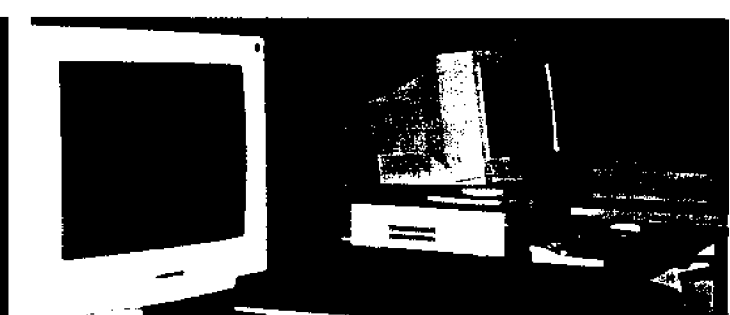




COMPUTING SERVICES INDUSTRY, AUSTRALIA 1992 - 93

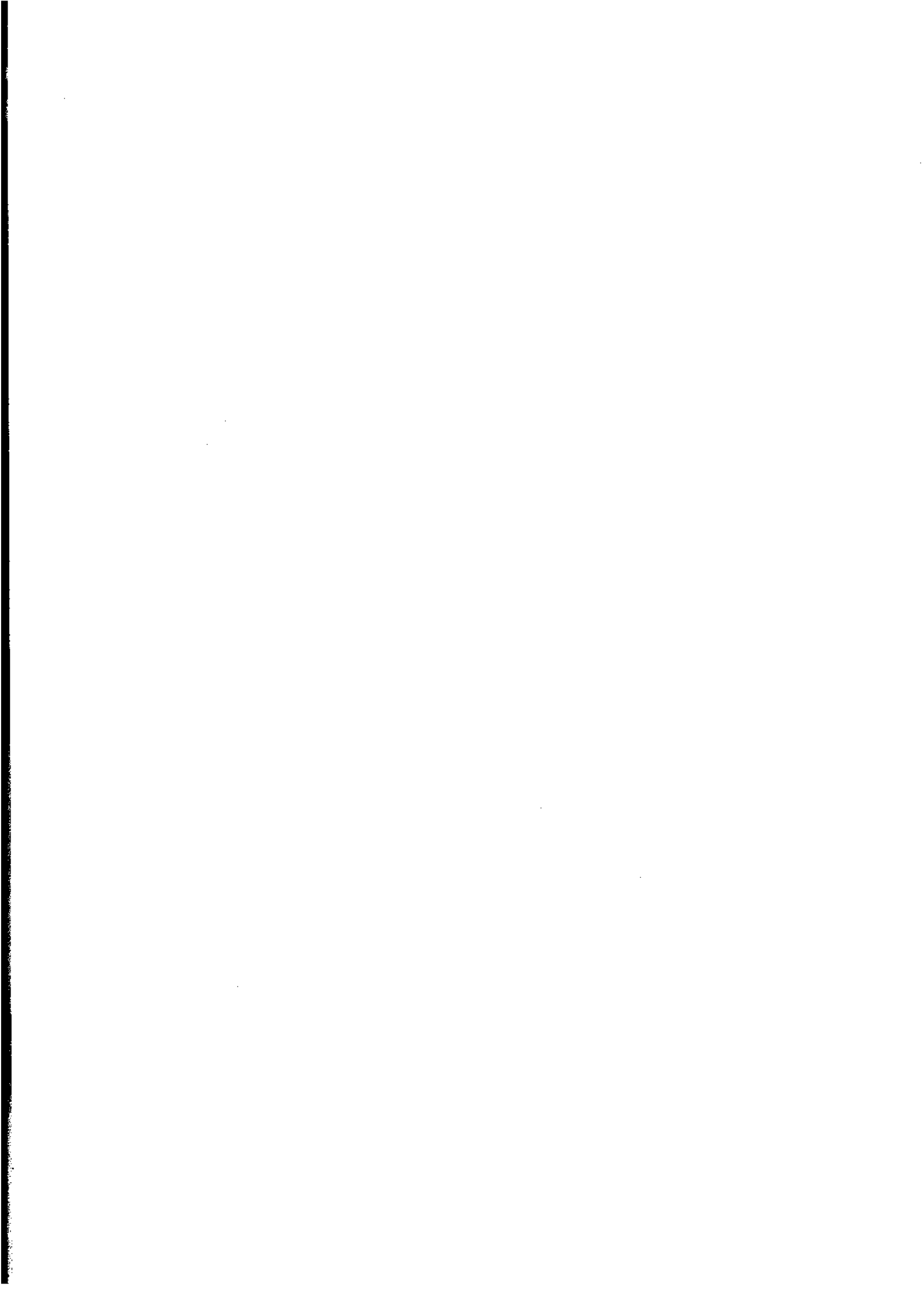




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**COMPUTING SERVICES
INDUSTRY, AUSTRALIA
1992-93**

Richard Madden
Acting Australian Statistician



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INQUIRIES . for further information about statistics in this publication and the availability of related unpublished statistics, contact Dennis Robson, on Melbourne (03) 615 7634.
. for information about other statistics and services please refer to the back page of this publication.



INTRODUCTION

The survey of the computer services industry for the 1992-93 reference year was the second collection conducted by the ABS for this rapidly expanding and changing area of the services industries sector. An earlier ABS survey of the computing services industry was conducted for the 1987-88 reference year. Results were published in *Computing Services Industry, Australia, 1987-88* (Catalogue No. 8669.0).

The 1992-93 computer services industry survey was conducted as part of a range of collections on business services comprising legal, accounting, business management, advertising, architecture, computing, real estate, market research, surveying, and consultant engineering services.

Information in this publication includes businesses classified to Group 783, Computer Services, of the 1993 edition of the Australian and New Zealand Standard Industrial Classification (ANZSIC). Group 783 includes all units mainly engaged in providing data processing services (ANZSIC class 7831), information storage and retrieval services (ANZSIC class 7832), computer maintenance services (ANZSIC class 7833), and computer consultancy services (ANZSIC class 7834).

In addition to this publication, data from the other surveys conducted for the 1992-93 reference year will be released in the following publications:

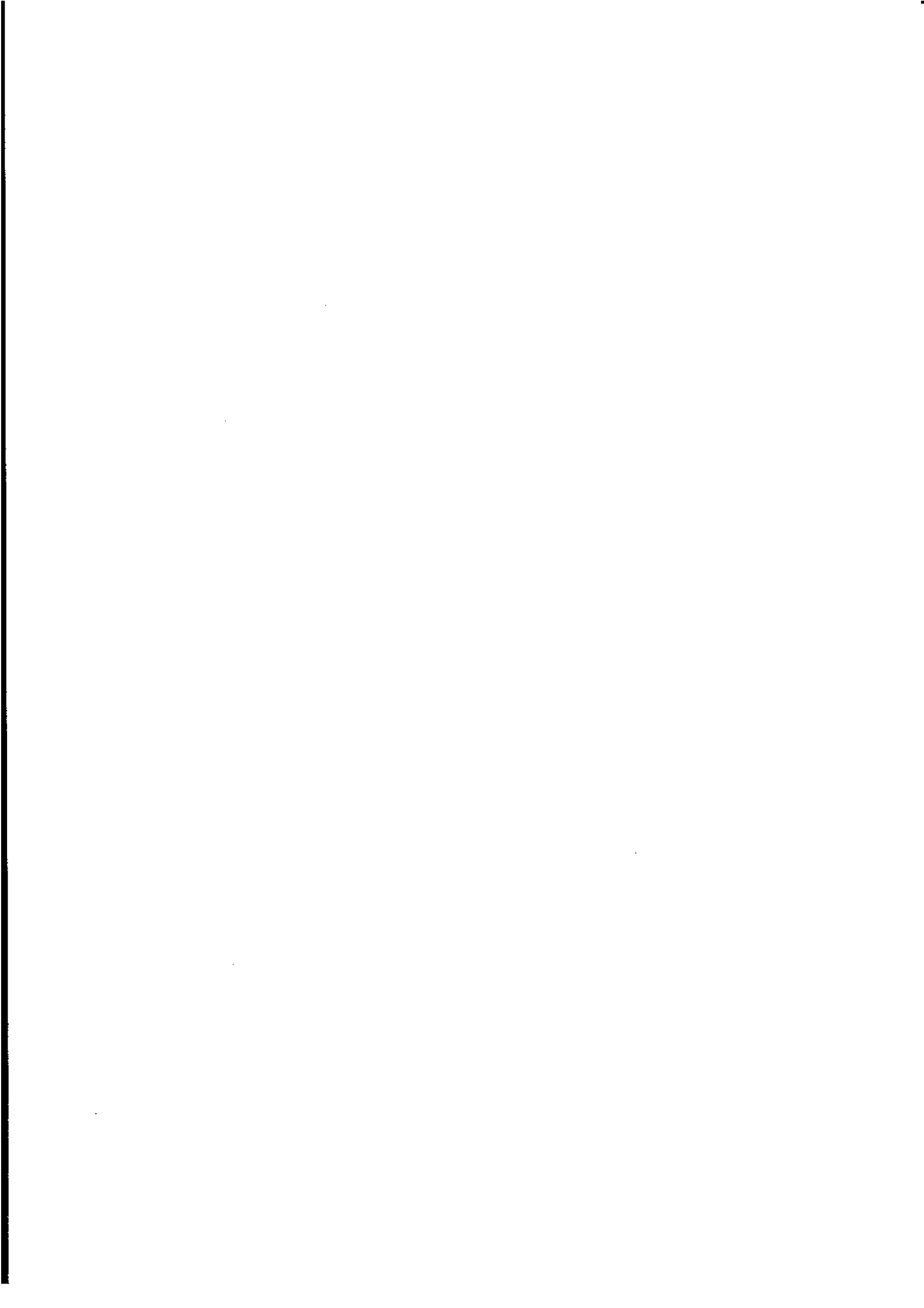
- . *Real Estate Agents Industry, Australia, 1992-93* (Catalogue No. 8663.0).
- . *Selected Technical Services, Australia, 1992-93* (Catalogue No. 8676.0).
- . *Selected Business Services, Australia, 1992-3* (Catalogue No. 8677.0).
- . *Legal and Accounting Services, Australia, 1992-93* (Catalogue No. 8678.0).

