 102.6 | 103.8 | 93.0 | 10.8 |
| Computer maintenance | 242 | 4778 | 1082.3 | 1085.2 | 1007.0 | 92.5 |
| Computer consultancy | 4315 | 22605 | 2701.7 | 2763.8 | 2517.2 | 246.2 |
| Total | 4886 | 30068 | 4030.8 | 4100.7 | 3749.5 | 365.0 |
| Total | 7243 | 136788 | 26888.8 | 27502.1 | 24950.1 | 2736.0 |

np not available for publication but included in totals where applicable, unless otherwise indicated
estimate has a relative standard error of between $25 \%$ and $50 \%$ and should be used with caution
(a) Total estimates for 1992-93 include the Plant hiring or leasing industry (ANZSIC Class 7743).

|  |  | SI |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & 0-4 \\ & \text { persons } \end{aligned}$ | $\begin{aligned} & 5-19 \\ & \text { persons } \end{aligned}$ | $\begin{aligned} & 20-99 \\ & \text { persons } \end{aligned}$ | 100 or more persons | Total |
|  |  | 1998 | -99 |  |  |  |
| Businesses at end June |  |  |  |  |  |  |
| Manufacturing | no. | 104 | 102 | 64 | 25 | 294 |
| Wholesale trade | no. | 1250 | 659 | 222 | 46 | 2177 |
| Telecommunication services | no. | 623 | 176 | 42 | 28 | 869 |
| Computer services | no. | 13018 | 1396 | 261 | 56 | 14731 |
| Total | no. | 14995 | 2332 | 589 | 155 | 18072 |
| Employment at end June |  |  |  |  |  |  |
| Manufacturing | no. | 256 | 960 | 2616 | 6711 | 10542 |
| Wholesale trade | no. | 2259 | 6089 | 7864 | 23725 | 39936 |
| Telecommunication services | no. | 1163 | 1588 | 1728 | 69988 | 74467 |
| Computer services | no. | 23593 | 12352 | 9589 | 28862 | 74395 |
| Total | no. | 27271 | 20989 | 21796 | 129285 | 199341 |
| Total income |  |  |  |  |  |  |
| Manufacturing | \$m | *36.2 | 185.6 | 630.4 | 2453.9 | 3306.2 |
| Wholesale trade | \$m | *1 134.6 | *2680.1 | *4 972.2 | 13965.4 | 22752.4 |
| Telecommunication services | \$m | 364.2 | 255.2 | 356.0 | 25107.6 | 26083.0 |
| Computer services | \$m | 1631.6 | 1292.3 | 1402.9 | 6147.2 | 10474.0 |
| Total | \$m | 3166.7 | 4413.2 | 7361.4 | 47674.2 | 62615.5 |
| 1995-96 |  |  |  |  |  |  |
| Businesses at end June |  |  |  |  |  |  |
| Manufacturing | no. | 163 | 174 | 105 | 31 | 473 |
| Wholesale trade | no. | 1697 | 1029 | 204 | 48 | 2979 |
| Telecommunication services | no. | 279 | *85 | 31 | 15 | 410 |
| Computer services | no. | 8498 | 873 | 251 | 51 | 9673 |
| Total | no. | 10637 | 2162 | 591 | 146 | 13535 |
| Employment at end June |  |  |  |  |  |  |
| Manufacturing | no. | 439 | 1801 | 4043 | 11011 | 17295 |
| Wholesale trade | no. | 3650 | 8772 | 7534 | 19672 | 39629 |
| Telecommunication services | no. | 591 | *798 | 1280 | 89032 | 91701 |
| Computer services | no. | 14997 | 7354 | 9571 | 23105 | 55028 |
| Total | no. | 19678 | 18725 | 22429 | 142820 | 203653 |
| Total income |  |  |  |  |  |  |
| Manufacturing | \$m | 73.6 | *445.8 | 893.6 | 3352.8 | 4765.8 |
| Wholesale trade | \$m | 846.0 | 2662.8 | 3763.2 | 10053.8 | 17325.8 |
| Telecommunication |  |  |  |  |  |  |
| Computer services | \$m | 1156.5 | 855.6 | 1342.4 | 4733.3 | 8087.8 |
| Total | \$m | 2119.9 | 4190.3 | 6210.7 | 36392.2 | 48913.1 |

CHARACTERISTICS OF EMPLOYMENT BY INDUSTRY, IT\&T Specialists-at end June


|  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Working proprietors and partners <br> of unincorporated businesses | 365 | 0.7 | 74 | 0.3 | 440 |
| Employees |  |  |  |  |  |

$\qquad$
. not applicable

* estimate has a relative standard error of between $25 \%$ and $50 \%$ and should be used with caution
** estimate has a relative standard error greater than $50 \%$ and is considered too unreliable for general use

CHARACTERISTICS OF EMPLOYMENT BY INDUSTRY, IT\&T Specialists—at end June continued

MALES
FEMALES
TOTAL

|  | no. | \% | no. | \% | no. | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | COMPUTER SERVICES |  |  |  |  |  |
| Working proprietors and partners of unincorporated businesses | 1191 | 2.4 | 351 | 1.4 | 1542 | 2.1 |
| Employees |  |  |  |  |  |  |
| Permanent full time | 44664 | 90.1 | 17567 | 70.7 | 62231 | 83.6 |
| Permanent part time | 1090 | 2.2 | 4858 | 19.6 | 5947 | 8.0 |
| Total permanent | 45753 | 92.3 | 22424 | 90.2 | 68178 | 91.6 |
| Casuals/temporaries | 2602 | 5.3 | 2074 | 8.3 | 4676 | 6.3 |
| Total | 48355 | 97.6 | 24498 | 98.6 | 72853 | 97.9 |
| Total employment at end June 1999 | 49546 | 100.0 | 24849 | 100.0 | 74395 | 100.0 |
| Percentage of total |  | 66.6 |  | 33.4 |  | 100.0 |
| Total employment at end June $1996$ | 36354 | 66.1 | 18673 | 33.9 | 55028 | 100.0 |
| TOTAL |  |  |  |  |  |  |
| Working proprietors and partners of unincorporated businesses | 1914 | 1.4 | 541 | 0.8 | 2455 | 1.2 |
| Employees |  |  |  |  |  |  |
| Permanent full time | 124172 | 92.8 | 52433 | 79.9 | 176605 | 88.6 |
| Permanent part time | 2449 | 1.8 | 8290 | 12.6 | 10739 | 5.4 |
| Total permanent | 126621 | 94.7 | 60723 | 92.6 | 187344 | 94.0 |
| Casuals/temporaries | 5214 | 3.9 | 4328 | 6.6 | 9542 | 4.8 |
| Total | 131835 | 98.6 | 65051 | 99.2 | 196886 | 98.8 |
| Total employment at end |  |  |  |  |  |  |
| Percentage of total |  | 67.1 |  | 32.9 |  | 100.0 |
| Total employment at end June $1996$ | 138499 | 68.0 | 65153 | 32.0 | 203653 | 100.0 |

$\qquad$
. not applicable
MALES ... FEMALES . TOTAL

|  | no. | \% | no. | \% | no. | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MANUFACTURING |  |  |  |  |  |  |
| Computing and technical | 2886 | 39.3 | 523 | 16.3 | 3409 | 32.3 |
| Other | 4455 | 60.7 | 2678 | 83.7 | 7133 | 67.7 |
| Total | 7341 | 100.0 | 3201 | 100.0 | 10542 | 100.0 |
| $\cdots \cdots \bullet \bullet \bullet \bullet \bullet \bullet \bullet$ | -••• | - •• | -••• | - • - | -•••• | -•• |
| WHOLESALE TRADE |  |  |  |  |  |  |
| Computing and technical | 13486 | 49.1 | 3421 | 27.5 | 16907 | 42.3 |
| Other | 14001 | 50.9 | 9029 | 72.5 | 23029 | 57.7 |
| Total | 27487 | 100.0 | 12449 | 100.0 | 39936 | 100.0 |
| -•••••••••••• | -•••••• | $\cdots \cdot \bullet$ | -•••• | -•• | -•••• | $\bullet \bullet \bullet$ • |
| TELECOMMUNICATION SERVICES |  |  |  |  |  |  |
| Computing and technical | 20371 | 41.3 | 8285 | 33.0 | 28657 | 38.5 |
| Other | 29004 | 58.7 | 16807 | 67.0 | 45811 | 61.5 |
| Total | 49375 | 100.0 | 25093 | 100.0 | 74467 | 100.0 |
| - . . . . . . . . . . . | - ••• | $\cdots \cdot \bullet$ | -•••• | -•• | -••••• | -••• |
| COMPUTER SERVICES |  |  |  |  |  |  |
| Computing and technical | 43362 | 87.5 | 12829 | 51.6 | 56191 | 75.5 |
| Other | 6184 | 12.5 | 12021 | 48.4 | 18205 | 24.5 |
| Total | 49546 | 100.0 | 24849 | 100.0 | 74395 | 100.0 |
| - | - ... | - . | - . | - . | - .... | -••• |
| TOTAL |  |  |  |  |  |  |
| Computing and technical | 80106 | 59.9 | 25058 | 38.2 | 105164 | 52.8 |
| Other | 53643 | 40.1 | 40535 | 61.8 | 94178 | 47.2 |
| Total | 133749 | 100.0 | 65592 | 100.0 | 199341 | 100.0 |

