

**VOORBURG GROUP ON SERVICE STATISTICS**  
**5TH MEETING (PARIS 1 - 5 OCTOBER 1990)**

**SURVEYING THE COMPUTING SERVICES  
INDUSTRY IN NEW ZEALAND**

**(Item 2/3 of the Provisional Agenda)**

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Auckland  
NEW ZEALAND

## **Surveying the Computing Services Industry in New Zealand**

### **Introduction**

This brief paper has been prepared to add another countries perspective to the Model Survey of Computer Services proposed by Statistics Canada. We are basically in agreement with the proposals by Statistics Canada, their recommendations could be implemented in New Zealand. Inevitably there are areas where experience has lead to different ways of addressing a problem. These differences are noted in this paper and may be useful discussion points in considering this item of the agenda.

The survey planned for New Zealand is an illustration of an application of the model survey.

### **The Model Survey Questionnaire**

Using the model developed by Statistics Canada we have prepared a New Zealand version of the questionnaire. It is intended that the questionnaire will be used for businesses in the 1989-90 Annual Enterprise Survey which are classified to Computer Services. A draft copy is attached. The unit used to collect the data will be the Accounting Unit.

There are 110 Accounting Units classified to the Computer Services Industry in the survey. This is not a large enough sample to produce reliable data on the Computer Services Industry as such. At present Computer Services are part of the much larger Real Estate and Business Services Industry for which results are published.

Questionnaires will collect data for the accounting year nearest to 31 March 1990 and will be posted in late October after the comments of the Voorburg meeting in Paris have been assessed. Therefore results of this test will be available for the 1991 meeting of the Voorburg group.

Our plans for the 1990/91 year are to supplement the existing sample to produce statistical valid data for the computer services industry. It may be possible to use the Computer Services Questionnaire for Computer Wholesalers repairers and manufacturers in 1990-91. External Users would appreciate this approach as they tend to see both services, wholsaling repairers and manufacturers as one 'industry'.

In addition we plan to include questions on 'Own Account' Computer Services in questionnaires for other industries within scope of the 1990-91 survey. Consideration will need to be given to how far Modules 7-9 can be used in questionnaires for other industries.

## C.P.C.

New Zealand supports the regrouping of the C.P.C. into the categories suggested and these have been used in the questionnaire. Our survey will test the proposed regrouping of the C.P.C.

### Differences Between the Canadian Model and the New Zealand Application

The following list of differences may be useful discussion points for this item of the agenda. (References used are to the Canadian Questionnaire with the New Zealand questionnaire item no. noted after each comment as NZ item \_\_\_\_\_).

1. **Non-Financial Structural Data** Financial data needs to be supplemented by non-financial data to aid comparisons with other industries and to provide measures of productivity changes. These measures are not necessarily relevant to National Accounting and associated uses but are important to Business and Planning users. The type of data we would add is:

(a) **Employment Numbers** as at --/--/-- Male Female

Working Proprietors	-	Full-time	
Working Proprietors	-	Part-time(1)	
Paid Employees	-	Full-time	
Paid Employees	-	Part-time(1)	

(1) Part-time is defined as those working less than 30 hours per week.

(NZ Items 2-6)

(b) **Floorspace** (Square Metres) occupied by this business at the end of the Accounting Year.

(NZ Item 82)

2. **Specialised Resources Used** Our survey of users of Computer industry statistics showed a strong interest in a measure of the use of computing equipment. This is a complex area which we don't have a firm answer to. The most logical suggestion made was to obtain data on the number of computing work stations used without distinguishing between the type. The distinction between VDU's and PC's is becoming blurred. An alternative to this approach may be to separate computing service personnel from administrative/ marketing staff when asking for Employment numbers. We favour this latter approach.

(NZ Items 2-6)

3. **Modules 6 and 7 Exports and Imports** The items should equate in content and/or wording with Module 1. We think it essential that

(a) the order of the items is the same, in each module

- (b) the items are the major heading or all the items within the heading, and
- (c) that the wording for the same item is identical in each module.

4. **Questions 1.N and 2.N Other Goods and Services/Other Operating Expenses**

We have had great difficulty getting meaningful data for these without also having separate questions for extraordinary items such as profits or losses from

Exchange Transactions  
Revaluation of Fixed Assets  
Sales of Fixed Assets

(NZ Items 40 and 69)

5. **Net Profit/Loss** If extraordinary items are added Net Profit/Loss can also be asked. As this is a major component of value added it needs to be measured accurately rather than being a residual item.