These publications contain only a small portion of the information available from the surveys. More detailed information is available from the ABS on request. This includes in-depth statistical analysis in formats tailored to meet the needs of individual clients.

The ABS is committed to providing more information on the service industries sector of the economy. However, the breadth of activities encompassed in the sector poses the problem of selecting which industries to include. To this end the ABS welcomes comments and suggestions from users recommending industries, and data items for inclusion in future surveys. These comments should be addressed to: The Director, Service Industries Surveys, PO Box 10, Belconnen, ACT, 2616.

RICHARD MADDEN
A/g Australian Statistician

Australian Bureau of Statistics
Belconnen ACT 2616
16 March 1995



SECTION 1. COMPUTER SERVICES - AN OVERVIEW

Introduction

The computer services industry comprises businesses whose primary activities are the provision of data processing services, information storage and retrieval services, computer maintenance services, and computer consultancy services. It should be noted that businesses whose primary activities are computer manufacturing, wholesaling or retailing are not included in the statistics presented in this publication. Statistics relating to these businesses appear in *Information Technology in Australia, 1992-93* (Catalogue No. 8126.0).

The importance of the computer services industry

Over the last 25 years, computer and information technology has pervaded almost every area of Australian society - industry, commerce, education, medicine, welfare, etc. The expanded use of technology has been accompanied by the development of a large range of support services. These infrastructure services include data entry, data processing, information storage and retrieval, computer repair and maintenance, programming, systems analysis, etc.

Such services are carried out either in-house by employees of an organisation, or by specialist businesses that comprise the computer services industry. Over the last 10 years, a number of large businesses have outsourced computer service activities previously carried out by their own employees. Nevertheless, the data processing and information storage and retrieval industries are still very small in comparison with other computer services industries, indicating that the activities associated with these industries are still largely undertaken in-house.

Total industry gross product (IGP) for the computer services industry was \$1,826 million. This represented 0.9 per cent of IGP for all non-farm industries.

Size of industry

At 30 June 1993, there were 4,894 businesses (management units) in the computer services industry employing about 30,000 people. These businesses generated \$4 billion from the sales of goods and services, and had an operating profit before tax of \$365 million.

Almost 90 per cent of these businesses were classified to the computer consultancy services industry (ANZSIC 7834). Businesses in this industry employed 75 per cent of all persons employed in the computer services industry, computer maintenance services had 16 per cent, and data processing services had 7 per cent. The information storage and retrieval industry was the smallest industry, accounting for only 2 per cent of employment.

Business size

In terms of number of businesses, the computer services industry was dominated by small businesses, with 97 per cent of businesses employing fewer than 20 people. These small businesses accounted for 42 per cent of industry employment and 28 per cent of industry operating profit before tax. In contrast, the 29 businesses in the industry employing 100 or more persons (representing less than 1 per cent of businesses) accounted for 42 per cent of employment and 58 per cent of operating profit before tax.

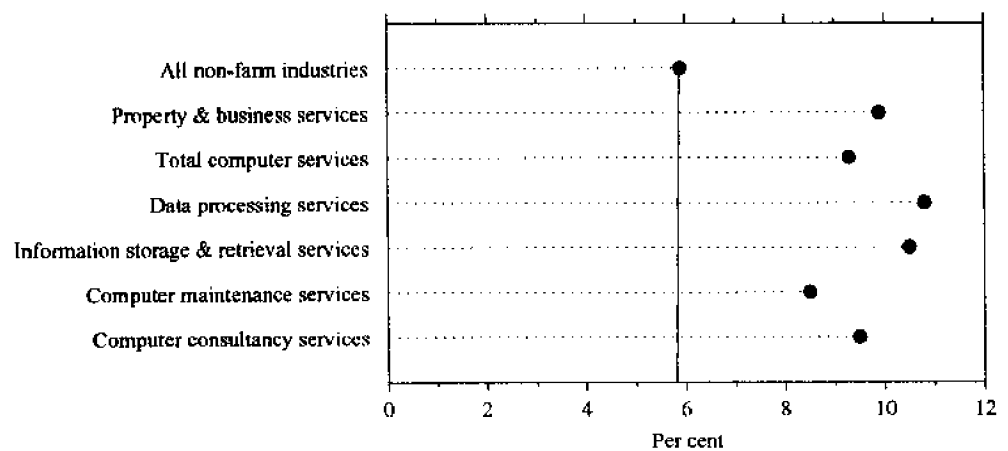
The State dimension

Businesses operating in New South Wales dominated the computer services industry. The 2,000 businesses operating in the computer services industry in New South Wales accounted for 47 per cent of employment and 54 per cent of income. Businesses in New South Wales and Victoria together accounted for 77 per cent of employment and 81 per cent of income for the computer services industry.

Profitability

The computer services industry had an operating profit before tax of \$365 million for 1992-93. This represented an operating profit margin of 9.3 per cent. By comparison, the operating profit margin for the property and business services sector (which includes the computer services industry) was 9.9 per cent, and the operating profit margin for all non-farm industries was 5.9 per cent.

CHART 1.1 SELECTED INDUSTRIES: OPERATING PROFIT MARGIN, AUSTRALIA, 1992-93



Historical comparison

While direct comparisons with results from the 1987-88 survey are not feasible (see technical notes, paras 9 to 13), it is possible to make broad comparisons in total for the three ANZSIC classes 7831, 7832 and 7834. For these three industries, the number of employing businesses increased by 40 per cent (from 3,321 to 4,652 businesses) in the period 1987-88 to 1992-93, while the number of persons employed increased by 7 per cent. Over the same period, the total number of employed persons in Australia increased by 5 per cent.

TABLE 1.1 SUMMARY OF OPERATIONS, AUSTRALIA, 1992-93

Item	Unit	ANZSIC	ANZSIC	ANZSIC	ANZSIC	Total computer services
		7831	7832	7833	7834	
		Data processing services	Information storage and retrieval services	Computer maintenance services	Computer consultancy services	
Businesses at 30 June	No.	262	*67	242	4,323	4,894
Employment						
Working proprietors and partners	No.	*68	*4	*47	216	335
Employees	No.	1,981	632	4,731	22,382	29,726
Total	No.	2,049	636	4,778	22,599	30,061
Income statement						
Sales of goods and services	\$m	142.7	102.6	1,082.1	2,601.4	3,928.9
<i>Less</i>						
Purchases and selected expenses	\$m	59.4	48.8	666.6	1,343.0	2,117.8
Opening stocks	\$m	*0.7	*0.1	123.4	15.5	139.7
<i>Plus</i>						
Closing stocks	\$m	*0.6	*0.1	137.7	15.2	153.5
Trading profit	\$m	83.2	53.8	429.8	1,258.1	1,824.9
<i>Plus</i>						
Interest income	\$m	1.0	0.2	1.5	35.5	38.3
Other operating income	\$m	*4.1	*1.0	1.6	127.1	133.5
<i>Less</i>						
Labour costs	\$m	57.8	24.5	237.9	973.6	1,283.7
Depreciation	\$m	9.6	14.4	61.5	103.0	188.5
Other operating expenses	\$m	1.6	1.2	33.7	55.9	92.3
Earnings before interest and tax	\$m	19.4	14.9	99.8	268.0	422.1
<i>Less</i>						
Interest expenses	\$m	3.9	4.1	7.4	41.8	57.1
Operating profit before tax	\$m	15.5	10.8	92.5	246.2	365.0
Operating profit margin	Per cent	10.8	10.5	8.5	9.5	9.3
Industry gross product	\$m	83.2	53.8	429.8	1,258.4	1,826.2

SECTION 2. INCOME AND EXPENDITURE

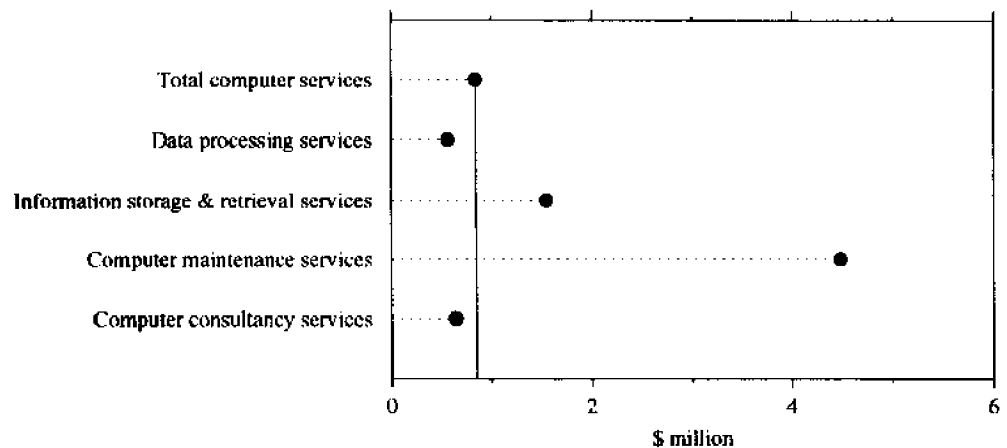
Sources of income

For the computer services industry, 70 per cent of gross income was earned from the provision of services primary to the industry, i.e. software and systems consultancy services, data entry, processing and time sharing services, information network and database services, hardware servicing, cabling services and training.