SOURCES OF INCOME, Manufacturing, IT\&T Specialists

|  | Businesses <br> at end <br> June(a) | Value | Proportion of total income |
| :---: | :---: | :---: | :---: |
|  | no. | \$m | \% |
| 1998-99 |  |  |  |
| Income from the sale of goods |  |  |  |
| Computer and communications hardware, equipment and cables, etc. produced by this business |  |  |  |
| Mainframe data processing machines | 12 | 129.0 | 3.9 |
| Laptop, notebook and similar portable computers | 18 | 28.9 | 0.9 |
| PCs and similar desktop computers | 73 | 747.0 | 22.6 |
| Laser and other printing systems | 15 | 4.9 | 0.1 |
| Other input-output devices and peripherals (including scanners, keyboards, monitors, etc.) | 21 | *8.5 | 0.3 |
| Consumables (including removable storage media) | 39 | *41.2 | 1.2 |
| Other computer and communications hardware (excluding storage media) | 79 | 189.2 | 5.7 |
| Telephone and telegraph equipment (excluding parts) | *56 | 522.8 | 15.8 |
| Mobile communications |  |  |  |
| Mobile, celluar and car phones | 7 | 30.5 | 0.9 |
| CB and other mobile radio and transeiving equipment | *7 | 113.6 | 3.4 |
| Total | 13 | 144.1 | 4.4 |
| Other telecommunications and transceiving equipment | 54 | 569.2 | 17.2 |
| Cables |  |  |  |
| Insulated optical fibre cable | 15 | 216.8 | 6.6 |
| Co-axial cable and other co-axial electrical conductors | 19 | 59.3 | 1.8 |
| Total(b) | 28 | 276.1 | 8.4 |
| Total computer and communications hardware, equipment and cables, etc. produced by this business | 290 | 2661.1 | 80.5 |
| Other manufactured goods produced by this business | 61 | 308.1 | 9.3 |
| Computer and communications hardware, parts, components, consumables and other goods not produced by this business |  |  |  |
| Computer hardware (excluding parts and components) | 59 | *51.6 | 1.6 |
| Communications hardware (excluding parts and components) | *42 | 59.3 | 1.8 |
| Computer and communications parts, components and consumables |  |  |  |
| Parts and components | *39 | 32.8 | 1.0 |
| Consumables | *46 | 5.0 | 0.2 |
| Total | 59 | 37.9 | 1.1 |
| Total computer and communications hardware, parts, components, consumables and other goods not produced by this business | 92 | 148.8 | 4.5 |
| Income from the sale and licensing of packaged software | 58 | 19.0 | 0.6 |
| Other income from the sale of goods | *17 | 8.5 | 0.3 |
| Total income from the sale of goods | 290 | 3145.4 | 95.1 |
| Income from the provision of computer services | (c) 63 | (c)27.4 | (c) 0.8 |
| Income from the provision of telecommunications services | *36 | 78.4 | 2.4 |
| Income from rent, leasing and hiring of computer and communications hardware | *29 | 1.9 | 0.1 |
| Other income | 119 | 53.1 | 1.6 |
| Total | 294 | 3306.2 | 100.0 |

[^0](a) Businesses may have more than one source of income. Hence, the counts of businesses for each income source do not sum to the total.
(b) Excludes income from production of cables that are not associated with IT\&T.
(c) Includes income from developing packaged software.

## SOURCES OF INCOME, Manufacturing, IT\&T Specialists continued

|  | Businesses <br> at end June(a) | Value | Proportion of total income |
| :---: | :---: | :---: | :---: |
|  | no. | \$m | \% |
|  |  |  |  |
| 1995-96 |  |  |  |
| Income from the sale of goods |  |  |  |
| Computer and communications hardware, equipment and cables, etc. produced by this business |  |  |  |
| Mainframe data processing machines | *25 | np | np |
| Laptop, notebook and similar portable computers | 83 | np | np |
| PCs and similar desktop computers | 65 | 628.6 | 13.2 |
| Laser and other printing systems | *27 | **21.4 | 0.4 |
| Other input-output devices and peripherals (including scanners, keyboards, monitors, etc.) | *12 | *11.5 | 0.2 |
| Consumables (including removable storage media) | 18 | 81.5 | 1.7 |
| Other computer and communications hardware (excluding storage media) | 144 | 401.3 | 8.4 |
| Telephone and telegraph equipment (excluding parts) | *48 | 767.7 | 16.1 |
| Mobile communications |  |  |  |
| Mobile, celluar and car phones | *8 | np | np |
| CB and other mobile radio and transeiving equipment | 2 | np | np |
| Total | *8 | 124.9 | 2.6 |
| Other telecommunications and transceiving equipment | 149 | 615.6 | 12.9 |
| Cables |  |  |  |
| Insulated optical fibre cable | *19 | np | np |
| Co-axial cable and other co-axial electrical conductors | *19 | np | np |
| Total(b) | *26 | 432.2 | 9.1 |
| Total computer and communications hardware, equipment and cables, etc. produced by this business | 452 | 3724.1 | 78.1 |
| Other manufactured goods produced by this business | *42 | 520.5 | 10.9 |
| Computer and communications hardware, parts, components, consumables and other goods not produced by this business |  |  |  |
| Computer hardware (excluding parts and components) | 69 | *113.7 | 2.4 |
| Communications hardware (excluding parts and components) | 47 | 79.7 | 1.7 |
| Computer and communications parts, components and consumables |  |  |  |
| Parts and components | na | na | na |
| Consumables | na | na | na |
| Total | *52 | **34.8 | 0.7 |
| Total computer and communications hardware, parts, components, consumables and other goods not produced by this business | 112 | 228.2 | 4.8 |
| Income from the sale and licensing of packaged software | 76 | 7.6 | 0.2 |
| Other income from the sale of goods | na | na | na |
| Total income from the sale of goods | 473 | 4480.4 | 94.0 |
| Income from the provision of computer services | 131 | 48.5 | 1.0 |
| Income from the provision of telecommunications services | 27 | 35.7 | 0.7 |
| Income from rent, leasing and hiring of computer and communications hardware | *61 | 2.0 | - |
| Other income | 315 | 199.1 | 4.2 |
| Total | 473 | 4765.8 | 100.0 |

* 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
** estimate has a relative standard error greater than $50 \%$ and is considered too unreliable for general use
na not available
- nil or rounded to zero (including null cells)
(a) Businesses may have more than one source of income. Hence, the counts of businesses for each income source do not sum to the total.
(b) Excludes income from production of cables that are not associated with IT\&T.

SOURCES OF INCOME, Wholesale, IT\&T Specialists

|  | Businesses <br> at end <br> June(a) | Income | Proportion of total income |
| :---: | :---: | :---: | :---: |
|  | no. | \$m | \% |
| 1998-99 |  |  |  |
| Income from the sale of goods purchased for resale |  |  |  |
| Computer and communications hardware, parts, components and consumables |  |  |  |
| Computer hardware (excluding parts and components) | 1128 | 7260.4 | 31.9 |
| Communications hardware (excluding parts and components) | 812 | *5 542.1 | 24.4 |
| Computer and communications parts and components | 394 | 1087.1 | 4.8 |
| Computer and communications consumables | 368 | *1629.1 | 7.2 |
| Total computer and communications hardware, parts, components and consumables | 1804 | 15518.6 | 68.2 |
| Income from the sale and licensing of packaged software |  |  |  |
| Games and recreation | *63 | 334.0 | 1.5 |
| Education and training | 146 | 225.6 | 1.0 |
| Communications | 113 | 203.6 | 0.9 |
| Other packaged software | 699 | 1174.7 | 5.2 |
| Unspecified | 1 | - | - |
| Total | 806 | 1938.0 | 8.5 |
| Other income from the sale of goods purchased for resale | *327 | 1224.8 | 5.4 |
| Total income from the sale of goods purchased for resale | 1928 | 18681.2 | 82.1 |
| Income from the sale of computer and communications hardware, parts, components and consumables produced by this business | **62 | *504.9 | 2.2 |
| Income from the sale of software developed by this business | **59 | 38.2 | 0.2 |
| Income from the provision of whole IT\&T business functions | 200 | 600.7 | 2.6 |
| Income from the provision of computer services |  |  |  |
| Customised software services and solutions (excluding maintenance) |  |  |  |
| Digital/multi-media applications | 4 | 0.8 | - |
| Communications | **38 | **4.8 | - |
| Business applications and systems | 177 | 281.5 | 1.2 |
| Other | *60 | 16.9 | 0.1 |
| Total income from customised software services and solutions (excluding maintenance) | 236 | 303.9 | 1.3 |
| Software maintenance services | 403 | 243.2 | 1.1 |
| Hardware consultancy services (excluding maintenance) | *116 | 234.6 | 1.0 |
| Other computer consultancy services | *175 | 41.4 | 0.2 |
| Hardware maintenance services | 234 | 288.4 | 1.3 |
| Installation and cabling services for computers | *113 | 101.4 | 0.4 |
| Computer processing services | *29 | *1.8 | - |
| Information storage and retrieval | 3 | - | - |
| Other computer services | *85 | np | np |
| Unspecified | 5 | np | np |
| Total income from the provision of computer services | 749 | 1383.4 | 6.1 |
| Income from the provision of telecommunications services | 32 | 13.1 | 0.1 |
| Other income | 1270 | 1530.8 | 6.7 |
| Total | 2177 | 22752.4 | 100.0 |

$\qquad$

* 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
np not available for publication but included in totals where applicable, unless otherwise indicated
(a) Businesses may have more than one source of income. Hence, the counts of businesses for each income source do not sum to the total.