We go even further and ask respondents to comment on why the profit or loss does not agree with their accounting records.

We would support the inclusion of a question to determine profit/loss such as:

Module 1  
Less Module 2  
Less Module 3  
Plus Closing Inventories  
Less Opening Inventories

(NZ Item 71)

6. **Commentary Para 12 Operating Subsidies** We would support identifying operating subsidies as an item that would be included if it was relevant in any country. In New Zealand it would not be relevant in the Computer Services industry but there may be Government grants received for Research and Development etc. Provision has been made for this in our questionnaire.

(NZ Item 37)

**Note:** **Measurement of Wages and Salaries/Employee Benefits in New Zealand** The format of the questions in items 7-10 is specific to New Zealand Tax Laws and the treatment of this in our National Accounts.

Salaries and wages paid to working proprietors of legal character 0 - 2 individuals, partnerships are an element of operating surplus, whereas legal character 3 - 9 companies, trusts etc. enterprises are not considered to have working proprietors. Therefore any salaries and wages attributed to working proprietors in the returns of legal character 3 - 9 enterprises are classified to compensation of employees.

This is complicated by the NZSNA divergence from UNSNA in the treatment of unincorporated enterprises and private companies. Whereas the UNSNA adopts the legal/accounting practise that salaries and wages recorded as being paid to working proprietors are in fact salaries and wages, the NZSNA adopts the view that such payments are, in part at least, a withdrawal of profit. Thus such payments are excluded from compensation of employees in the NZSNA.

## The Structure of the New Zealand Computer Services Industry

The industry has grown considerably in the last decade but is still a minor generator of employment. As at February 1990 it accounted for just 0.6 percent of non-agricultural employment. Between 1981 and 1990 employment in the industry grew by 250 percent.

The industry is dominated by six New Zealand owned enterprises who operate as Computer Bureaux or Data Banks. Overseas ownership accounts for just six percent of the Enterprises in the industry and is largely concentrated in enterprises which develop software. Tables 1-3 provide data on the industry.

The New Zealand Standard Industrial Classification (1987) recognizes four separate parts of the Computer Services Industry viz:

### 83231: Computer Bureaux

Processing data on a contract bases. Includes data capture services (data punching). May also include incidental development of software for clients.

Calculating service, fee or contract basis	Computer processing
Computer bureau	Data processing service

### 83232: Software Development

Analysis, design and programming of systems ready to use. This involves the analysis of a users' needs and problems and offering the most economical solution and producing the necessary software to realise this solution.

Computer programming service on a fee basis	Programming service, computer, on a fee basis
Computer systems software design	Software development

### 83233: Computer Consultancy

Consultancy on type and configuration of hardware and appropriate software, and incidental training.

Bar coding	Systems analysis work
Computer consultancy	

### 83234: Data Banks

The provision of data (financial, economical, statistical or technical) in a certain order/sequence. The data may be accessible to everyone or to limited users and can be sorted on demand and provided for in a certain order or sequence.

Data banks	Packet switching services
	Data Sources

## **Data Sources**

Our Business Statistics Strategy which encompasses the Computer Services Industry is:

1. To update the Business Directory annually and use the data obtained in other economic statistics. The results are published in Business Patterns at the 5 digit level of the NZSIC for the number of activity units and the number of persons engaged.
2. To carry out a five yearly economic census. A Census was carried out for the 1986-87 year. Results for 550 industries are available at the 5 digit level of the NZSIC.
3. To reduce the level of data included in publications and encourage ad hoc (revenue generating) requests.
4. To carry out an annual sample survey which produces updates for the five yearly Census at a broad level. Sixty one industry groups are recognised in this survey. Computer Services are included in the group which covers all of NZSIC 83 (Real Estate and Business Services except for Renting and Leasing of Property). The only significant industry not covered by the survey is Agriculture.

## **Units Used**

### **Enterprise**

A business or service entity operating in New Zealand such as a company, partnership, trust, estate, Incorporated Society, Producer Board, Local or Central Government Organisation, Voluntary Organisation or self-employed individual. Enterprises under common ownership are referred to as **Group Enterprises**.