For individual industry classes, this proportion varied from a high of almost 90 per cent for data processing services to a low of just over 50 per cent for computer maintenance services. For computer maintenance services, just over one third of gross income was from the sale of hardware.

Average income per business in the computer services industry for 1992-93 was \$838,000. For data processing services, average income per business was \$565,000, whereas for computer maintenance services, the average income per business was \$4,484,000.

CHART 2.1 AVERAGE INCOME PER BUSINESS BY INDUSTRY, AUSTRALIA, 1992-93



Items of expenditure

Labour costs were the largest expenditure items for the computer services industry, comprising 35 per cent of total expenses. Payments to sub-contractors and consultants were not included with labour costs. These payments, which amounted to \$262 million, accounted for 8 per cent of total expenses for the computer services industry.

For computer consultancy services, labour costs represented almost 39 per cent of total expenses, whereas for computer maintenance services, they represented only 24 per cent of total expenses. The largest item of expense for computer maintenance services was the purchase of goods for resale which represented just over 40 per cent of total expenses.

Interest expenses were not a significant cost for businesses in the computer services industry, representing less than 1.5 per cent of total expenses.

More information?

More detailed income information is available:

- . detailed components of packaged software and hardware categorised by source of income (e.g. sale of goods produced by the business, not produced by the business, commission, and licence fees including royalties).
- . total income by type of client
- . detailed components of computer services

TABLE 2.1 SOURCES OF INCOME, AUSTRALIA, 1992-93

Source of income	Businesses	Value	
	at 30 June	\$m	%
	No.		
Data processing services (ANZSIC 7831)			
Income from			
Computer services	262	132.1	89.3
Communication services	*14	*2.2	1.5
Packaged software	*16	1.2	1.3
Hardware	*18	4.7	3.2
Interest income	98	1.0	0.7
Other operating income	*28	2.6	2.2
Other non-operating income	*75	*4.1	1.8
Gross income		147.9	100.0
Information storage and retrieval services (ANZSIC 7832)			
Income from			
Computer services	*67	89.5	86.2
Communication services	*5	7.6	7.3
Packaged software	*4	4.1	3.9
Hardware	*3	0.2	0.2
Interest income	*32	0.2	0.2
Other operating income	*11	1.2	1.2
Other non-operating income	*8	*1.0	1.0
Gross income		103.8	100.0
Computer maintenance services (ANZSIC 7833)			
Income from			
Computer services	242	579.2	53.4
Communication services	*39	2.4	0.2
Packaged software	41	65.9	6.1
Hardware	134	376.5	34.7
Interest income	61	1.5	0.1
Other operating income	*34	58.1	5.4
Other non-operating income	*37	1.6	0.1
Gross income		1,085.2	100.0
Computer consultancy services (ANZSIC 7834)			
Income from			
Computer services	4,186	2,087.6	75.5
Communication services	161	83.4	3.0
Packaged software	974	266.3	12.4
Hardware	783	123.6	4.5
Interest income	2,046	35.5	1.3
Other operating income	406	40.5	2.4
Other non-operating income	940	126.8	0.9
Gross income		2,783.9	100.0
Total computer services (ANZSIC Group 783)			
Income from			
Computer services	4,757	2,888.5	70.4
Communication services	218	95.5	2.3
Packaged software	1,035	337.6	10.1
Hardware	938	505.0	12.3
Interest income	2,238	38.2	0.9
Other operating income	478	102.3	3.2
Other non-operating income	1060	133.5	0.7
Gross income		4,100.7	100.0

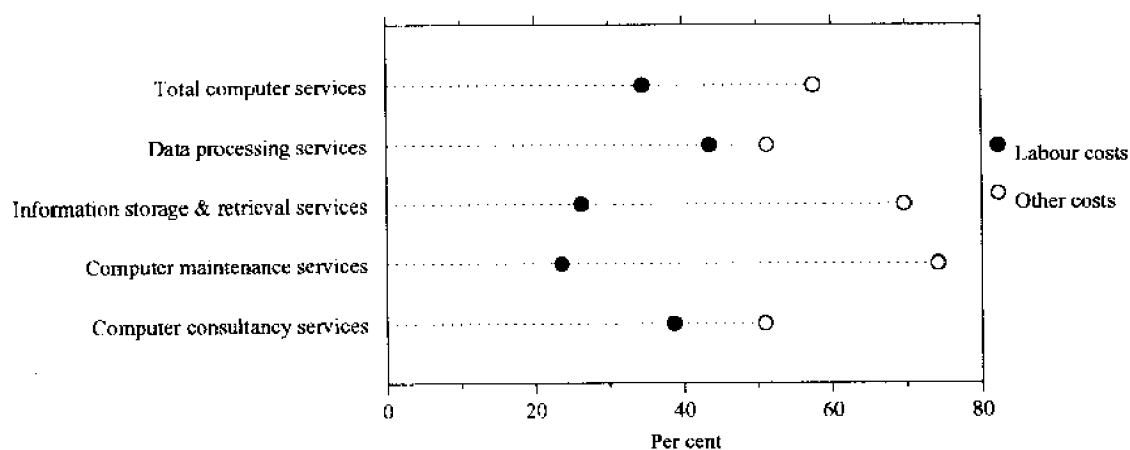
TABLE 2.2 ITEMS OF EXPENDITURE, AUSTRALIA, 1992-93

Item of expense	Businesses	Value	
	at 30 June	\$m	%
	No.		
Data processing services (ANZSIC 7831)			
Labour costs			
Wages and salaries	243	52.6	39.8
Employer contributions to superannuation funds	219	4.8	3.7
Workers' compensation costs	206	0.4	0.3
Total labour costs	250	57.8	43.7
Payments to sub-contractors and consultants	55	6.7	5.0
Other costs			
Depreciation on buildings and other fixed tangible assets	209	9.6	7.2
Purchases of goods for resale	42	4.9	3.8
Rent leasing and hiring expenses	120	9.8	7.4
Motor vehicle running expenses	130	1.7	1.2
Insurance premiums	197	0.7	0.5
Interest expenses	163	3.9	3.0
Other business expenses	262	37.3	28.1
Total other costs	262	67.9	51.3
Total expenses		132.3	100.0
Information storage and retrieval services (ANZSIC 7832)			
Labour costs			
Wages and salaries	60	22.6	24.3
Employer contributions to superannuation funds	46	1.6	1.7
Workers' compensation costs	54	0.2	0.2
Total labour costs	67	24.4	26.2
Payments to sub-contractors and consultants	35	3.7	4.0
Other costs			
Depreciation on buildings and other fixed tangible assets	65	14.4	15.5
Purchases of goods for resale	14	0.3	0.3
Rent leasing and hiring expenses	53	4.0	4.3
Motor vehicle running expenses	48	0.5	0.5
Insurance premiums	62	0.3	0.3
Interest expenses	48	4.1	4.4
Other business expenses	67	41.2	44.3
Total other costs	67	64.8	69.7
Total expenses		93.0	100.0
Computer maintenance services (ANZSIC 7833)			
Labour costs			
Wages and salaries	229	223.2	22.2
Employer contributions to superannuation funds	180	13.0	1.3
Workers' compensation costs	157	1.7	0.2
Total labour costs	232	237.9	23.6
Payments to sub-contractors and consultants	133	22.3	2.2
Other costs			
Depreciation on buildings and other fixed tangible assets	166	61.5	6.1
Purchases of goods for resale	186	408.3	40.5
Rent leasing and hiring expenses	142	80.3	8.0
Motor vehicle running expenses	187	11.6	1.2
Insurance premiums	185	1.9	0.2
Interest expenses	135	7.4	0.7
Other business expenses	242	175.8	17.5
Total other costs	242	746.8	74.2
Total expenses		1,007.0	100.0