SOURCES OF INCOME, Wholesale, IT\&T Specialists continued

|  | Businesses <br> at end <br> June(a) | Income | Proportion of total income |
| :---: | :---: | :---: | :---: |
|  | no. | \$m | \% |
| 1995-96 |  |  |  |
| Income from the sale of goods purchased for resale |  |  |  |
| Computer and communications hardware, parts, components and consumables |  |  |  |
| Computer hardware (excluding parts and components) | 1834 | 7454.8 | 43.0 |
| Communications hardware (excluding parts and components) | 1178 | 3402.1 | 19.6 |
| Computer and communications parts and components | (b) 689 | (b)862.1 | (b) 5.0 |
| Computer and communications consumables | na | na | na |
| Total computer and communications hardware, parts, components and consumables | 2509 | 11719.0 | 67.6 |
| Income from the sale and licensing of packaged software |  |  |  |
| Games and recreation | 225 | 127.9 | 0.7 |
| Education and training | na | na | na |
| Communications | 329 | 134.8 | 0.8 |
| Other packaged software | 1190 | *1187.6 | 6.9 |
| Unspecified | na | na | na |
| Total | 1379 | 1450.3 | 8.4 |
| Other income from the sale of goods purchased for resale | na | na | na |
| Total income from the sale of goods purchased for resale | 2828 | 13169.3 | 76.0 |
| Income from the sale of computer and communications hardware, parts, components and consumables produced by this business | 123 | 809.0 | 4.7 |
| Income from the sale of software developed by this business | 311 | 119.3 | 0.7 |
| Income from the provision of whole IT\&T business functions | na | na | na |
| Income from the provision of computer services |  |  |  |
| Customised software services and solutions (excluding maintenance) |  |  |  |
| Digital/multi-media applications | na | na | na |
| Communications | na | na | na |
| Business applications and systems | na | na | na |
| Other | na | na | na |
| Total income from customised software services and solutions (excluding maintenance) | 701 | 208.9 | 1.2 |
| Software maintenance services | 734 | 155.3 | 0.9 |
| Hardware consultancy services (excluding maintenance) | 463 | *172.8 | 1.0 |
| Other computer consultancy services | 239 | **124.3 | 0.7 |
| Hardware maintenance services | 799 | 874.6 | 5.0 |
| Installation and cabling services for computers | 580 | 44.9 | 0.3 |
| Computer processing services | *56 | np | np |
| Information storage and retrieval | *48 | **0.6 | - |
| Other computer services | 263 | np | np |
| Unspecified | na | na | na |
| Total income from the provision of computer services | 1594 | 1747.4 | 10.1 |
| Income from the provision of telecommunications services | 427 | 236.2 | 1.4 |
| Other income | 2110 | 1244.6 | 7.2 |
| Total | 2979 | 17325.8 | 100.0 |
| na not available |  |  |  |
|  |  |  |  |
| * estimate has a relative standard error of between $25 \%$ and $50 \%$ and should be used with caution |  |  |  |
| ** estimate has a relative standard error greater than $50 \%$ and is considered too unreliable for general use |  |  |  |
| np not available for publication but included in totals where applicable, unless otherwise indicated |  |  |  |
| - nil or rounded to zero (including null cells) |  |  |  |
| (a) Businesses may have more than one source of income. Hence, the counts of businesses for each income source do not sum to the total.(b) Includes computer and communication consumables. |  |  |  |
|  |  |  |  |

SOURCES OF INCOME, Computer Services, IT\&T Specialists

| 1995-96 |  |  | 1998-9 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Businesses |  |  | Businesses |  |  |
| at end |  | Proportion | at end |  | Proportion |
| June(a) | Income | of income | June(a) | Income | of income |


| Income from the sale of goods |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Computer and communications hardware, parts, components and consumables | 1649 | 1047.8 | 13.0 | 1936 | 525.1 | 5.0 |
| Income from the sale and licensing of packaged software |  |  |  |  |  |  |
| Games and recreation | 189 | **25.3 | 0.3 | *32 | **1.8 | - |
| Education and training | na | na | na | *95 | *2.1 | - |
| Communications | 229 | *109.6 | 1.4 | 226 | 26.0 | 0.2 |
| Other business applications and systems | na | na | na | 1530 | 271.8 | 2.6 |
| Other | 1609 | 589.2 | 7.3 | 210 | 37.2 | 0.4 |
| Total income from the sale and licensing of packaged software | 1802 | 724.1 | 9.0 | 1808 | 338.9 | 3.2 |
| Other income from the sale of goods | na | na | na | 233 | 15.1 | 0.1 |
| Total income from the sale of goods | 2575 | 1771.9 | 21.9 | 2850 | 879.1 | 8.4 |
| Income from the provision of computer services |  |  |  |  |  |  |
| Income from the provision of bundled computer services | na | na | na | 2157 | 3353.6 | 32.0 |
| Customised software services and solutions (excluding maintenance) |  |  |  |  |  |  |
| Digital/multi-media applications | na | na | na | 536 | 62.0 | 0.6 |
| Communications | na | na | na | 667 | 131.6 | 1.3 |
| Business applications and systems | na | na | na | 6841 | 2064.4 | 19.7 |
| Other | na | na | na | 1149 | 297.7 | 2.8 |
| Total customised software services and solutions (excluding maintenance) | 7134 | 2098.5 | 25.9 | 7966 | 2555.6 | 24.4 |
| Software maintenance services | 2862 | 521.1 | 6.4 | 4279 | 737.5 | 7.0 |
| Hardware consultancy services (excluding maintenance) | 1832 | 734.9 | 9.1 | 1327 | 167.6 | 1.6 |
| Other computer consultancy services | 1340 | 765.8 | 9.5 | 4017 | 687.6 | 6.6 |
| Hardware maintenance services | 686 | 573.9 | 7.1 | 889 | 213.9 | 2.0 |
| Installation and cabling services for computers | 593 | 132.4 | 1.6 | 579 | *72.4 | 0.7 |
| Computer processing services | 771 | 761.0 | 9.4 | 454 | 1105.9 | 10.6 |
| Information storage and retrieval services | 105 | 161.6 | 2.0 | *242 | 95.7 | 0.9 |
| Other computer services | 253 | 31.2 | 0.4 | 479 | 80.5 | 0.8 |
| Total income from the provision of computer services | 9523 | 5780.4 | 71.5 | 13478 | 5716.7 | 54.6 |
| Income from the provision of telecommunications services | 128 | 147.9 | 1.8 | 604 | 312.3 | 3.0 |
| Other income | 5691 | 387.5 | 4.8 | 6738 | 212.3 | 2.0 |
| Total | 9673 | 8087.8 | 100.0 | 14731 | 10474.0 | 100.0 |

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

* 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)
na not available
(a) Businesses may have more than one source of income. Hence, the counts of businesses for each income source do not sum to the total.


## 2.8

TELECOMMUNI-

|  | MANUFACTURING $\qquad$ |  | WHOLESALE <br> TRADE ... |  | TELECOMMUNICATION SERVICES ... |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Expenditure | Proportion of total expenses | Expenditure | Proportion of total expenses | Expenditure | Proportion of total expenses |
|  | \$m | \% | \$m | \% | \$m | \% |
| Labour costs |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Wages and salaries | 485.5 | 15.3 | 2331.6 | 10.6 | 3687.1 | 17.9 |
| Employer contribution to superannuation funds | 35.2 | 1.1 | 172.5 | 0.8 | 90.5 | 0.4 |
| Workers' compensation costs | 6.1 | 0.2 | 15.7 | 0.1 | 30.5 | 0.1 |
| Total | 526.8 | 16.6 | 2519.8 | 11.5 | 3808.1 | 18.5 |
| Selected expenses |  |  |  |  |  |  |
| Payments to contractors and consultants <br> for computing and communications $\begin{array}{llllll}\text { services } & 23.6 & 0.7 & 75.7 & 0.3 & 490.0\end{array}$ <br> 2.4 |  |  |  |  |  |  |
| Other payments for IT\&T services | 29.4 | 0.9 | 64.4 | 0.3 | 5635.5 | 27.4 |
| Rent, leasing and hiring expenses | 71.0 | 2.2 | 292.5 | 1.3 | 459.4 | 2.2 |
| Repair and maintenance expenses | 15.7 | 0.5 | *23.8 | 0.1 | 254.3 | 1.2 |
| Recruitment services provided by other businesses | 4.4 | 0.1 | 6.1 | - | 30.5 | 0.1 |
| Travelling, accommodation and entertainment expenses | 28.5 | 0.9 | 63.4 | 0.3 | 222.5 | 1.1 |
| Other selected expenses | 310.5 | 9.8 | 1962.6 | 8.9 | 4202.2 | 20.4 |
| Total | 483.1 | 15.2 | 2488.5 | 11.3 | 11294.4 | 54.8 |
| Other costs |  |  |  |  |  |  |
| Purchases |  |  |  |  |  |  |
| Computer and communications <br> hardware, components and consumables $\quad \mathrm{np} \quad \mathrm{np} \quad$ *5879.7 26.7 np |  |  |  |  |  |  |
| Packaged software and software |  |  |  |  |  |  |
| Other purchases | 467.4 | 14.7 | 10133.5 | 46.1 | 5.3 | - |
| Total | 2054.8 | 64.8 | 16645.8 | 75.7 | 797.5 | 3.9 |
| Depreciation and amortisation | np | np | 245.8 | 1.1 | np | np |
| Insurance premiums | 5.5 | 0.2 | 29.2 | 0.1 | 8.0 | - |
| Interest expenses | 20.7 | 0.7 | 63.2 | 0.3 | 822.4 | 4.0 |
| Bad and doubtful debts | np | np | - | - | np | np |
| Total | 2162.0 | 68.2 | 16984.0 | 77.2 | 5499.0 | 26.7 |
| Total | 3172.0 | 100.0 | 21992.2 | 100.0 | 20601.5 | 100.0 |

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

ITEMS OF EXPENDITURE, IT\&T Specialists continued

|  | COMPUTER |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | SERVICES |  | TOTAL |  |
|  | Expenditure | Proportion of total expenses | Expenditure | Proportion of total expenses |
|  | \$m | \% | \$m | \% |
|  |  |  |  |  |
| Labour costs |  |  |  |  |
| Wages and salaries | 3710.7 | 38.4 | 10214.8 | 18.4 |
| Employer contribution to superannuation funds | 335.5 | 3.5 | 633.6 | 1.1 |
| Workers' compensation costs | 18.8 | 0.2 | 71.2 | 0.1 |
| Total | 4065.0 | 42.1 | 10919.6 | 19.7 |
| Selected expenses |  |  |  |  |
| Payments to contractors and consultants for computing and communications services |  |  |  |  |
| Other payments for IT\&T services | 387.5 | 4.0 | 6116.9 | 11.0 |
| Rent, leasing and hiring expenses | 353.9 | 3.7 | 1176.8 | 2.1 |
| Repair and maintenance expenses | 202.7 | 2.1 | 496.4 | 0.9 |
| Recruitment services provided by other |  |  |  |  |
| Travelling, accommodation and entertainment expenses | 271.8 | 2.8 | 586.2 | 1.1 |
| Other selected expenses | 1320.0 | 13.7 | 7795.3 | 14.1 |
| Total | 3982.2 | 41.2 | 18248.2 | 32.9 |
| Other costs |  |  |  |  |
| Purchases |  |  |  |  |
| Computer and communications hardware, components and consumables $\qquad$ 663.0 <br> 6.9 <br> 8743.3 <br> 15.8 |  |  |  |  |
| Packaged software and software |  |  |  |  |
| Other purchases | 89.4 | 0.9 | 10695.6 | 19.3 |
| Total | 1057.8 | 11.0 | 20555.9 | 37.1 |
| Depreciation and amortisation | 431.6 | 4.5 | 4242.7 | 7.7 |
| Insurance premiums | 31.5 | 0.3 | 74.2 | 0.1 |
| Interest expenses | 59.3 | 0.6 | 965.6 | 1.7 |
| Bad and doubtful debts | 27.0 | 0.3 | 413.9 | 0.7 |
| Total | 1607.3 | 16.6 | 26252.3 | 47.4 |
| Total | 9654.4 | 100.0 | 55420.2 | 100.0 |