### **Activity Unit (Business Location)**

A separate operating unit engaged in New Zealand in one or predominantly one kind of economic activity from a single physical location or base from which work is carried out.

### **Accounting Unit**

A subdivision of an Enterprise consisting of a set of one or more Activity Units for which a single set of accounting records are available; including as a minimum a profit and loss account and capital expenditure data. Every Enterprise has one or more Accounting unit records associated with it. The Accounting Unit is a Collection unit used in Economic Censuses and Surveys. Multi Accounting Unit Enterprises receive an additional questionnaire which deals with transfers between Accounting Units and acts a control document.

## THE NEW ZEALAND COMPUTER SERVICES INDUSTRY STRUCTURE

Table 1

NZSIC	Description	Persons Engaged Size Group	0-5	6-9	10-49	50-99	100 +	Total
83231	Computer Bureaux	Enterprises	197	16	18	4	5	240
		Persons Engaged	333	114	287	327	1,489	2,440
83232	Software Development	Enterprises	515	31	35	4	-	583
		Persons Engaged	845	221	630	256	-	1,952
83233	Computer Consultancy	Enterprises	625	13	15	1	-	654
		Persons Engaged	972	87	285	84	-	1,428
83224	Data Banks	Enterprises	16	1	1	1	1	20
		Persons Engaged	28	7	22	72	1,741	1,870
Total		Enterprises	1,351	61	69	10	6	1,497
		Persons Engaged	2,178	429	1,224	739	3,230	7,800

Source: Business Directory as at February 1990.

Table 2

NZSIC	Description	Persons Engaged Size Group	Overseas Owned	NZ Owned Part of a Group	NZ Owned Not Part of a Group	Total
83231	Computer Bureaux	Enterprises	5	13	222	240
		Persons Engaged	123	1,776	651	2,550
83232	Software Development	Enterprises	20	12	551	583
		Persons Engaged	223	252	1,477	1,952
83233	Computer Consultancy	Enterprises	7	6	641	654
		Persons Engaged	15	121	1,292	1,428
83224	Data Banks	Enterprises	2	2	16	20
		Persons Engaged	94	1,741	35	1,870
Total		Enterprises	34	33	1,430	1,497
		Persons Engaged	455	3,890	3,455	7,800

Source: Business Directory as at February 1990.



TABLE 3

## COMPUTER SERVICES

New Zealand Standard Industrial Classification (NZSIC) = 8323

Coverage: Computer Bureaux, Software Development, Computer Consultancy, Data Banks

## GENERAL STATISTICS

Statistical Item	Year				
	1980-81	1986-87	1988	1989	1990
	No.	No.	No.	No.	No.
Group Enterprises	139	1,064	1,304	1,404	1,441
Enterprises within these Group Enterprises	149	1,082	1,327	1,443	1,497
Activity Units (Including Ancillaries)	193	1,143	1,399	1,528	1,639
Full time equivalent persons engaged	3,286	7,245	7,876	8,117	8,238
	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
Stocks - Closing	2,193	7,591			
Opening	1,384	5,807			
Income - Sales of Goods and Services	113,152	674,110			
Interest and Dividends received	666	12,884			
All Other Income Received	82	25,861			
Total Sales and Other Income	113,900	712,856			
Adjusted for Change in Stock Values	114,709	714,638			
Operating Expenditure - Salaries and Wages	38,652	181,920			
Depreciation	10,316	69,409			
Interest	3,427(1)	38,046			
Indirect Taxes	114	878			
Purchases )	50,391	80,007			
All Other Operating )		264,068			
Expenditure )					
Total Operating Expenditure	102,930	634,328			
Working Proprietors/Partners Salaries and Wages	2,302	25,838			
Net Profit before tax, after deducting working proprietors/partners salaries and wages	9,478	54,472			
Economic Values					
Operating Surplus	14,540	112,790			
Value Added	65,361	371,803			
Fixed Tangible Assets					
Purchases During the Year	27,658	129,712			
Sales During the Year	..	38,346			
Book Value at End of Year	..	264,561			
Ratios					
Value Added per full-time Equivalent Persons Engaged	19,891	51,319			
Value Added per \$1,000 of Salaries-Wages Paid	1,691	2,044			
Total Sales and Other Income per Full-time Equivalent Persons Engaged	34,662	98,393			
Net Profit per Total Sales and Other Income	8.3%	7.6%			
Total Salaries and Wages per Total Sales and Other Income	33.9%	25.5%			
Value Added per Total Sales and Other Income	57.4%	52.2%			

(1) Includes bad debts, donations, royalties and patent fees paid.