TABLE 2.2 ITEMS OF EXPENDITURE, AUSTRALIA, 1992-93 *continued*

Item of expense	Businesses	Value	
	at 30 June	\$m	%
	No.		
Computer consultancy services (ANZSIC 7834)			
Labour costs			
Wages and salaries	4,144	909.0	36.1
Employer contributions to superannuation funds	3,658	60.3	2.4
Workers' compensation costs	3,014	4.3	0.2
Total labour costs	4,204	973.6	38.7
Payments to sub-contractors and consultants	1,032	262.0	10.4
Other costs			
Depreciation on buildings and other fixed tangible assets	3,523	103.0	4.1
Purchases of goods for resale	1,202	165.5	6.6
Rent leasing and hiring expenses	2,088	146.3	5.8
Motor vehicle running expenses	3,382	28.9	1.1
Insurance premiums	3,167	9.3	0.4
Interest expenses	2,128	41.8	1.7
Other business expenses	4,323	786.9	31.3
Total other costs	4,323	1,281.7	51.0
Total expenses		2,517.2	100.0
Total computer services (ANZSIC 783)			
Labour costs			
Wages and salaries	4,676	1,207.5	32.2
Employer contributions to superannuation funds	4,104	79.6	2.1
Workers' compensation costs	3,431	6.6	0.2
Total labour costs	4,753	1,293.7	34.5
Payments to sub-contractors and consultants	1,255	294.6	7.9
Other costs			
Depreciation on buildings and other fixed tangible assets	3,962	188.5	5.0
Purchases of goods for resale	1,444	579.0	15.4
Rent leasing and hiring expenses	2,403	240.4	6.4
Motor vehicle running expenses	3,748	42.8	1.1
Insurance premiums	3,611	12.2	0.3
Interest expenses	2,474	57.1	1.5
Other business expenses	4,894	1,041.2	27.8
Total other costs	4,894	2,161.1	57.6
Total expenses		3,749.5	100.0

CHART 2.2 PROPORTION OF EXPENDITURE BY INDUSTRY, AUSTRALIA, 1992-93



SECTION 3. EMPLOYMENT

Introduction

Employment in the computer services industry was dominated by those working in computer consultancy services (75 per cent of total industry employment). This was followed by those employed in computer maintenance services (16 per cent of total industry employment).

Type of employment

Employment in computer maintenance services was dominated by computing and technical staff which comprised 64 per cent of total employment. The comparable proportion for computer consultancy services was just under 55 per cent. This was followed by those employed in data processing services (28 per cent), and information storage and services (23 per cent).

In contrast, the category "other employees" dominated information storage and retrieval services, comprising over 60 per cent of total employment, and data processing services with 53 per cent. This was followed by computer maintenance services (28 per cent), and computer consultancy services (14 per cent).

There were also considerable differences between the proportions of working proprietors, partners and working directors in each of the four ANZSIC classes that comprise the computer services industry. Computer consultancy services recorded the highest proportion with just under 32 per cent. This was followed by data processing services (19 per cent), information storage and retrieval services (16 per cent), and computer maintenance services (8 per cent).

Incidence of full-time employment

Just under 87 per cent of those employed in the computer services industry worked full-time. The incidence of full-time employment was highest in computer maintenance services (95 per cent of total employment) and lowest in data processing services (with 58 per cent of total employment).

Male and female employment

There were considerable differences in the proportion of males to females in the four ANZSIC classes that make up the computer services industry. Just over 75 per cent of those working in computer maintenance services were male. This was followed by computer consultancy services where 67 per cent of staff were male. However, employment in the data processing services and information storage and retrieval services was predominantly female.

Incidence of females working part-time

The incidence of females in the computer services industry working part-time was also considerably higher (at 28 per cent of total female employment in the industry) than for males (where the comparable proportion was just under 6 per cent). The incidence of females working part-time was particularly high in data processing services where just over 56 per cent of females worked part-time.

Type of employment: males and females

There was a considerably higher proportion of males compared with females working in the computer services industry as working proprietors/directors and computing/technical staff. In contrast, the proportion of females engaged in non-technical work was considerably higher than males in each of the four ANZSIC classes comprising the computer services industry.

TABLE 3.1 CHARACTERISTICS OF EMPLOYMENT, AUSTRALIA, END JUNE 1993
(Number)

Type of employment	Males			Females			Total		
	Full time	Part time	Total	Full time	Part time	Total	Full time	Part time	Total
Data processing services (ANZSIC 7831)									
Working proprietors, partners and working directors	177	74	252	*68	69	137	245	143	389
Computing and technical staff	392	15	407	144	*13	157	536	28	564
Other employees	54	60	114	348	634	982	402	694	1,096
Total, at 30 June	624	149	773	560	716	1,276	1,184	865	2,049
Percentage contribution to total	30.5	7.3	37.7	27.3	34.9	62.3	57.8	42.2	100.0
Information storage and retrieval services (ANZSIC 7832)									
Working proprietors, partners and working directors	*50	*6	*56	*29	*17	*47	*79	*23	*103
Computing and technical staff	70	*22	92	20	*35	*55	90	*57	*147
Other employees	148	4	152	210	*24	234	359	*28	386
Total, at 30 June	268	*32	300	260	*76	336	528	*106	636
Percentage contribution to total	42.1	5.0	47.2	40.1	11.9	52.8	83.0	17.0	100.0
Computer maintenance services (ANZSIC 7833)									
Working proprietors, partners and working directors	246	*35	281	110	*8	118	356	*43	399
Computing and technical staff	2,510	*44	2,554	484	*21	504	2,993	65	3,058
Other employees	750	*15	765	458	98	557	1,208	113	1,321
Total, at 30 June	3,506	*94	3,599	1,051	127	1,178	4,567	220	4,778
Percentage contribution to total	73.4	2.0	75.3	22.0	2.7	24.7	95.4	4.6	100.0
Computer consultancy services (ANZSIC 7834)									
Working proprietors, partners and working directors	4,281	357	4,637	1,348	1,152	2,500	5,629	1,509	7,137
Computing and technical staff	9,032	307	9,338	2,776	246	3,022	11,807	553	12,360
Other employees	923	192	1,115	1,393	592	1,986	2,317	784	3,101
Total, at 30 June	14,236	855	15,091	5,517	1,991	7,508	19,753	2,846	22,599
Percentage contribution to total	63.0	3.8	66.8	24.4	8.8	33.2	87.4	12.6	100.0
Total computer services (ANZSIC 783)									
Working proprietors, partners and working directors	4,754	472	5,226	1,555	1,246	2,801	6,309	1,718	8,028
Computing and technical staff	12,003	388	12,391	3,423	314	3,734	15,427	702	16,129
Other employees	1,876	270	2,146	2,410	1,349	3,759	4,285	1,619	5,904
Total, at 30 June	18,633	1,130	19,763	7,388	2,909	10,296	26,021	4,039	30,061
Percentage contribution to total	62.0	3.8	65.7	24.6	9.7	34.3	86.6	13.4	100.0

SECTION 4. BUSINESS SIZE ANALYSIS

Introduction

Table 4.1 provides details of the 1992-93 computing services industry by business size. The business sizes are defined in terms of the total employment of each individual business, with those businesses employing less than 20 classified as "small".

Small business

In terms of the number of businesses, the statistics indicate computing services industry to be dominated by small business, with 97 per cent of the businesses being small. In particular, over 85 per cent of businesses in the computer services industry had employment of less than five persons.

While small business represented 97 per cent of businesses in the industry, they accounted for only 42 per cent of total employment, 23 per cent of gross income, and 28 per cent of operating profit before tax.

The predominance of small business in terms of number of businesses was evident in each of the four ANZSIC classes that comprise the computer services industry. Computer consultancy services had the highest proportion (97 per cent), followed by data processing services (93 per cent), computer maintenance services (92 per cent), and information storage and retrieval services (87 per cent).

Large business

The dominance of the larger businesses in the industry is highlighted by the fact that the 29 businesses with total employment of 100 or more persons accounted for 42 per cent of total industry employment and 61 per cent of industry gross income.

There were considerable differences between the four ANZSIC classes in the predominance, in terms of employment, of other businesses (i.e. those with employment of 20 or more). Computer maintenance services had the highest proportion (83 per cent). This was followed by information storage and retrieval services (77 per cent), data processing services (56 per cent), and computer consultancy services (52 per cent).

In terms of gross income, the other businesses in computer maintenance services again recorded the highest proportion at 95 per cent. This was followed by information storage and retrieval services (88 per cent), computer consultancy services (71 per cent), and data processing services (59 per cent).