2.9

PROFITABILITY MEASURES, IT\&T Specialists

|  | EARNINGS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | BEFORE <br> INTEREST |  | OPERATING PROFIT |  | OPERATING PROFIT |  |
|  |  |  |  |  |  |  |
|  | AND TAX |  | BEFORE TAX |  | MARGIN |  |
|  | 1995-96 | 1998-99 | 1995-96 | 1998-99 | 1995-96 | 1998-99 |
|  | \$m | \$m | \$m | \$m | \% | \% |
| -................. | - | - | - | - .... | -•••• | $\cdots \cdot$ |
| Manufacturing | 479.5 | 154.6 | 437.3 | 133.8 | 9.3 | 4.1 |
| Wholesale trade | 979.8 | 1045.7 | 872.6 | 982.5 | 5.1 | 4.5 |
| Telecommunication services | 3470.1 | 6371.7 | 2781.5 | 5549.2 | 15.5 | 21.5 |
| Computer services | 519.9 | 894.9 | 455.3 | 835.6 | 5.7 | 8.1 |
| Total | 5449.3 | 8466.8 | 4546.7 | 7501.2 | 9.5 | 12.2 |


| Operating profit margin |  | Manufacturing | Wholesale trade | Telecommunication services | Computer services | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1998-99 |  |  |  |  |  |  |
| Loss | no. | 116 | 571 | 369 | 4089 | 5145 |
|  | \% | 39.5 | 26.2 | 42.5 | 27.8 | 28.5 |
| 0\%-24\% profit | no. | 125 | 1442 | 402 | 7824 | 9794 |
|  | \% | 42.5 | 66.2 | 46.3 | 53.1 | 54.2 |
| 25\%-49\% profit | no. | *36 | *86 | 83 | 1968 | 2174 |
|  | \% | 12.2 | 4.0 | 9.6 | 13.4 | 12.0 |
| 50\% profit or more | no. | 17 | *78 | 14 | 850 | 958 |
|  | \% | 5.8 | 3.6 | 1.6 | 5.8 | 5.3 |
| Total | no. | 294 | 2177 | 869 | 14731 | 18072 |
|  | \% | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1995-96 |  |  |  |  |  |  |
| Loss | no. | 145 | 885 | 140 | 2348 | 3518 |
|  | \% | 30.7 | 29.7 | 34.1 | 24.3 | 26.0 |
| 0\%-24\% profit | no. | 249 | 1833 | 189 | 5527 | 7799 |
|  | \% | 52.6 | 61.5 | 46.1 | 57.1 | 57.6 |
| 25\%-49\% profit | no. | *68 | 195 | *79 | 1297 | 1639 |
|  | \% | 14.4 | 6.5 | 19.3 | 13.4 | 12.1 |
| 50\% profit or more | no. | *11 | **65 | 2 | 500 | 579 |
|  | \% | 2.3 | 2.2 | 0.5 | 5.2 | 4.3 |
| Total | no. | 473 | 2979 | 410 | 9673 | 13535 |
|  | \% | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

* estimate has a relative standard error of between $25 \%$ and $50 \%$ and should be used with caution
** estimate has a relative standard error greater than $50 \%$ and is considered too unreliable for general use

STATE AND TERRITORY COMPARISONS, IT\&T Specialists

|  |  | Manufacturing | Wholesale trade | Telecommunication services | Computer senvices | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 8-99 |  |  |  |
| Businesses at end June(a) |  |  |  |  |  |  |
| New South Wales | no. | 128 | 842 | 402 | 6362 | 7735 |
| Victoria | no. | 116 | 850 | 249 | 4589 | 5803 |
| Queensland | no. | 53 | 415 | 170 | 1760 | 2398 |
| South Australia | no. | 35 | *232 | 65 | 682 | 1014 |
| Western Australia | no. | 43 | 356 | 112 | 1024 | 1535 |
| Tasmania | no. | 5 | *63 | 25 | 111 | 205 |
| Northern Territory | no. | 5 | **34 | 18 | 53 | 110 |
| Australian Capital |  |  |  |  |  |  |
| Territory | no. | 22 | *104 | 32 | 729 | 887 |
| Australia | no. | 294 | 2177 | 869 | 14731 | 18072 |
| Employment at end June |  |  |  |  |  |  |
| New South Wales | no. | 5748 | 15945 | 28401 | 32743 | 82837 |
| Victoria | no. | 2678 | 14772 | 21540 | 21410 | 60401 |
| Queensland | no. | 540 | 3595 | 10848 | 8005 | 22987 |
| South Australia | no. | np | 1577 | np | 3626 | 10680 |
| Western Australia | no. | np | 2479 | np | 3918 | 12520 |
| Tasmania | no. | 12 | np | np | 376 | 2399 |
| Northern Territory | no. | 17 | np | np | 112 | 906 |
| Australian Capital |  |  |  |  |  |  |
| Territory | no. | np | 826 | np | 4205 | 6614 |
| Australia | no. | 10542 | 39936 | 74467 | 74395 | 199341 |
| Wages and salaries |  |  |  |  |  |  |
| New South Wales | \$m | 270.6 | 1014.9 | 1494.6 | 1756.6 | 4536.6 |
| Victoria | \$m | 137.8 | 870.2 | 1054.8 | 1054.5 | 3117.3 |
| Queensland | \$m | np | 177.5 | np | 329.1 | 1041.8 |
| South Australia | \$m | np | 75.7 | np | 167.7 | 485.0 |
| Western Australia | \$m | np | 103.6 | np | 162.1 | 537.8 |
| Tasmania | \$m | 0.2 | np | np | 10.6 | 97.0 |
| Northern Territory | \$m | 0.4 | np | np | 5.8 | 40.9 |
| Australian Capital |  |  |  |  |  |  |
| Territory | \$m | np | 61.0 | np | 224.4 | 358.7 |
| Australia | \$m | 485.5 | 2331.6 | 3687.1 | 3710.7 | 10214.8 |

* estimate has a relative standard error of between $25 \%$ and $50 \%$ and should be used with caution
** estimate has a relative standard error greater than $50 \%$ and is considered too unreliable for general use
np not available for publication but included in totals where applicable, unless otherwise indicated
- nil or rounded to zero (including null cells)
(a) Multi-State organisations are counted in each State in which they operate. Hence, the counts of businesses for States and Territories do not sum to the total for Australia.

* 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)
np not available for publication but included in totals where applicable, unless otherwise indicated
revised
** estimate has a relative standard error greater than $50 \%$ and is considered too unreliable for general use
(a) Multi-State organisations are counted in each State in which they operate. Hence, the counts of businesses for States and Territories do not sum to the total for Australia.


## CHAPTER 3

INTRODUCTION

BUSINESSES

EMPLOYMENT

INCOME AND EXPENSES

PERFORMANCE

## SELECTED ACTIVITIES

This section presents statistics which supplement those statistics on the telecommunication services industry provided in Chapter 2. In 1996-97 and 1995-96, these statistics formed part of a separate publication, Telecommunication Services, Australia (Cat. no. 8145.0).

At the end of June 99, there were 869 businesses in the telecommunication services industry. This was an increase of $111 \%$ since 1996-97. These 869 businesses comprised 19 licensed carriers, 520 Internet service providers (ISPs, including non-employing businesses) and 331 other carriage service providers.

The industry employed 74,467 persons at the end of June 1999, a $7 \%$ decrease since the end of June 1997 and a 19\% decrease since the end of June 1996.

During 1998-99, the telecommunication services industry generated $\$ 26,083$ million in income, an increase of $25 \%$ since 1996-97.

Total expenses for the industry during 1998-99 were $\$ 20,602$ million, an increase of $6 \%$ since 1996-97.

The 869 businesses in the industry generated a total income per person employed of $\$ 350,300$ and recorded labour costs per employee of $\$ 51,400$.

There were 28 businesses with employment of 100 persons or more, $3 \%$ of all businesses in the industry. These large businesses accounted for the majority of the industry's employment (94\%) and income (96\%). The total income per person employed in these large businesses was $\$ 358,700$.

During 1998-99, the total industry operating profit before tax was $\$ 5,549$ million and the operating profit margin was $21.5 \%$. This operating profit margin was significantly higher than the operating profit margin of $7.1 \%$ recorded in 1996-97. The highest operating profit margin of $22.0 \%$ came from businesses with 100 or more persons employed, while businesses with employment of 5 to 99 persons made an operating loss before tax.

During 1998-99, 10 businesses in the industry facilitated 11,453 million local calls. There were 21 businesses which provided 18,790 million minutes of domestic long distance calls and 35 businesses which provided 2,715 million minutes of international long distance calls.

A total of 23 businesses had 4,793,000 mobile services in operation at the end of June 1999.