Table 3 Source - Census of Services 1981  
 - Economy Wide Census 1987  
 - Annual Business Directory Update

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DEPARTMENT OF  
STATISTICS  
PRIVATE BAG  
AUCKLAND

# Annual Enterprise Survey 1989-90

BS/ES/ **5CS**

For further information or assistance  
contact the Department's Enterprise  
Survey Section at:-

AUCKLAND Ph. (09) 303-1055

\_\_\_\_\_ Please correct any errors in name or address \_\_\_\_\_

If the balance date shown  
**is NOT CORRECT,**  
please contact the Enterprise  
Survey Section immediately

**INFORMATION TO BE SUPPLIED** - This questionnaire must be completed for the activities of the business or practice described in the above address panel.

**COMPULSORY REQUIREMENT** - The taking of this survey has been approved by the Minister of Statistics and the return of this questionnaire duly filled in and signed is a compulsory requirement under the Statistics Act 1975.

**CONFIDENTIALITY OF INFORMATION SUPPLIED** - The information supplied will be used by the department in the preparation of statistics. Any release of information will only be in accordance with the Statistics Act 1975. Only persons authorised by the Act will have access to the individual information.

**PURPOSE** - The purpose of this survey is to collect statistics for business services of all types as part of the Enterprise Survey for 1989-1990. Aggregated results of the survey are available to businesses and other organisations for planning and decision making purposes. The results are also used by the Department of Statistics in the preparation of National Accounts, price indexes and related measures of national importance.

- \* Complete and keep the duplicate copy of this questionnaire for your records.
- \* Give whole dollar amounts only.
- \* Reasonable estimates are acceptable where separate figures cannot otherwise be obtained.

S. Kuzmich  
GOVERNMENT STATISTICIAN

Item	Accounting Year						
1	<p>Please state the accounting period covered by this questionnaire:-  From ...../...../198..... to ...../...../199.....</p> <p>If the accounting year was more than or less than 12 months, please give reasons:</p> <p>.....</p> <p>.....</p> <p>.....</p>						
	<table border="1"> <tr> <th colspan="2">Office Use Only</th></tr> <tr> <td>0001</td><td></td></tr> <tr> <td>0002</td><td></td></tr> </table>	Office Use Only		0001		0002	
Office Use Only							
0001							
0002							

Item	Employment Numbers					
	as at mid - February 1990.		Males		Females	
			(1) Computing	All Other	(1) Computing	All Other
2	* Working Proprietors and Partners	- Full - time				
3		(2) - Part - time				
4	* Paid Employees	- Full - time				
5		(2) - Part - time				
6	TOTAL of items 2 to 5					
(1) Include Computing Professionals, Computer Service Managers, Computing and related equipment operators, data entry operators. (2) Part - time is defined as those working less than 30 hours per week.						

Item	Employment Payments			(1) Working proprietors and partners	(2) Paid employees
	Enter payments made to or on behalf of working proprietors in column (1) and to or on behalf of paid employees in column (2). INCLUDE any capitalised salaries and wages				
7	* Levies paid to the Accident Compensation Corporation (ACC Levies)	\$ 0071			
8	* Employer contributions to superannuation, pension and welfare schemes	\$ 0072			
9	* All salaries and wages paid (INCLUDE severance and redundancy payments, sick and holiday pay, and other employment related expenses)	\$ 0073			
10	TOTAL of items 7 to 9	\$ 0075			