CHART 4.1 COMPUTER SERVICES: PROPORTIONS BY BUSINESS SIZE, AUSTRALIA, 1992-93

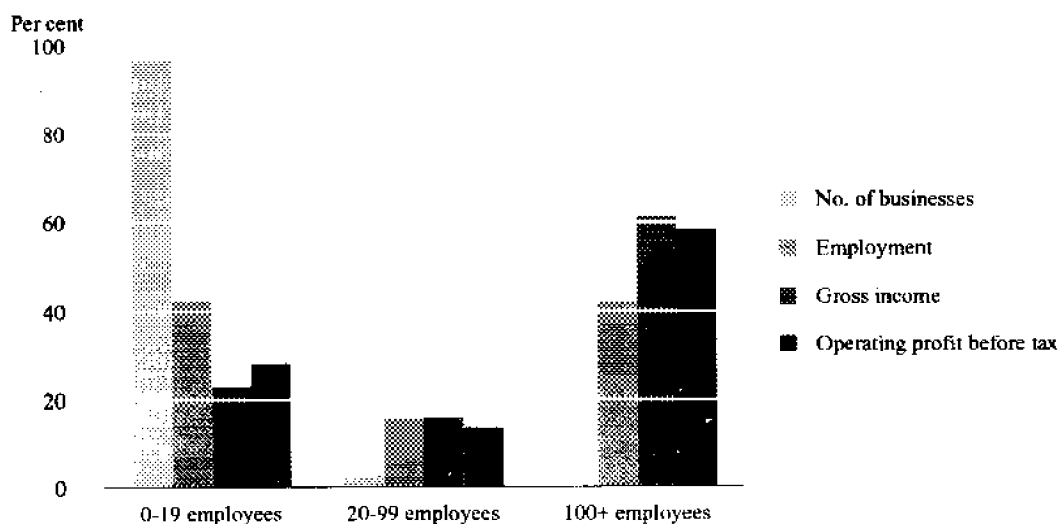


TABLE 4.1 KEY CHARACTERISTICS BY BUSINESS SIZE, AUSTRALIA, 1992-93

Employment size category at 30 June	Businesses at 30 June		Employment at end of June 1993		Gross income		Operating profit before tax	
	No.	%	No.	%	\$m	%	\$m	%
Data processing services (ANZSIC 7831)								
0-4 persons	187	71.4	398	19.4	18.8	46.6	*4.2	27.1
5-9 persons	*37	14.1	*245	12.0	*15.8	10.7	n.p.	n.p.
10-19 persons	*20	7.6	*262	12.8	*26.0	17.6	n.p.	n.p.
Total small businesses	244	93.1	906	44.2	60.6	41.0	*7.1	45.8
20-99 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
100 or more persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total other businesses	18	6.9	1,143	55.8	87.3	59.0	8.4	54.2
Total	262	100.0	2,049	100.0	147.9	100.0	15.5	100.0
Information storage and retrieval services (ANZSIC 7832)								
0-4 persons	*52	77.6	*116	18.2	*7.8	7.5	*1.7	15.7
5-9 persons	*6	9.0	*29	4.6	*4.3	4.1	*0.4	3.7
10-19 persons	-	-	-	-	-	-	-	-
Total small businesses	*58	86.6	*145	22.8	*12.1	11.7	*2.1	19.4
20-99 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
100 or more persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total other businesses	*9	13.4	491	77.2	91.6	88.2	8.7	80.6
Total	*67	100.0	636	100.0	103.8	100.0	10.8	100.0
Computer maintenance services (ANZSIC 7833)								
0-4 persons	181	74.8	431	9.0	27.8	2.6	*2.4	2.6
5-9 persons	*20	8.3	*144	3.0	*8.9	0.8	n.p.	n.p.
10-19 persons	*21	8.7	*241	5.0	18.8	1.7	n.p.	n.p.
Total small businesses	222	91.7	817	17.1	55.5	8.1	*3.6	3.9
20-99 persons	15	6.2	582	12.2	65.1	6.0	3.9	4.2
100 or more persons	5	2.1	3,378	70.7	964.5	88.9	85.0	91.9
Total other businesses	20	8.3	3,960	82.9	1,029.6	94.9	88.9	96.1
Total	242	100.0	4,778	100.0	1,065.2	100.0	92.5	100.0
Computer consultancy services (ANZSIC 7834)								
0-4 persons	3,750	86.7	7,076	31.3	446.3	16.1	50.4	20.5
5-9 persons	321	7.4	2,041	9.0	177.9	6.4	*19.7	8.0
10-19 persons	137	3.2	1,766	7.8	183.4	6.6	*19.8	8.0
Total small businesses	4,209	97.4	10,883	48.2	807.6	29.2	89.9	36.5
20-99 persons	93	2.2	3,393	15.0	496.1	17.9	34.1	13.9
100 or more persons	21	0.5	8,323	36.8	1,460.1	52.8	122.2	49.6
Total other businesses	114	2.6	11,716	51.8	1,956.2	70.8	156.3	63.5
Total	4,323	100.0	22,599	100.0	2,763.8	100.0	246.2	100.0
Computer services (ANZSIC 783)								
0-4 persons	4,171	85.2	8,022	26.7	500.7	12.2	58.7	16.1
5-9 persons	385	7.9	2,460	8.2	207.0	5.0	21.7	5.9
10-19 persons	178	3.6	2,269	7.5	228.2	5.6	22.2	6.1
Total small businesses	4,733	96.7	12,751	42.4	935.9	22.8	102.6	28.1
20-99 persons	132	2.7	4,687	15.6	648.6	15.8	49.5	13.6
100 or more persons	29	0.6	12,623	42.0	2,516.2	61.4	212.9	58.3
Total other businesses	161	3.3	17,310	57.6	3,164.8	77.2	262.4	71.9
Total	4,894	100.0	30,061	100.0	4,100.7	100.0	365.0	100.0

SECTION 5. STATE DATA

Introduction

In the 1992-93 computer services industry survey, the only data items collected by State were employment, wages and salaries, and selected income. These were the only data items for which multi-State computer services businesses were able to accurately supply State data.

State comparisons

Businesses in the computer services industry were highly concentrated in New South Wales. The 1,996 computer services businesses operating in New South Wales accounted for 48 per cent of all people employed in the industry, and 54 per cent of income.

This high concentration in New South Wales was repeated in each of the four individual industries within the computer services industry apart from data processing services where there was a high concentration in Victoria. For data processing services, businesses operating in Victoria accounted for 39 per cent of employment and 56 per cent of income.

Businesses in the Australian Capital Territory comprised a relatively high proportion of the computer services industry. The 261 businesses operating in the Australian Capital Territory accounted for almost 5 per cent of people employed in the industry and just over 4 per cent of income.