SELECTED ACTIVITIES
continued

At the end of June 1999 there were 503 businesses which had 1,834,600 dial-up subscribers as part of their Internet service. There were 122 businesses which hosted 6,400 websites with secure on-line financial transactions.

|  |  | 1995-96 | 1996-97 | 1998-99 |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| Businesses at end June |  |  |  |  |
| Licensed carriers | no. | na | 3 | 19 |
| Carriage service providers | no. | na | 102 | 331 |
| Internet senvice providers | no. | na | 306 | 520 |
| Total | no. | 410 | 411 | 869 |
| Employment at end June | no. | 91701 | 79654 | 74467 |
| Income |  |  |  |  |
| IT\&T income | \$m | 17937.5 | 19761.9 | 25071.4 |
| Other income | \$m | 796.2 | 1165.2 | 1011.8 |
| Total | \$m | 18733.7 | 20927.2 | 26083.0 |
| Expenses |  |  |  |  |
| Labour costs | \$m | 4528.6 | 4978.6 | 3808.1 |
| Payments to contractors and consultants for computing and telecommunication services | \$m | 44.5 | 364.9 | 490.0 |
| Other payments for telecommunication |  |  |  |  |
| Purchases(b) | \$m | 2226.0 | 1246.7 | 797.5 |
| Depreciation and amortisation | \$m | 2665.8 | 2875.3 | 3486.5 |
| Interest | \$m | 688.6 | 713.9 | 822.4 |
| Other expenses | \$m | 5780.2 | 5707.7 | 5561.6 |
| Total | \$m | 15933.6 | 19458.2 | 20601.5 |
| Operating profit before tax | \$m | 2781.5 | 1472.8 | 5549.2 |
| Operating profit margin | \% | 15.5 | 7.1 | 21.5 |
| na not available |  |  |  |  |
| (a) Estimates for 1995-96 and 1996-97 are not strictly comparable ow differences in scope; see Explanatory Notes paragraph 8. |  |  |  |  |
| (b) Some other payments for telecommmunication expenses were includ purchases for 1995-96 and 1996-97. |  |  |  |  |

PERFORMANCE INDICATORS BY EMPLOYMENT SIZE, Telecommunication Services

|  |  | EMPL | YMEN | SIZE |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0-4 persons | $\begin{aligned} & 5-19 \\ & \text { persons } \end{aligned}$ | $\begin{aligned} & 20-99 \\ & \text { persons } \end{aligned}$ | 100 or more persons | Total |
| 1998-99 |  |  |  |  |  |  |
| Businesses at end June | no. | 623 | 176 | 42 | 28 | 869 |
| Employment at end June | no. | 1163 | 1588 | 1728 | 69988 | 74467 |
| Total income | \$m | 364.2 | 255.2 | 356.0 | 25107.6 | 26083.0 |
| Total income per person employed | \$'000 | 313.1 | 160.7 | 206.0 | 358.7 | 350.3 |
| Labour costs per employee | \$'000 | 34.7 | 32.4 | 37.5 | 52.4 | 51.4 |
| Labour costs to total expenses | \% | 9.3 | 17.8 | 16.6 | 18.7 | 18.5 |
| Operating profit before tax per person employed | \$'000 | 45.1 | *-8.4 | *-18.5 | 79.2 | 74.5 |
| Operating profit margin | \% | 14.6 | *-5.4 | *-9.1 | 22.2 | 21.5 |
| 1996-97 |  |  |  |  |  |  |
| Businesses at end June | no. | 252 | 110 | 30 | 19 | 411 |
| Employment at end June | no. | 378 | 1047 | 1347 | 76882 | 79654 |
| Total income | \$m | 159.3 | 133.3 | 482.9 | 20151.6 | 20927.2 |
| Total income per person employed | \$'000 | 421.0 | 127.3 | 358.4 | 262.1 | 262.7 |
| Labour costs per employee | \$'000 | 38.1 | 23.9 | 41.4 | 63.6 | 62.6 |
| Labour costs to total expenses | \% | 6.1 | 17.0 | 11.5 | 26.2 | 25.6 |
| Operating profit before tax per person employed | \$'000 | -45.2 | -11.4 | **-3.2 | 19.6 | 18.5 |
| Operating profit margin | \% | -10.8 | -9.1 | **-0.9 | 7.5 | 7.1 |
| 1995-96 |  |  |  |  |  |  |
| Businesses at end June | no. | 279 | *85 | 31 | 15 | 410 |
| Employment at end June | no. | 591 | *798 | 1280 | 89032 | 91701 |
| Total income | \$m | *43.8 | *226.1 | 211.5 | 18252.3 | 18733.7 |
| Total income per person employed | \$'000 | 74.2 | *283.4 | 165.2 | 205.0 | 204.3 |
| Labour costs per employee | \$'000 | 29.7 | 28.2 | 41.5 | 49.8 | 49.4 |
| Labour costs to total expenses | \% | 38.6 | *10.1 | 23.3 | 28.7 | 28.4 |
| Operating profit before tax per person employed | \$'000 | **-3.1 | **8.6 | **-8.9 | 31.3 | 30.3 |
| Operating profit margin | \% | **-4.8 | **3.0 | **-5.5 | 15.9 | 15.5 |

* estimate has a relative standard error of between $25 \%$ and $50 \%$ and should be used with caution
** estimate has a relative standard error greater than $50 \%$ and is considered too unreliable for general use

PERFORMANCE INDICATORS BY INCOME SIZE, Telecommunication Services

|  |  | INCOME SIZE (\$M) |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Less <br> than 0.1 | 0.1-0.9 | 1.0-9.9 | 10.0 or more |  |
| 1998-99 |  |  |  |  |  |  |
| Businesses at end June | no. | 256 | 475 | 95 | 43 | 869 |
| Employment at end June | no. | 359 | 2989 | 2110 | 69008 | 74467 |
| Total income | \$m | 9.7 | 142.4 | 283.3 | 25647.6 | 26083.0 |
| Total income per person employed | \$'000 | 26.9 | 47.7 | 134.3 | 371.7 | 350.3 |
| Labour costs per employee | \$'000 | 17.7 | 14.8 | 31.2 | 53.6 | 51.4 |
| Labour costs to total expenses | \% | 20.8 | 28.0 | 19.3 | 18.4 | 18.5 |
| Operating profit before tax per <br> person employed $\qquad$ \$'000 -17.0 **-1.0 $\quad-24.5 \quad 81.3$ <br> 74.5 |  |  |  |  |  |  |
| Operating profit margin | \% | -63.3 | **-2.1 | -18.4 | 22.1 | 21.5 |


| 1996-97 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Businesses at end June | no. | 164 | 165 | 46 | 36 | 411 |
| Employment at end June | no. | 252 | 928 | 902 | 77572 | 79654 |
| Total income | \$m | 6.2 | 58.0 | 168.2 | 20694.7 | 20927.2 |
| Total income per person employed | \$'000 | 24.6 | 62.6 | 186.4 | 266.8 | 262.7 |
| Labour costs per employee | \$'000 | 16.0 | 20.2 | 32.3 | 63.5 | 62.6 |
| Labour costs to total expenses | \% | 21.2 | 24.4 | 18.0 | 25.7 | 25.6 |
| Operating profit before tax per person employed | \$'000 | -29.3 | -16.5 | *7.9 | 19.2 | 18.5 |
| Operating profit margin | \% | -119.9 | -26.6 | *4.3 | 7.3 | 7.1 |
| 1995-96 |  |  |  |  |  |  |
| Businesses at end June | no. | *122 | 197 | 70 | 21 | 410 |
| Employment at end June | no. | *267 | *732 | 1431 | 89271 | 91701 |
| Total income | \$m | *7.3 | 47.5 | *336.7 | 18342.3 | 18733.7 |
| Total income per person employed | \$'000 | 27.2 | 64.9 | *235.3 | 205.5 | 204.3 |
| Labour costs per employee | \$'000 | 20.2 | 25.1 | 40.7 | 49.8 | 49.4 |
| Labour costs to total expenses | \% | 61.4 | 34.6 | 16.8 | 28.6 | 28.4 |
| Operating profit before tax per person employed | \$'000 | **-4.3 | **-6.4 | **-6.4 | 31.3 | 30.3 |
| Operating profit margin | \% | **-15.8 | **-9.9 | **-2.8 | 15.9 | 15.5 |

[^1]

PRODUCTION IMPORTS AND EXPORTS OF SELECTED IT\&T GOODS AND SERVICES

## INTRODUCTION

SUMMARY

This section compares 1998-99 income from domestic production of selected IT\&T goods and services with imports and exports data compiled from sources other than this survey. These sources comprise information submitted by exporters, importers or their agents to the Australian Customs Service and the ABS Survey of International Trade in Services. Income from domestic production relates to all businesses in the industries generally included in the international definition of IT\&T industries, together with businesses in the recorded media manufacturing and publishing industry.

Total income from the domestic production of IT\&T goods and services was $\$ 39,864$ million in 1998-99, an increase of $28 \%$ since 1995-96. Computer services and telecommunication services recorded increases of $41 \%$ and $40 \%$ respectively, however, production of packaged software and manufactured IT\&T goods declined by $43 \%$ and $24 \%$ respectively over the three-year period. The decline in domestic production of packaged software and manufactured IT\&T goods was offset by an increase in imports of these products.

Exports (including re-exports) of selected IT\&T goods and services totalled $\$ 4,386$ million in 1998-99, an 11\% increase since 1995-96. Imports of these items were valued at $\$ 13,534$ million, a $26 \%$ increase since $1995-96$. This represents a trade deficit for 1998-99 of \$9,148 million and compares with $\$ 6,765$ million in $1995-96$. It should be noted that the imports and exports details include amounts for re-exports, which are goods imported into Australia and subsequently exported in the same condition, or after undergoing minor operations which leave them essentially unchanged. After excluding these re-export goods from the IT\&T imports and exports details, the value of exports was equivalent to $8 \%$ of the value of revenue from domestic production in 1998-99, while imports were equivalent to $31 \%$.

With $\$ 2,242$ million in exports and $\$ 10,757$ million in imports of IT $\&$ T goods, Australia exports considerably fewer IT\&T goods than it imports. The United States of America was the major source of imports, accounting for $24 \%$ ( $\$ 2,563$ million) of all IT\&T goods, followed by Singapore (13\%) and Malaysia (10\%).

Australia exported more IT\&T goods to New Zealand and the United States of America than to any other country. Exports to New Zealand accounted for $\$ 485$ million or $22 \%$ of all IT\&T goods, followed by the United States of America with $\$ 422$ million (19\%).

The value of imports and exports was higher for computer parts and accessories than any other types of IT\&T goods. Computer parts and accessories accounted for $44 \%$ ( $\$ 4,707$ million) of imports and $57 \%$ ( $\$ 1,268$ million) of exports.