Item	Income and Expenditure		
11	<b>Work in Progress:</b>	* Value of work-in-progress, not yet billed at the end of the accounting year	\$
12	<b>Stocks:</b>	* Value of stocks at the end of the accounting year.	
13		- Goods purchased for resale	\$
14		- Goods used in the operation	\$
		- Other stocks	\$
15	<b>Sales of:</b>	* Packaged software products (of own design):	
16		- systems and user tools software	\$
		- application software	\$
17		* Packaged software sales (resold)	\$
18		* Computer hardware sales (purchased for resale)	\$
19	<b>Gross income from:</b>	* Professional computer services:	
20		- consultancy services related to the installation of hardware	\$
21		- systems and technical consulting services	\$
22		- custom software development services	\$
23		- systems analysis and programming services	\$
24		- computer facilities management services	\$
		- other professional computer services	\$
25		* Computer processing services:	
26		- data processing and tabulation services	\$
27		- data entry services	\$
		- other computer processing services	\$
28		* Data base services (Electronic information services)	\$
29		* Computer repair and maintenance services	\$
30		* Computer hardware leasing and/or rental services	\$
31		* Network services	\$
32		* Computer related training services	\$
33		* Other computer services (specify main type)	\$
34		* Services to related parties not included above (research and development charges, management fees, etc.)	\$
35		* Interest	\$ 0301
36		* Dividends, donations, insurance claims, royalties, patent fees and bad debts recovered	\$ 0270
37		* Direct Government cash grants and subsidies (specify main type)	\$ 0277

38	* GST income (enter net amount received) Note: You should complete this item only if your accounts are GST inclusive, ie income and Expenditure amounts include GST.	\$ 0310	
39	* All other income ( specify main type )	\$ 0320	
40	Gains Before Tax from Extraordinary Transactions (Outside the Normal Course of Business) e.g. Sale of assets, exchange transactions (specify main type)	\$ 0345	
41	<b>TOTAL</b> of items 11 to 40 <b>This is Total (A)</b>	\$ 0500	
42	<b>Work in Progress:</b> * Value of work-in-progress, not yet billed at the beginning of the accounting year	\$	
	<b>Stocks:</b> * Value of stocks at the beginning of the accounting year.		
43	-- Goods purchased for resale	\$	
44	-- Goods used in the operation	\$	
45	-- Other stocks	\$	
46	<b>Purchases of:</b> * Electricity and fuel, all types, including fuel for motor vehicles	\$ 0570	
47	* Computer services, include the types of services in items 19 to 27	\$	
48	* Telecommunication services	\$	
	* Purchases of goods and for resale:		
49	-- Computer hardware	\$	
50	-- Packaged software products	\$	
51	-- Other goods	\$	
52	<b>Operating Expenses:</b> * Employment payments. INCLUDE salaries and wages, ACC levies, superannuation contributions, severance and redundancy payments, sick and holiday pay. EXCLUDE capitalised salaries and wages.	\$ 0651	
53	* Depreciation as charged in the books of account, including depreciation on finance leased assets	\$ 0652	
54	* Renting, hiring and leasing of machinery and equipment	\$	
55	* Renting, hiring and leasing (other than finance leasing) of land and buildings	\$ 0653	
56	* Rates, land tax, and other local/central Government rates and levies ( excluding withholding tax payments to superannuation and pension schemes)	\$ 0663	
57	* Withholding tax payments on superannuation and pension schemes (not included in item 56)	\$ 0665	
58	* Business insurance premiums	\$ 0666	
59	* Interest	\$ 0667	
60	* Donations, royalties, patent fees and bad debts	\$ 0668	
61	* Legal, accounting, security and similar business services	\$	
	* Advertising payments to other businesses		
62	-- in New Zealand	\$ 0678	
63	-- overseas	\$ 0679	
64	* Repairs and maintenance to your building by other businesses	\$ 0683	

65	* GST expense ( enter net amount paid ) Note: You should complete this item only if your accounts are GST inclusive, ie income and expenditure amounts include GST.	\$ 0710	
66	* Fringe Benefit Tax	\$ 0715	
67	* Services from related parties ( not included above )	\$	
68	* All other operating expenses ( specify main type )	\$ 0720	
69	Losses Before Tax From Extraordinary Transactions (Outside the Normal Course of Business) e.g. Sale of assets, exchange transactions (specify main type):	\$ 0845	
70	<b>TOTAL of Items 42 to 69</b>	<b>This is Total (B) \$ 0923</b>	
71	Net Profit/Loss Before Tax	Subtract TOTAL (B) from TOTAL (A) — leaves TOTAL (C) which is either	
		Profit \$ 0924	
		or	
		Loss \$ 0925	
	If the profit (or loss) does not agree with the net profit/loss before tax as shown on your accounting records, give reasons:		