CHART 5.1 COMPUTER SERVICES: PERCENTAGE OF SELECTED INCOME AND EMPLOYMENT BY STATE, 1992-93

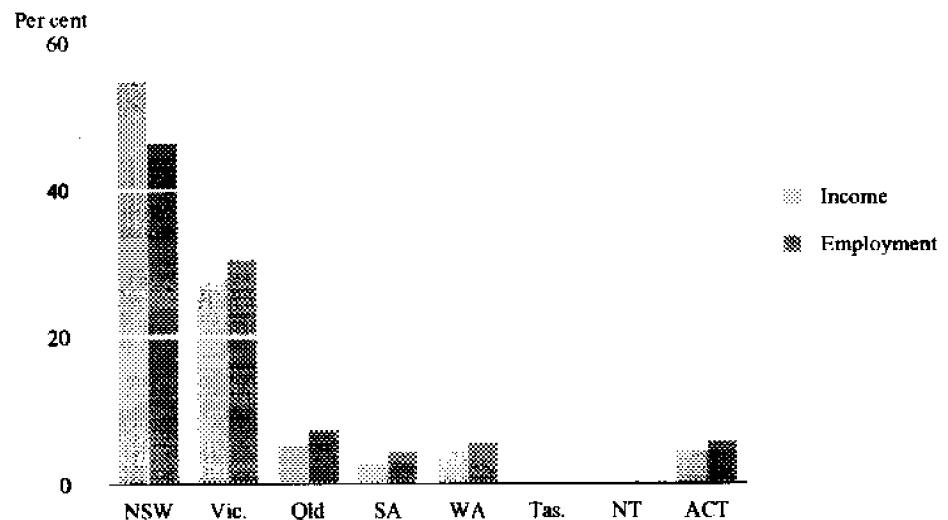


TABLE 5.1 KEY CHARACTERISTICS BY STATE, 1992-93

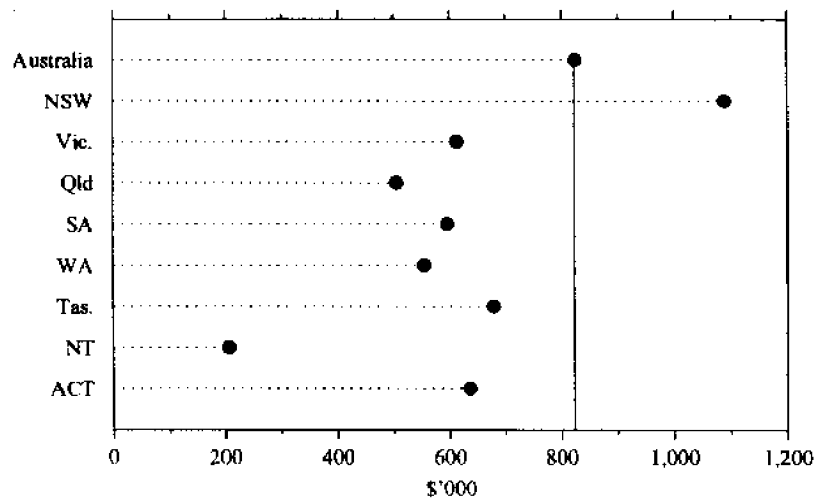
	<i>Businesses</i>	<i>Total</i>	<i>Wages</i>	<i>Selected income(b)</i>	
	<i>at 30 June(a)</i>	<i>employment</i>	<i>and</i>	<i>\$m</i>	<i>%</i>
	<i>No.</i>	<i>No.</i>	<i>salaries</i>	<i>\$m</i>	<i>%</i>
			<i>\$m</i>		
Data processing services (ANZSIC 7831)					
New South Wales	83	700	16.0	41.2	28.6
Victoria	105	790	25.3	81.0	56.2
Queensland	*50	*270	*6.8	*11.1	7.7
South Australia	9	n.p.	n.p.	n.p.	n.p.
Western Australia	16	n.p.	n.p.	n.p.	n.p.
Tasmania	3	7	0.2	1.1	0.8
Northern Territory	-	-	-	-	-
Australian Capital Territory	*7	22	0.5	0.9	0.6
Australia	262	2,049	52.6	144.2	100.0
Information storage and retrieval services (ANZSIC 7832)					
New South Wales	*34	409	15.7	49.7	44.4
Victoria	*28	137	3.7	25.9	25.2
Queensland	*8	*34	1.3	10.2	9.9
South Australia	2	n.p.	n.p.	n.p.	n.p.
Western Australia	3	n.p.	n.p.	n.p.	n.p.
Tasmania	-	-	-	-	-
Northern Territory	-	-	-	-	-
Australian Capital Territory	-	-	-	-	-
Australia	67	636	22.6	102.6	100.0
Computer maintenance services (ANZSIC 7833)					
New South Wales	107	2,697	130.8	601.6	55.6
Victoria	73	986	46.9	227.2	21.0
Queensland	57	479	18.7	107.2	9.9
South Australia	27	298	11.5	52.4	4.8
Western Australia	20	139	6.7	37.7	3.5
Tasmania	9	38	1.9	12.1	1.1
Northern Territory	*3	*6	*0.2	*0.7	0.1
Australian Capital Territory	9	134	6.6	43.5	4.0
Australia	242	4,778	223.2	1,082.3	100.0
Computer consultancy services (ANZSIC 7834)					
New South Wales	1,772	10,463	451.3	1,480.4	54.8
Victoria	1,577	6,880	256.9	758.4	28.1
Queensland	417	1,661	50.8	140.8	5.2
South Australia	194	966	38.0	76.2	2.8
Western Australia	273	1,268	49.2	120.0	4.4
Tasmania	12	42	1.2	3.1	0.1
Northern Territory	*13	25	1.1	2.7	0.1
Australian Capital Territory	245	1,293	60.4	121.5	4.5
Australia	4,323	22,599	909.0	2,703.0	100.0

TABLE 5.1 KEY CHARACTERISTICS BY STATE, 1992-93 - continued

	<i>Businesses at 30 June(a)</i>	<i>Total employment</i>	<i>Wages and salaries</i>	<i>Selected income(b)</i>	
	<i>No.</i>	<i>No.</i>	<i>\$m</i>	<i>\$m</i>	<i>%</i>
Total computer services (ANZSIC 783)					
New South Wales	1,996	14,268	613.8	2,172.9	53.9
Victoria	1,783	8,793	332.8	1,092.5	27.1
Queensland	532	2,445	77.5	269.3	6.7
South Australia	232	1,377	52.0	138.5	3.4
Western Australia	312	1,610	59.3	173.4	4.3
Tasmania	24	87	3.3	16.3	0.4
Northern Territory	16	31	1.3	3.3	0.1
Australian Capital Territory	261	1,450	67.4	166.0	4.1
Australia	4,894	30,061	1,207.5	4,032.1	100.0

(a) Multi-state businesses are counted in each State in which they operate. Hence States do not sum to the total for Australia.

(b) Selected income is gross income minus interest income, dividends received, net profit (loss) on sales of fixed tangible assets, and net profit (loss) on foreign loans as a result of variations in foreign exchange rates/transactions.

CHART 5.2 COMPUTER SERVICES: SELECTED INCOME PER BUSINESS, BY STATE, 1992-93**More information?**

Detailed analyses of the data are available on request:

- . income and expenditure by deciles, mean and median values
- . regression analysis
- . analysis of variance

SECTION 6. PERFORMANCE MEASURES

Operating profit before tax per person employed

In 1992-93, operating profit before tax (OPBT) per person employed in the computer services industry was \$12,100. Computer maintenance services reported the highest ratio (\$19,400) and data processing the lowest (\$7,600).

In terms of OPBT per person employed, small businesses in the computer services industry recorded a lower (\$8,000) figure than that recorded by other businesses (\$15,200) in the industry. This difference was particularly marked in computer maintenance services (\$4,400 compared with \$22,500).

It should be noted that working proprietors and partners are included as employed persons although they do not draw a wage. Labour costs may therefore be lower in these businesses thus affecting OPBT. However, the number of unincorporated businesses in the computer services industry was very small, comprising only 1.2 per cent of all businesses in the industry.

Labour costs per person employed

Labour costs per person employed varied significantly between the four ANZSIC classes that comprise the computer service industry. In computer maintenance services, labour costs were \$49,800 per person compared with a low \$28,200 per person employed in data processing.

Labour costs also varied significantly with business size. Small businesses in the computer services industry had relatively low labour costs per person employed (\$29,800) compared with other businesses in the industry (\$52,800).

Return on assets

The return on assets ratio shows the relationship between profits and total assets. This ratio indicates how effectively a business has used its assets to generate profits. During 1992-93, the average return on assets of all businesses in the computing services industry was 14.4 per cent. This rate of return compared very favourably with the 3.9 per cent reported by all non-farm industries over the same period.

The ANZSIC classes reporting the highest return on assets in 1992-93 were computer consultancy (15.1 per cent) and computer maintenance (14.8 per cent).

Small businesses in the computer services industries recorded a rate of return which was 6 per cent higher (19.1 per cent) than for other businesses (13.1 per cent). The highest return on assets for small businesses was for those in the information storage and retrieval services industry where a large 25.3 per cent return on assets was reported.

Operating profit margin

Operating profit margin shows the relationship between profits and sales. It reflects the proportion of each dollar of sales that represents profit. In 1992-93, the average operating profit margin of all businesses in the computing services industry was 9.3 per cent. This margin compared favourably with the 5.9 per cent achieved by non-farm industries over the same period.

Of the four computer service industries, data processing had the highest operating profit margin (10.8 per cent) and computer maintenance the lowest (8.5 per cent).

Small businesses in the computer services industries were more profitable than other businesses. The operating profit margin for small businesses was 11.7 per cent compared with 8.6 per cent for other businesses. These results were consistent with those for all non-farm industries where small businesses were also more profitable than larger businesses.

The most profitable small businesses were those in information storage and retrieval services where an operating profit margin of 17.4 per cent was achieved. Profitability dropped to 9.6 per cent for the other businesses in this industry.

It should be noted that many small businesses are sole proprietorships or partnerships where working proprietors and partners do not draw wages. The exclusion of this labour cost may affect profit levels. An imputed wage for unincorporated businesses is available upon request.

Interest coverage

The purpose of the interest coverage ratio is to measure how comfortably current profit (earnings before interest and tax) covers interest cost. In 1992-93, the average interest coverage of all businesses in the computing services industry was 7.4 times. This was more than three times the interest coverage (2.2 times) of all non-farm industries during this financial year.

The financial stability (as measured by interest coverage) of small businesses was higher than for other businesses.