PRODUCTION, IMPORTS \& EXPORTS OF SELECTED IT\&T GOODS \& SERVICES

|  | INCOME FROM DOMESTIC PRODUCTION |  | IMPORTS (CUSTOMS VALUE)(a) |  | EXPORTS (F.O.B.) (a) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1995-96(b) | 1998-99 | 1995-96 | 1998-99 | 1995-96 | 1998-99 |
|  | \$m | \$m | \$m | \$m | \$m | \$m |
| Computer and communications hardware, equipment and cables, etc. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Mainframe and data processing machines | np | 129.0 | 454.0 | 448.0 | 159.9 | 185.0 |
| Laptop, notebook and similar portable computers | np | 28.9 | na | 490.3 | na | 15.6 |
| PCs and similar desktop computers | 628.6 | 747.0 | 1121.0 | 1065.9 | 139.7 | 30.6 |
| Laser and other printing systems | **21.4 | 4.9 | 388.4 | 403.4 | na | 40.8 |
| Other input-output devices and peripherals (including scanners, keyboards, monitors etc.) | *18.6 | *8.5 | 626.6 | 665.5 | 70.0 | na |
| Consumables (including removable storage media) | 85.0 | *41.2 | 52.6 | 86.5 | 11.7 | 20.4 |
| Other computer and communications hardware (excluding storage media) | 431.9 | 189.6 | 4277.2 | 4620.4 | 1463.6 | 1248.0 |
| Telephone and telegraph equipment (excluding parts) | 770.6 | 522.9 | 41.4 | 161.9 | 71.5 | 20.3 |
| Mobile communications |  |  |  |  |  |  |
| Mobile, cellular and car phones | $n \mathrm{p}$ | 30.5 | 590.8 | 768.2 | na | na |
| CB and other mobile radio transceiving equipment | np | 113.6 | 65.7 | 74.7 | na | na |
| Total | 126.1 | 144.1 | 656.5 | 842.9 | na | na |
| Other telecommunications and transceiving equipment | 627.0 | 571.1 | 1154.6 | 1866.0 | 567.0 | 624.1 |
| CablesInsulated optical fibre cable |  |  |  |  |  |  |
|  | $n \mathrm{n}$ | 272.9 | 33.6 | 30.0 | 36.1 | 14.0 |
| Co-axial cable and other co-axial electrical conductors | np | 98.6 | 98.4 | 76.1 | 23.5 | 43.2 |
| Total | (c) 433.4 | (c) 371.5 | 132.0 | 106.1 | 59.6 | 57.2 |
| Unspecified | np | 890.7 | - | - | - | - |
| Total | (c) 4805.0 | (c)3 649.7 | 8904.3 | 10756.9 | 2543.0 | 2242.0 |

np not available for publication but included in totals where applicable, unless otherwise indicated
na not available
** estimate has a relative standard error greater than $50 \%$ and is considered too unreliable for general use

* 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)
(a) Import and export data are compiled by the ABS from information submitted by importers, exporters or their agents to the Australian Customs Service. Exports include exports of Australian commodities 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) Data for 1995-96 have been revised to include data for the Recorded media manufacturing and publishing industry (ANZSIC Class 2430).
(c) Excludes income from production of cables that are not associated with IT\&T.

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CHAPTER 4 • PRODUCTION IMPORTS AND EXPORTS OF SELECTED IT&T GOODS AND SERVICES
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PRODUCTION, IMPORTS \& EXPORTS OF SELECTED IT\&T GOODS \& SERVICES continued

na not available
(a) Import and export data are compiled by the ABS from information submitted by importers, exporters or their agents to the Australian Customs Service. Exports include exports of Australian commodities 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) Data for 1995-96 have been revised to include data for the Recorded media manufacturing and publishing industry (ANZSIC Class 2430).
(c) Includes both postal and telecommunication senvices data. Telecommunication senvices data are not separately available.
(d) Excludes income from production of cables that are not associated with IT\&T.

IMPORTS AND EXPORTS (a), By Country of Origin/Destination(b)

|  | TOTAL IT\&T IMPORTS (CUSTOMS VALUE) |  |  | TOTAL IT\&T EXPORTS(F.O.B.) . . . . . . . . |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1995-96 | 1998-99 | Change | 1995-96 | 1998-99 | Change |
| Country of origin/final destination | \$m | \$m | \% | \$m | \$m | \% |
|  |  |  |  |  |  |  |
| Oceania and Antarctica |  |  |  |  |  |  |
| New Zealand | 45.0 | 48.8 | 8.4 | 441.6 | 484.8 | 9.8 |
| Papua New Guinea | 0.1 | - | -100.0 | 38.0 | 34.6 | -8.9 |
| Other Oceania and |  |  |  |  |  |  |
| North-West Europe |  |  |  |  |  |  |
| United Kingdom | 418.2 | 421.8 | 0.9 | 97.2 | 60.3 | -38.0 |
| Ireland | 78.9 | 144.3 | 82.9 | 5.7 | 6.6 | 15.8 |
| Austria | 10.2 | 21.8 | 113.7 | 1.9 | 2.0 | 5.3 |
| Belgium-Luxembourg | 51.6 | 17.2 | -66.7 | 13.8 | 8.2 | -40.6 |
| France | 107.5 | 128.0 | 19.1 | 8.6 | 10.2 | 18.6 |
| Germany | 283.3 | 233.5 | -17.6 | 25.9 | 74.5 | 187.6 |
| Finland | 101.8 | 68.8 | -32.4 | 2.0 | 3.9 | 95.0 |
| Sweden | 352.1 | 295.5 | -16.1 | 43.9 | 6.2 | -85.9 |
| Other North-West |  |  |  |  |  |  |
| Europe | 43.3 | 60.3 | 39.3 | 19.4 | 32.6 | 68.0 |
| Southern and Eastern |  |  |  |  |  |  |
| Europe |  |  |  |  |  |  |
| Italy | 40.0 | 39.7 | -0.7 | 15.9 | 3.9 | -75.5 |
| Other Southern and |  |  |  |  |  |  |
| Eastern Europe | 22.8 | 87.1 | 282.0 | 7.2 | 7.8 | 8.3 |
| North Africa and the Middle |  |  |  |  |  |  |
| East |  |  |  |  |  |  |
| Israel | 31.7 | 60.2 | 89.9 | 3.5 | 7.8 | 122.9 |
| Other North Africa and the Middle East | 3.3 | 4.9 | 49.8 | 22.5 | 31.7 | 40.9 |
| South-East Asia |  |  |  |  |  |  |
| Thailand | 123.8 | 172.5 | 39.3 | 42.1 | 21.7 | -48.5 |
| Malaysia | 283.5 | 1119.3 | 294.8 | 63.6 | 43.0 | -32.4 |
| Philippines | 34.2 | 157.5 | 360.5 | 37.1 | 32.1 | -13.5 |
| Singapore | 1059.5 | 1424.3 | 34.4 | 336.3 | 180.4 | -46.4 |
| Other South-East Asia | 7.3 | 32.3 | 342.5 | 51.3 | 25.6 | -50.1 |
| North-East Asia |  |  |  |  |  |  |
| China | 168.3 | 393.4 | 133.7 | 55.4 | 47.4 | -14.4 |
| Hong Kong (SAR of |  |  |  |  |  |  |
| Taiwan | 833.1 | 1005.6 | 20.7 | 53.2 | 46.5 | -12.6 |
| Japan | 1057.8 | 1000.6 | -5.4 | 159.0 | 101.4 | -36.2 |
| Korea, Republic of | 366.0 | 521.0 | 42.3 | 67.7 | 49.5 | -26.9 |
| Other North-East Asia | 0.2 | 0.3 | 53.4 | - | 0.4 | 833.8 |
| Southern-Central Asia |  |  |  |  |  |  |
| Total Southern-Central |  |  |  |  |  |  |
| Asia | 1.1 | 2.9 | 163.6 | 31.7 | 24.7 | -22.1 |

- nil or rounded to zero (including null cells)
. not applicable
(a) Data in this table relate to merchandise trade and not to trade in services. Import and export data are compiled by the ABS from information submitted by importers, exporters or their agents to the Australian Customs Service. Exports include exports of Australian commodities 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) Countries are classified according to the 1998 Standard Australian Classification of Countries (SACC, Cat. no. 1269.0).

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CHAPTER 4 • PRODUCTION IMPORTS AND EXPORTS OF SELECTED IT&T GOODS AND SERVICES
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IMPORTS AND EXPORTS(a), By Country of Origin/Destination(b) continued

|  | TOTAL IT\&T IMPORTS (CUSTOMS VALUE) |  |  | $\begin{aligned} & \text { TOTAL } \\ & \text { (F.O.B } \end{aligned}$ |  | RTS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1995-96 | 1998-99 | Change | 1995-96 | 1998-99 | Change |
| Country of origin/final destination | \$m | \$m | \% | \$m | \$m | \% |
|  |  |  |  |  |  |  |
| Americas |  |  |  |  |  |  |
| United States of |  |  |  |  |  |  |
| America | 2682.6 | 2563.2 | -4.5 | 361.4 | 421.5 | 16.6 |
| Canada | 290.5 | 257.3 | -11.4 | 35.5 | 32.9 | -7.3 |
| Mexico | 27.0 | 119.8 | 343.7 | 0.4 | 7.5 | 1768.9 |
| Other Americas | 4.7 | 43.6 | 825.9 | 27.4 | 40.2 | 46.7 |
| Sub-Saharan Africa |  |  |  |  |  |  |
| South Africa | 1.9 | 2.8 | 49.0 | 30.0 | 18.3 | -39.0 |
| Other Sub-Saharan |  |  |  |  |  |  |
| Africa | 0.2 | 0.7 | 205.5 | 5.7 | 4.7 | -17.3 |
| Other |  |  |  |  |  |  |
| Total other | (c) 7.2 | (c)27.1 | 276.4 | (d)147.7 | (d)186.6 | 26.3 |
| Total(e) | 8904.3 | 10756.9 | 20.8 | 2543.0 | 2242.0 | 11.8 |
| -•••••••••••••••••••••••••••••••••••••••••••••••••••••••• |  |  |  |  |  |  |
| (a) Data in this table relate to compiled by the ABS from Customs Service. Exports origin. Because of the shee misclassifications and appro classifications, data for 19 further information. | merchandise formation s lude exports volume of tr ximations in -99 are no | ade and not mitted by im of Australian sactions in e statistics. trictly comp | trade in orters, exp ommoditie lved, it is ue to cha able with | ces. Import s or their a d re-exports able that th in import a -96 data. | nd export d ents to the of goods of re will be s d export co lease conta | a are ustralian oreign me errors modity ABS for |
| (b) Countries are class no. 1269.0). | rding to the | 998 Standa | Australian | ssification | Countries | ACC, Cat. |
| (c) | orts with cou | ry unknown |  |  |  |  |
| (d) Includes exports classified Timor Gap, and a commodit | Internation subject to | Waters, Ship no country | and Aircra tails' confi | res, Zone ality restric | Cooperatio | $A$ in the |

IMPORTS OF SELECTED MERCHANDISE(a), By Major Country of Origin(b)

|  | Computers | Printers, input output devices and peripherals | Computer parts and accessories | Mobile communications | Other communications equipment and cables | Total(c) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Country of |  |  |  |  |  |  |
| origin | \$m | \$m | \$m | \$m | \$m | \$m |
|  |  |  | 8-99 |  |  |  |
| United States of America | 451.9 | 100.2 | 1434.8 | 62.1 | 514.3 | 2563.2 |
| Singapore | 332.9 | 191.9 | 714.8 | 111.8 | 72.8 | 1424.3 |
| Malaysia | 378.4 | 83.1 | 498.4 | 93.5 | 65.9 | 1119.3 |
| Taiwan | 349.6 | 143.0 | 457.8 | 0.3 | 54.9 | 1005.6 |
| Japan | 241.8 | 140.2 | 380.6 | 6.5 | 231.4 | 1000.6 |
| Korea, Republic of | 10.3 | 94.8 | 57.6 | 309.3 | 49.1 | 521.0 |
| United Kingdom | 49.0 | 4.7 | 105.2 | 41.2 | 221.7 | 421.8 |
| China | 5.5 | 122.2 | 154.6 | 39.0 | 72.1 | 393.4 |
| Sweden | 13.8 | 9.1 | 17.8 | 42.8 | 212.1 | 295.5 |
| Hong Kong (SAR of China) | 5.2 | 23.6 | 227.3 | 2.3 | 20.0 | 278.5 |
| Canada | 6.8 | 4.8 | 38.7 | 1.6 | 205.4 | 257.3 |
| Germany | 23.1 | 6.4 | 86.5 | 45.9 | 71.7 | 233.5 |
| Thailand | 0.3 | 75.6 | 58.4 | 1.0 | 37.2 | 172.5 |
| Philippines | 3.0 | 8.9 | 118.5 | 17.5 | 9.6 | 157.5 |
| Ireland | 34.8 | 1.2 | 99.7 | 0.9 | 7.6 | 144.3 |
| France | 5.8 | 5.8 | 23.0 | 35.5 | 57.9 | 128.0 |
| Mexico | 74.0 | 7.4 | 36.3 | 0.1 | 1.9 | 119.8 |
| Finland | 0.9 | 0.1 | 1.4 | 9.1 | 57.3 | 68.8 |
| Total(d) | 2004.2 | 1068.9 | 4706.9 | 842.9 | 2134.0 | 10756.9 |


| 1995-96 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United States of America | 471.1 | 224.8 | 1542.2 | 98.3 | 346.3 | 2682.6 |
| Singapore | 356.3 | 80.4 | 593.8 | 10.6 | 18.5 | 1059.5 |
| Japan | 255.8 | 212.8 | 405.9 | 8.9 | 174.5 | 1057.8 |
| Taiwan | 182.9 | 196.1 | 417.7 | 0.7 | 35.8 | 833.1 |
| United Kingdom | 60.3 | 14.2 | 117.9 | 85.8 | 140.0 | 418.2 |
| Korea, Republic of | 7.5 | 105.7 | 171.4 | 60.5 | 21.0 | 366.0 |
| Hong Kong (SAR of China) | 79.2 | 13.8 | 250.6 | 4.7 | 17.2 | 365.6 |
| Sweden | 11.1 | 0.4 | 40.6 | 132.6 | 167.4 | 352.1 |
| Canada | 5.5 | 4.1 | 232.3 | 0.6 | 48.0 | 290.5 |
| Malaysia | 62.9 | 40.5 | 157.7 | 3.0 | 19.4 | 283.5 |
| Germany | 9.0 | 4.9 | 55.4 | 148.3 | 65.7 | 283.3 |
| China | 10.7 | 29.9 | 78.9 | 3.4 | 45.4 | 168.3 |
| Finland | 5.7 | 1.4 | 8.8 | 66.1 | 19.8 | 101.8 |
| Total(d) | 1575.0 | 1015.0 | 4329.8 | 656.5 | 1327.8 | 8904.3 |

(a) Data in this table relate to merchandise trade and not to trade in services. Where imports for an individual country exceed $\$ 50 \mathrm{~m}$ for any one category, data have been included against that country for all categories.
(b) Countries are classified according to the 1998 Standard Australian Classification of Countries (SACC, Cat. no. 1269.0).
(c) Excludes packaged software
(d) Relates to all countries, not just those listed.

|  | Computers | Printers, input output devices and peripherals | Computer parts and accessories | Other communications equipment and cables | Total(c) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Country of |  |  |  |  |  |
|  |  |  |  |  |  |
| destination | \$m | \$m | \$m | \$m | \$m |
|  |  |  |  |  |  |
| 1998-99 |  |  |  |  |  |
| New Zealand | 63.1 | 6.8 | 345.5 | 69.4 | 484.8 |
| United States of |  |  |  |  |  |
| America | 19.1 | 4.9 | 328.6 | 68.9 | 421.5 |
| Singapore | 29.9 | 5.9 | 104.2 | 40.3 | 180.4 |
| Hong Kong (SAR of |  |  |  |  |  |
| China) | 22.9 | 2.3 | 77.7 | 33.2 | 136.0 |
| Japan | 36.3 | 7.4 | 52.7 | 4.9 | 101.4 |
| Germany | 1.3 | 0.1 | 60.9 | 12.1 | 74.5 |
| United Kingdom | 2.3 | 0.2 | 37.9 | 19.9 | 60.3 |
| China | 0.8 | 0.8 | 10.1 | 35.8 | 47.4 |
| Malaysia | 4.1 | 0.2 | 30.2 | 8.5 | 43.0 |
| Papua New Guinea | 1.1 | 0.4 | 27.0 | 6.1 | 34.6 |
| Philippines | 1.2 | 0.2 | 5.1 | 25.6 | 32.1 |
| Brazil | - | - | 3.2 | 20.8 | 24.0 |
| Total(d) | 231.3 | 40.8 | 1268.3 | 701.5 | 2242.0 |
|  |  | 199 |  |  |  |
| New Zealand | 38.8 | 5.8 | 350.9 | 46.1 | 441.6 |
| United States of |  |  |  |  |  |
| America | 20.6 | 3.1 | 313.8 | 23.9 | 361.4 |
| Singapore | 64.4 | 4.5 | 235.5 | 31.9 | 336.3 |
| Hong Kong (SAR of |  |  |  |  |  |
| China) | 53.1 | 5.3 | 96.0 | 106.2 | 260.6 |
| Japan | 42.4 | 30.4 | 82.6 | 3.6 | 159.0 |
| United Kingdom | 9.6 | 0.3 | 67.6 | 19.7 | 97.2 |
| Korea, Republic of | 37.3 | 9.8 | 15.8 | 4.9 | 67.7 |
| Malaysia | 2.8 | 1.8 | 38.8 | 20.1 | 63.6 |
| China | 0.1 | - | 5.9 | 49.4 | 55.4 |
| Taiwan | 15.6 | 3.6 | 31.8 | 2.1 | 53.2 |
| Sweden | 0.1 | 0.1 | 1.6 | 42.1 | 43.9 |
| Papua New Guinea | 1.0 | 0.8 | 28.7 | 7.4 | 38.0 |
| Philippines | 1.0 | 0.7 | 5.5 | 29.9 | 37.1 |
| Canada | 1.1 | 0.2 | 30.3 | 4.0 | 35.5 |
| Argentina | 0.1 | - | 0.1 | 21.0 | 21.1 |
| Total(d) | 299.6 | 70.0 | 1475.2 | 698.0 | 2543.0 |

$\qquad$

- nil or rounded to zero (including null cells)
(a) Data in this table relate to merchandise trade and not to trade in services. Where exports for an individual country exceed $\$ 20 \mathrm{~m}$ for any one category, data have been included against that country for all categories.
(b) Countries are classified according to the 1998 Standard Australian Classification of Countries (SACC, Cat. no. 1269.0).
(c) Excludes packaged software.
(d) Relates to all countries, not just those listed.


## RECORDED MEDIA MANUFACTURING AND PUBLISHING INDUSTRY

INTRODUCTION

SUMMARY

The recorded media manufacturing and publishing industry is not included in the main part of this publication as it does not form part of the international definition of industries which specialise in IT\&T activity. Selected statistics about this industry, however, are presented below, given that the industry has significant IT\&T activity. Details for this industry are also included in table 4.1 which provides a more comprehensive picture of domestic production of IT\&T.

The 302 IT\&T specialist businesses in the recorded media manufacturing and publishing industry employed 3,045 persons during 1998-99.

During 1998-99, the total income for IT\&T specialists in the industry was $\$ 278$ million. The majority of income, $\$ 207$ million ( $75 \%$ ), was generated from the sale and licensing of packaged software produced by the business.

Total expenses for IT\&T specialist businesses in the industry during 1998-99 were $\$ 222$ million. Labour costs was the highest single expense ( $\$ 95$ million), representing $43 \%$ of total expenses.

IT\&T specialist businesses in the recorded media manufacturing and publishing industry generated an operating profit before tax of $\$ 56$ million during 1998-99. The operating profit margin for these businesses was $12 \%$.

KEY FIGURES, RECORDED MEDIA MANUFACTURING AND PUBLISHING, IT\&T
Specialists

Value


## EXPLANATORY NOTES

1 This publication presents 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. 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 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 that generally comply with the international definition of industries that specialise in IT\&T activity. A complete list of these industries can be found in paragraph 5 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 recorded media manufacturing and publishing industry is included in a separate section of the publication, because it undertakes significant IT\&T activity, but is not within the international definition of industries which specialise in IT\&T activity.

3 The definition of information technology and telecommunications 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.

4 The survey complements other information produced as part of the ABS IT\&T statistics work program. Related publications are listed in paragraphs 23 and 24 of the Explanatory Notes.

5 The scope of the survey was all employing businesses recorded on the ABS Business Register and classified to 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.;

COMPARABILITY BETWEEN 1995-96 AND 1996-97 TELECOMMUNICATIONS DATA

IMPROVEMENTS TO COVERAGE

STATISTICAL UNIT

REFERENCE PERIOD

- 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.