CHART 6.1 LABOUR COSTS PER PERSON EMPLOYED BY BUSINESS SIZE BY INDUSTRY, AUSTRALIA, 1992-93

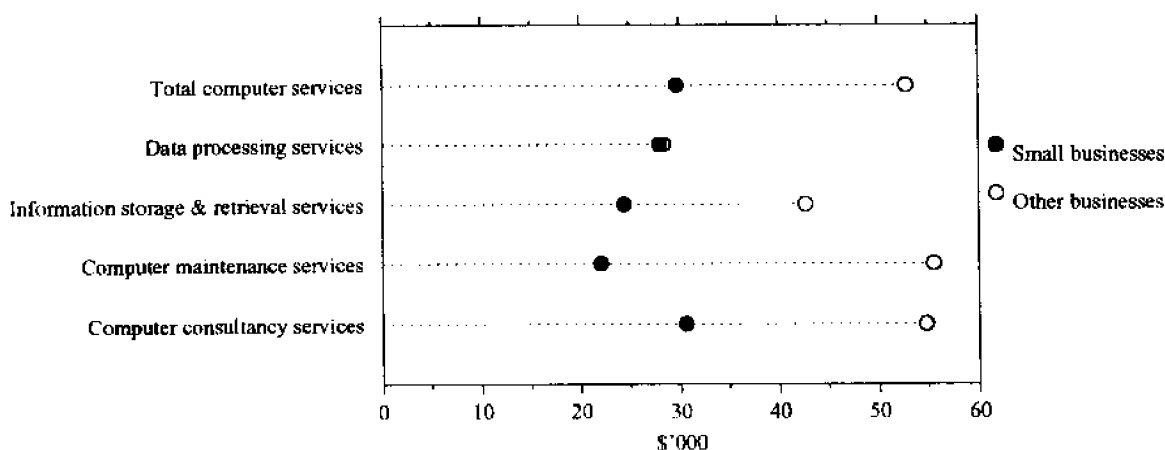
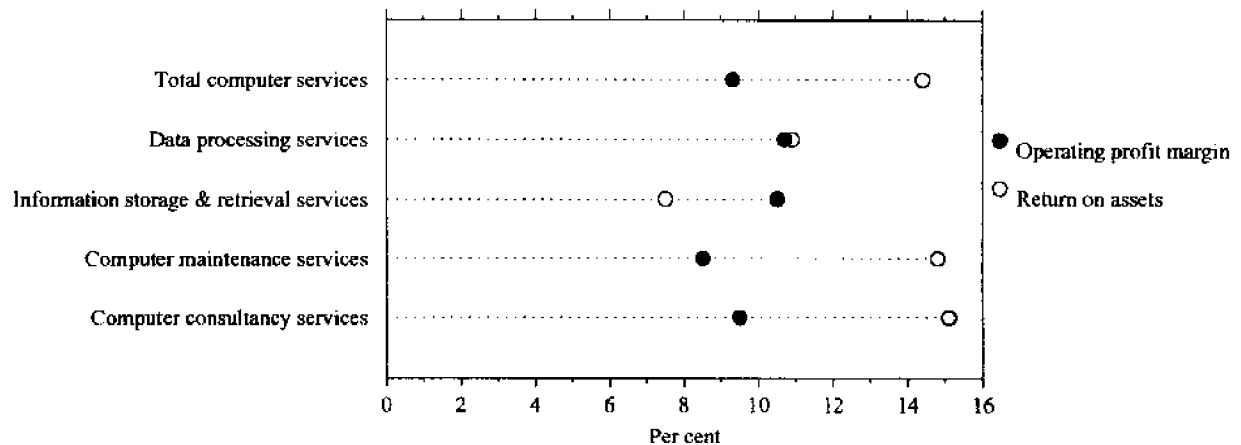


TABLE 6.1 SELECTED PERFORMANCE RATIOS, AUSTRALIA, 1992-93

Ratio	Unit	Small businesses	Other businesses	All businesses
Data processing services (ANZSIC 7831)				
Employment ratios				
Operating profit before tax per person employed	\$'000	7.8	7.4	7.6
Labour costs per person employed	\$'000	28.2	28.2	28.2
Financial ratios				
Operating profit margin	Per cent	12.4	9.8	10.8
Interest coverage	Times	*5.3	4.6	4.9
Return on assets	Per cent	*7.5	16.9	*10.8
Information storage and retrieval services (ANZSIC 7832)				
Employment ratios				
Operating profit before tax per person employed	\$'000	14.5	17.7	17.0
Labour costs per person employed	\$'000	24.4	42.7	38.5
Financial ratios				
Operating profit margin	Per cent	17.4	9.6	10.5
Interest coverage	Times	*29.4	3.2	3.6
Return on assets	Per cent	*25.3	6.4	7.5
Computer maintenance services (ANZSIC 7833)				
Employment ratios				
Operating profit before tax per person employed	\$'000	*4.4	22.5	19.4
Labour costs per person employed	\$'000	22.1	55.5	49.8
Financial ratios				
Operating profit margin	Per cent	*6.5	8.7	8.5
Interest coverage	Times	*7.0	14.2	13.6
Return on assets	Per cent	19.4	14.7	14.8
Computer consultancy services (ANZSIC 7834)				
Employment ratios				
Operating profit before tax per person employed	\$'000	8.3	13.3	10.9
Labour costs per person employed	\$'000	30.6	54.7	43.1
Financial ratios				
Operating profit margin	Per cent	12.0	8.4	9.5
Interest coverage	Times	9.5	6.0	6.9
Return on assets	Per cent	*21.6	12.9	15.1

TABLE 6.1 SELECTED PERFORMANCE RATIOS, AUSTRALIA, 1992-93 - continued

Ratio	Unit	Small businesses	Other businesses	All businesses
Total computer services (ANZSIC Group 783)				
Employment ratios				
Operating profit before tax per person employed	\$'000	8.0	15.2	12.1
Labour costs per person employed	\$'000	29.8	52.8	43.0
Financial ratios				
Operating profit margin	Per cent	11.7	8.6	9.3
Interest coverage	Times	9.0	6.9	7.4
Return on assets	Per cent	19.1	13.1	14.4

**CHART 6.2 OPERATING PROFIT MARGIN AND RETURN ON ASSETS
BY INDUSTRY, AUSTRALIA, 1992-93****More information?**

Information is also available for:

- . capital expenditure on computer and communication hardware, and other equipment and real estate
- . amount spent on the provision of training
- . number of businesses undertaking research and development
- . value of assets

SPECIAL DATA SERVICES

- The ABS can provide a wider range of data for the computing services industry than is contained in this publication. Two examples of standard products that can be made available on request are detailed components of income and expenditure, and detailed statistical analysis.
- Other statistical products can be tailored to satisfy the specific requirements of clients.
- For further information on unpublished statistics that can be made available, contact Dennis Robson, on Melbourne (03) 615 7634.

TECHNICAL NOTES

Survey scope and methodology

1. This publication contains data derived from a survey of the computer services industry for 1992-93.

2. The survey excluded businesses which did not have employees at the time the survey population was selected. Non-employed businesses contribute a relatively small proportion of the total economic activity and their exclusion from the survey would not have a significant impact on the published data.

3. The survey was conducted by mail with full enumeration of the larger businesses and a sample of the smaller businesses.

Classification by industry

4. The survey included the four industries classified to Group 783 of the 1993 edition of the Australian and New Zealand Standard Industrial Classification (ANZSIC). Group 783 includes all units mainly engaged in providing data processing (ANZSIC class 7831), information storage and retrieval (ANZSIC class 7832), computer maintenance (ANZSIC class 7833), and computer consultancy services (ANZSIC class 7834).

Statistical unit

5. 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, having regard for industry homogeneity, for which accounts are maintained. In nearly all cases it coincides with the legal entity owning the business (i.e. company, partnership trust, sole operator, 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.

State data

6. Data were collected from the Australia-wide operations of each business. Businesses which operated in more than one State were asked to provide a dissection of total operating income, employment, and wages and salaries, to enable State statistics to be compiled.

Reference period

7. Data contained in the tables of this publication relate to all businesses which operated in Australia at any time during the year ended 30 June 1993. Counts of businesses include only those businesses that were operating at 30 June 1993.

Businesses ceased during the year

8. A very small number of businesses ceased business during the 1992-93 reference period. It is normal ABS procedure to include the contributions of these businesses in the survey output.

Comparability with previous statistics

9. Due to differences in scope, coverage, and data definitions, statistics presented in this publication are not directly comparable with statistics from the 1987-88 survey of the computer services industry.

Units definitions

10. The standard units definitions employed in the system of integrated economic statistics were revised in 1988-89. Prior to this period, the enterprise was the statistical unit for which data was collected. However, for the majority of businesses (particularly smaller businesses), the management unit and enterprise are expected to be one and the same.

- Non-employing units** 11. The 1987-88 computer services industry survey included non-employing units, whereas these were excluded from the 1992-93 survey. (Refer to paragraph 2 for information regarding the treatment of non-employing businesses in the 1992-93 survey).
- Industry classification** 12. The 1987-88 computer services industry survey used the 1983 Australian Standard Industrial Classification (ASIC) to classify units. This classification had a single industry class for computer services, namely ASIC class 6381, Data Processing Services. The 1992-93 survey used the 1993 ANZSIC to classify units. This classification had four classes for the computer services industry, viz. ANZSIC classes: 7831, Data Processing Services; 7832, Information Storage and Retrieval Services; 7833, Computer Maintenance Services; and 7834, Computer Consultancy Services. Businesses now classified to ANZSIC classes 7831, 7832 and 7834 were previously classified to ASIC 6381. However, businesses classified to ANZSIC class 7833, Computer Maintenance Services were previously included as part of class 4734, Business Machines Wholesalers of the 1983 ASIC.
- Data item definitions** 13. Changes to data item definitions occurred between the 1987-88 and 1992-93 collections. This was the result of different questions (often at a finer level of detail) being asked on the questionnaire for each survey.
- Reliability of estimates** 14. The estimates presented in this publication are subject to both sampling and non-sampling error.
- Sampling errors** 15. Since the estimates in this publication are based on information obtained from a sample drawn from units in the surveyed population, the estimates are subject to sampling variability, i.e. 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, which indicates the extent to which an estimate might have varied by chance because only a sample of units was included.
16. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all units had been included in the survey, and approximately nineteen chances in twenty that the difference will be less than two standard errors.
17. *Sampling variability* can be measured by the relative standard error (RSE) which is obtained by expressing the standard error 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.
18. The following table contains estimates of RSEs for a selection of statistics presented in this publication.

TABLE 7.1 RELATIVE STANDARD ERRORS OF SUMMARY OF OPERATIONS, AUSTRALIA, 1992-93

Item	ANZSIC 7831	ANZSIC 7832	ANZSIC 7833	ANZSIC 7834	Total computer services
	Data processing services	Information storage and retrieval services	Computer maintenance services	Computer consultancy services	
	Per cent				
Businesses at 30 June	13	26	13	2	2
Employment					
Working proprietors and partners	32	87	46	17	14
Employees	6	15	3	2	2
Total	6	15	3	2	2
Income statement					
Sales of goods and services	8	11	1	2	1
Less					
Purchases and selected expenses	11	10	1	2	2
Opening stocks	39	58	1	14	2
Plus					
Closing stocks	36	48	0	15	2
Trading profit	8	12	1	2	2
Plus					
Interest income	17	20	4	3	3
Other operating income	34	39	9	10	9
Less					
Labour costs	9	13	2	2	1
Depreciation	8	10	0	1	1
Other operating expenses	9	11	0	8	5
Earnings before interest and tax	12	15	2	5	3
Less					
Interest expenses	13	4	2	2	2
Operating profit before tax	14	19	2	6	4
Operating profit margin	11	9	2	4	3
Industry gross product	6	12	1	2	2

19. As an example of the above, an estimate of the employment for the computer services industry is 30,061 persons and the RSE is 2 per cent giving a standard error of 601 persons. Therefore, there would be two chances in three that, if all units had been included in the survey, a figure within the range of 29,460 persons to 30,662 persons would have been obtained, and nineteen chances in twenty that the figure would have been within the range of 28,883 persons to 31,239 persons (a confidence interval of 95 per cent).

20. Where the RSE of an estimate included in this publication exceeds 25 per cent, it has been annotated with an asterisk (*) as a warning to users.

Non-sampling error

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 error 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 used to compile the statistics.

Availability of unpublished statistics

22. As well as statistics included in this publication, the ABS has a large range of more detailed data on the computing services industry. For example, more detailed income and expense data may be made available on request.

23. Inquiries on computing services statistics should be made by telephoning Dennis Robson on (03) 615 7634.

Other publications in this series

24. The 1992-93 series of surveys included several other property and business services industries. Statistics will be released in four separate publications:

- . *Real Estate Agents Industry, Australia, 1992-93* (Catalogue No. 8663.0);
- . *Selected Technical Services, Australia, 1992-93* (Catalogue No. 8676.0). This publication includes the architectural, surveying, and consultant engineering services industries;
- . *Selected Business Services, Australia, 1992-93* (Catalogue No. 8677.0). This publication includes the advertising, market research, and business management services industries; and
- . *Legal and Accounting Services, Australia, 1992-93* (Catalogue No. 8678.0).

GLOSSARY OF TERMS

Businesses at end June	Count 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. (Refer to paragraph 5 of Technical Notes for further information regarding management units).
Computing and technical staff	Staff engaged in systems analysis, programming, software engineering, etc. Working proprietors, partners and directors are excluded.
Earnings before interest and tax (EBIT)	A measure of profit prior to the deduction of interest expense and income tax.
Employment at the end of June	Includes working proprietors and partners, working directors, computing and technical staff, and other employees working for a business during the last pay period in June each year. Employees absent on paid or prepaid leave are included.
Full-time employees	Employees who work 35 hours per week or more.
Gross income	Sum of all income items. Includes income from computer and communication services, packaged software, hardware, licence fees (including royalties), other operating income, interest income and other non-operating income.
Income from communication services	Includes income from the provision of network and management services, communication consultancy, etc.
Income from computer services	Includes income from the provision of software and systems consultancy services, data entry, processing and time sharing services, hardware servicing and repairs, training, etc.
Income from hardware	Income from the sales of computer hardware which includes systems processor or central processing units, storage sub-systems, printer sub-systems, PCs and PC based systems, mid-range and large scale systems, peripheral computer equipment, communication hardware, and other computer equipment.
Income from packaged software	Includes income from the sale of applications (word processing, accounting, payroll, office automation applications, spreadsheets, graphics, etc), systems management and utilities (DOS, MVS, Unix, Lanmanager, etc) and tools (Case, 3GLs, Norton Utilities, DB2, etc).

Industry gross product	<p>Is a measure of the unduplicated gross product of a businesses derived a follows:</p> <p style="margin-left: 40px;">IGP = Sales of goods and services</p> <p style="margin-left: 80px;">+ Government subsidies</p> <p style="margin-left: 80px;">+ Closing stocks</p> <p style="margin-left: 80px;">- Opening stocks</p> <p style="margin-left: 80px;">- Purchases</p> <p style="margin-left: 80px;">- Selected expenses</p>
Interest coverage	The number of times over that businesses can meet their interest expenses from their earnings before interest, i.e. EBIT/interest expenses.
Labour costs	Includes wages and salaries, employer contribution to superannuation funds and workers' compensation costs. Payments to sub-contractors and consultants are excluded.
Labour costs per person employed	Persons employed includes working proprietors and working partners of unincorporated businesses, working directors of incorporated companies and other employees (e.g. computing and technical staff, clerical and administrative staff).
Operating profit before tax (OPBT)	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).
Operating profit before tax per person employed	OPBT/persons employed. Persons employed includes working proprietors and working partners of unincorporated businesses, working directors of incorporated companies and other employees (e.g. computing and technical staff, clerical and administrative staff).
Operating profit margin	The percentage of sales of goods and services available as operating profit, i.e. (operating profit before tax x 100)/sales of goods and services.
Other businesses	Are those businesses with 20 or more employees.
Other non-operating income	Includes dividends received, income from net profit (loss) on sale of fixed tangible assets, and net profit (loss) on foreign loans as a result of variations in foreign exchange rates/transactions. Does not include extraordinary profit (loss).
Other operating expenses	Includes expenses such as repairs and maintenance expenses, office supplies and printing costs, travelling expenses, telephone and postal charges and other business expenses.
Other operating income	Includes income from government subsidies, rent, leasing and hiring income not included elsewhere, licence fees and royalties not included elsewhere, contract, sub-contract, commission and other revenue not included elsewhere.
Part-time employees	Employees who work less than 35 hours per week.

Persons employed at 30 June 1993	Includes working proprietors and working partners of unincorporated businesses, working directors of incorporated companies and trusts, computing and technical staff, and other employees working for a business during the last pay period ending in June 1993.
Purchases and selected expenses	Includes purchases of goods for resale (computer and communication hardware, packaged software and other purchases), motor vehicle running expenses, and rent, leasing and hiring expenses.
Rent, leasing and hiring expenses	Includes rent leasing and hiring of motor vehicles and equipment supplied without an operator, rent paid for premises, shops, etc., and rent or royalties paid for land use.
Return on assets	Operating profit before tax as a percentage of the total value of assets, i.e. OPBT/total assets. This ratio indicates the efficiency with which assets are employed to generate profits.
Sales of goods and services	Includes income from the provision of computer and communication services, the sale of hardware and packaged software, and other operating income.
Selected income	Selected income is gross income minus interest income, dividends received, net profit (loss) on sales of fixed tangible assets, and net profit (loss) on foreign loans as a result of variations in foreign exchange rates/transactions.
Small businesses	Are those businesses with employment of less than 20 persons.
Total expenses	Sum of expense items, i.e. wages and salaries, employer contributions to superannuation funds, workers' compensation costs, insurance premiums, cost of goods sold, interest expenses, depreciation on buildings, rent, leasing and hiring expenses, media advertising expenses, bad debts written off, and other expenses.
Trading profit	A measure of profit directly attributable to trading in goods and services. It is derived by subtracting the purchases and selected expenses, and opening stocks from the sum of sales of goods and services, and closing stocks.
Wages and salaries	Are gross earnings of all employees before taxation and other deductions. Drawings of working proprietors and working partners of unincorporated businesses are excluded.

SYMBOLS AND OTHER ABBREVIATIONS

Symbols

The following symbols, where shown in columns of figures or elsewhere in tables mean:

—	nil or rounded to zero
..	not applicable
n.a.	not available
n.p.	not available for separate publication, but included in totals where applicable
*	subject to sampling variability too high for practical purposes (i.e. relative standard error greater than 25 per cent)

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

Abbreviations

ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ASIC	Australian Standard Industrial Classification
EBIT	Earnings before interest and tax
IGP	Industry Gross Product
OPBT	Operating profit before tax



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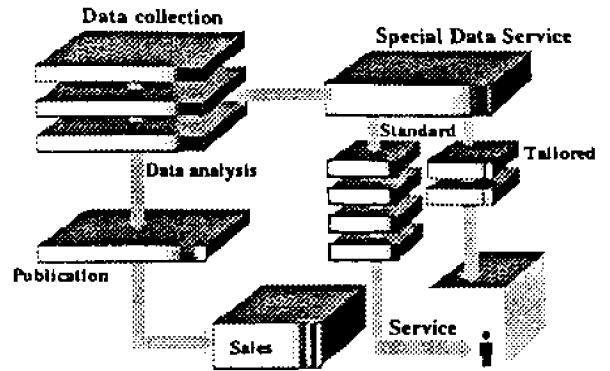
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