6 A random sample of businesses recorded on the ABS Business Register that were classified to ANZSIC 2430, recorded media manufacturing and publishing, was also surveyed. This industry is not included in the main parts of this publication as it does not form part of the international definition of industries which specialise in IT\&T activity. The only tables which incorporate statistics from this industry are Tables 4.1 (Production, imports and exports of selected IT\&T goods and services) and 5.1 (Key figures, Recorded media manufacturing and publishing, IT\&T specialists).

7 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.

8 Estimates for the telecommunications services industry are not strictly comparable between 1995-96 and 1996-97 owing to differences in scope and coverage. The 1995-96 survey included telecommunications consultants which were excluded from the 1996-97 survey. In addition, the 1996-97 survey frame was supplemented by the Australian ISP list which was not the case in the 1995-96 survey. Care should therefore be taken when comparing estimates from the two surveys, in particular the number of businesses.

9 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.

10 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.

11 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 Business Register. The ABS is remedying these omissions.

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

13 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.

14 Data contained in the tables in this publication relate to all IT\&T businesses which operated in Australia at any time during the year ended 30 June 1999.

REFERENCE PERIOD continued

RELIABILITY OF the data

Counts of businesses and organisations, however, include only those that were operating at 30 June 1999.

15 The estimates presented in this publication are subject to sampling and non-sampling error.
16 The estimates in this publication are based on information obtained from a sample of businesses in the surveyed population. 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.

17 There are about 2 chances in 3 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.

18 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.

19 The following table contains estimates of RSEs for a selection of statistics presented in this publication.

RELATIVE STANDARD ERRORS


RELIABILITY OF the data continued

20 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 $\$ 1,146.4$ million and the RSE is $10 \%$, giving a standard error of $\$ 114.6$ million. Therefore, there would be 2 chances in 3 that, if all units had been included in the survey, a figure in the range of $\$ 1,031.8$ million to $\$ 1,261.0$ 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 $\$ 917.1$ million to $\$ 1,375.7$ million.

21 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.

22 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.

23 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, 1998-99 (Cat. no. 8669.0)
Government Use of Information Technology, Australia, 1997-98
(Cat. no. 8119.0)
Household Use of Information Technology, Australia, 1999 (Cat. no. 8146.0) Telecommunication Services, Australia, 1996-97 (Cat. no. 8145.0) Use of Information Technology on Farms, Australia, 1998-99
(Cat. no. 8150.0)
Use of the Internet by Householders, Australia, August 2000
(Cat. no. 8147.0)
Year 2000 Problem, Australia, June 1999 (Cat. no. 8152.0)
24 While there was a separate publication for the results from the 1996-97 Telecommunication services survey, the 1998-99 details for this industry are included in this publication (Cat no. 8126.0). More detailed information than presented in this publication regarding the computer services industry may be found in Computing Services Industry, Australia, 1998-99 (Cat. no. 8669.0) which was released on 28 August 2000.

## GLOSSARY

## Bad and doubtful debts

Businesses at end June

Carriage service providers

Casual employees
Computing and technical staff

## Depreciation and amortisation

Earnings before interest and

Employees

Employer contributions to superannuation funds

Employment at the end of
June

Exports (f.o.b.)

Full-time employees
Imports (customs value)

Bad and doubtful debts is the amount of accounts receivable that are either written off, or estimated to be uncollectible during an accounting period, that are expensed in a period's profit calculations.

The number of management units operating at the end of June. A management unit is the highest level accounting unit within a business, having regard for industry homogeneity, for which accounts are maintained.

Businesses which provide telecommunication services via an existing network infrastructure. Typical services offered by these businesses include voice, mobile, data and Internet connectivity, transmission, networking and e-commerce solutions.

This item refers to employees not entitled to take paid holidays.
This item includes system information technology managers, electronics engineers, systems managers and administrators, software designers, applications and analyst programmers, computer database managers, testers, controllers, security auditors, electronic, computer and communication technicians.

These are the financial charges made to the accounts to reflect that part of the value of an asset which may be regarded as having been used up in producing revenue in a particular accounting period.

A measure of profit prior to the deduction of interest expenses and income tax.

This item includes working directors, and other employees working for a business during the last pay period in June. Employees absent on paid or prepaid leave are included. Also included are employees being paid a retainer plus commission. This item excludes working proprietors and partners of unincorporated businesses.

These are the contributions by the employer to superannuation funds, including the employer productivity contribution.

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.

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.

Full-time employees are those who work 35 hours or more per week.
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.

## Income from domestic

 productionIncome from the provision of
computer services

Income from the provision of bundled IT\&T business functions

Income from the provision of telecommunication services

Income from the sale of computer and communications hardware, parts, components and consumables

Income from the sale and licensing of packaged software

Information technology and telecommunications (IT\&T)

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. This is not to be confused with gross domestic product, which is a national accounting concept.

This item includes income from customised software development services and solutions, software and hardware maintenance services, hardware consultancy services, installation and cabling services, computer processing services, information storage and retrieval services and other computer services.

This item includes income from the bundling of services such as help desk, hardware and software appraisal, configuration management, inventory management, software distribution, usage and maintenance, communication network management, facilities maintenance and management, etc. This item may also include computer and communications hardware and software purchased for resale and computer services provided in the course of the consultancy. For the wholesale industry, income from provision of bundled IT\&T business functions includes income from the provision of bundled computer services and bundled telecommunications services.

This item includes income from voice services, data services, mobile voice services, Internet services, leased lines, mobile data services, electronic data interchange services, video conferencing, value added voice services, repair and maintenance of telecommunications equipment and telecommunications consultancy services.

This item includes income from the sale of the following goods, either manufactured in Australia by the business or purchased by it for resale, or both:

- computer hardware-laptops, notebook, portable computers, other PCs and desktop computers, mid range multi user systems, large scale multi user systems, input/output devices such as scanners, keyboards, video conference cameras, monitors, laser and other printer systems;
- communications hardware-switching and transmission equipment such as PABX, SBS and satellite equipment, fibre optic and coaxial communication cables, fixed and mobile phones and networks, radio, mobile, data and Internet transmission apparatus, Citizens' Band (CB) and other mobile radio equipment, modems, Local Area Network (LAN) equipment including multiplexors, servers, bridges, routers, hubs, facsimile machines, teleprinters and other line equipment;
- parts and components—printed circuit boards, integrated circuits, transformers and semi-conductors; and
- consumables-storage media such as floppy disks, compact disks (CDs), magnetic tape, toner and cartridges.

This item includes income from the sale of these goods, either developed in Australia by the business or purchased for resale or both. It includes income from packaged software used for business applications, communication, games and recreation, education, training and other purpose built software.

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.

Insurance premiums

This item refers to expenses incurred by a business in respect of different types of insurance policies but excluding workers' compensation and compulsory third party motor vehicle insurance.

Interest expenses

Internet service providers
(ISPs)

IT\&T goods and services

IT\&T income

IT\&T specialists

Labour costs

Licensed carriers

Operating profit before tax
(OPBT)

Operating profit margin

Other businesses

Other payments for IT\&T
services

Part-time employees
Payments to subcontractors and consultants for computing and communications services

Purchases

This includes interest on bank loans, interest on loans made to the business from related and unrelated businesses, interest in respect of finance leases, interest paid on loans from partners, and interest equivalents such as hedging costs and expenses associated with discounted bills.

Businesses which provide access to the Internet or World Wide Web, to other ISPs, businesses or to the public. Typical services provided by these businesses include dial up Internet access, permanent connection, virtual web and web hosting, domain name hosting, web page design and other Internet services.

IT\&T goods and services are defined to include:

- computer hardware, communications hardware, parts, components and consumables;
- packaged and customised software;
- computer and data processing services;
- information storage and retrieval services;
- installation and cabling services;
- hardware and software maintenance services;
- computer consultancy services such as hardware and software appraisal, facilities management, network management, etc.; and
- telecommunication services such as Internet services, data services, telephony and mobile phone services.

This item includes income from the manufacture and wholesale of IT\&T goods, and income from the supply of services related to the IT\&T industry.

This item refers to those businesses whose IT\&T income (as defined above) is $50 \%$ or more of the total income of the business.

These include wages and salaries, provision expenses for employee entitlements, employer contributions to superannuation, and workers' compensation costs.

Businesses which provide a wide range of value added telecommunication services operating under the Telecommunication Act 1991. These organisations are licensed to own and build network infrastructure within Australia and have a Telecommunications Licence.

This is a measure of profit before extraordinary items are brought to account and prior to the deduction of income tax and appropriations to owners, e.g. dividends paid.

This is the percentage of sales of goods and services available as operating profit before tax i.e. OPBT times 100 divided by sales of goods and services.

These are businesses whose majority income (i.e. $50 \%$ or more) is earned from the sale of non-IT\&T goods and/or services.

This includes payments for network interconnection and transmission expenses, telephone, facsimile, Internet access and usage, commission and rebate expenses.

Part-time employees are those who work less than 35 hours per week.
These are payments to subcontractors and consultants for computer and communication services and related to work. Payments to subcontractors for non-computing work (e.g. cleaning services) are not included.

This item includes purchases of computer and communications hardware components and consumables, packaged software and software licences as well as items such as materials, components, parts, containers and packaging materials.
Rent, leasing and hiring

This item includes expenses incurred from the rental of land, buildings and otherexpenses structures, motor vehicles and equipment used by the business.

## Total expenses

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.
Total income 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.
Unspecified This represents uncategorised income which cannot be attributed to any of the components under the relevant heading in the table.
Wages and salaries This item includes severance, termination and redundancy payments, and provision expenses for employee entitlements. It excludes payments to subcontractors and consultants, and drawings of working proprietors and partners of unincorporated businesses.
Working proprietors and partners of unincorporated businesses This item includes working proprietors and partners who own/operate their own business in a profession or trade (a sole proprietorship) or, along with one or more other partners, operate a partnership. Working proprietors and working partners as owners are not considered to be employees of the business.
Workers' compensation costs These include insurance premiums/levies and non-payroll costs incurred by a business and not reimbursed by an insurance company.

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[^2]
[^0]:    * estimate has a relative standard error of between $25 \%$ and $50 \%$ and should be used with caution

[^1]:    ** estimate has a relative standard error greater than $50 \%$ and is considered too unreliable for general use

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

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