Item	Fixed Assets: Book Value, Additions and Disposals			
	INCLUDE (1) All fixed assets as shown in your books of account (2) All fixed assets operated by your business under finance lease arrangements  EXCLUDE Expenditure on maintenance and on intangible assets such as goodwill			
		ADDITIONS to fixed assets during the accounting year	DISPOSALS of fixed assets during the accounting year	BOOKVALUE of fixed assets at the end of the accounting year
72	Land \$ 1001			
73	Buildings — Residential \$ 1003			
74	— Non-residential \$ 1004			
75	Other construction \$ 1007			
76	Motor vehicles and other transport equipment \$ 1013			
77	Furniture and fittings \$ 1029			
78	Computer equipment \$ 1032			
79	Other plant, machinery and equipment \$ 1030			
80	All other Fixed Assets (specify main addition during the year) \$ 1034			
81	TOTAL of items 72 to 80 \$ 1050			

**This is Total [D]**

Item	Floorspace
82	<p>Enter below the floor space occupied by this business at the end of the accounting year.</p> <p><b>Definition of floorspace:</b>  Floorspace includes any area not exposed to the elements, any area that has a floor, roof and solid walls.  It does NOT include service station forecourts, outside parking areas and outside display areas.  NOTE: 1000 square feet equals 93 square meters.</p> <p style="text-align: right;">TOTAL floorspace sq.m. <span style="border: 1px solid black; display: inline-block; width: 50px; height: 20px; vertical-align: middle;"></span></p> <p>This information is required for town and regional planning.</p>

Item	Value of Exports and Imports of Goods and Services By This Business During the Accounting Year		
	<b>Exports:</b>		
83	* Packaged software products	\$	
84	* Computer hardware (purchased for resale)	\$	
85	* Professional computer services	\$	
86	* Computer processing services	\$	
87	* Data base services (Electronic information services)	\$	
88	* Other computer services	\$	
89	* Computer hardware leasing and/or rental services	\$	
90	* Services to related parties not included above (research and development charges, management fees, etc.)	\$	
91	* Other goods and services (specify main type)	\$	
92	TOTAL Exports of Items 83 to 91		
	<b>Direct Imports:</b>		
93	* Packaged software products	\$	
94	* Computer hardware (purchased for resale)	\$	
95	* Professional computer services	\$	
96	* Computer processing services	\$	
97	* Data base services (Electronic information services)	\$	
98	* Other computer services	\$	
99	* Computer hardware leasing and/or renting services	\$	
100	* Services from related parties not included above (research and development charges, management fees, etc.)	\$	
101	* Other goods and services (specify main type)	\$	
102	TOTAL Direct Imports of Items 93 to 101	\$	

Item	Balance Sheet Data			As At Balance Date This Year
	All amounts at Book Value.			
103	Shareholders Funds / Accumulated Funds / Proprietor's Capital, including all reserves and long term provisions (with the exception of depreciation)	OR +\$ 1061 -\$ 1071		
104	Term Liabilities including Deferred Tax, debentures etc.	\$ 1062		
105	Current Liabilities including overdrafts, accounts payable, provision for tax and provision for dividends.	\$ 1063		
106	Other Liabilities (Please specify main type)	\$ 1064		
107	TOTAL Capital and Liabilities.	\$ 1065		
108	Fixed Assets, including land, buildings, vehicles, machinery and equipment. (This year should agree with <b>Total [D]</b> of item 81)	\$ 1072		
109	Investments, including shares in associates and subsidiaries and other shares, mortgages, debentures etc.	\$ 1073		
110	Intangible Assets, including goodwill, patents etc.	\$ 1074		
111	Current Assets, including cash and bank balances, short term investments, accounts receivable, stock, debit balances (if any) in Profit and Loss Appropriation accounts, etc.	\$ 1075		
112	Other Assets (Please specify main type)	\$ 1076		
113	TOTAL Assets (to equal Total Capital and Liabilities of Item 107)	\$ 1077		

Item	Dividends Received and Paid During the Accounting Year		
114	Enter the Cash Value of dividends received or paid during the accounting year by the business named on the questionnaire label.		
114	Dividends Received -- Cash dividends	\$ 1085	
115	-- bonus shares issued in lieu of dividends	\$ 1086	
116	Dividends Paid -- Cash dividends	\$ 1087	
117	-- bonus shares issued in lieu of dividends	\$ 1089	



Item	Software Revenues		
	This section is concerned with various aspects of software development and distribution. If your organisation has generated revenues from the marketing/sales of software products, estimate the proportion of those revenues derived from the sales of software developed by:		Value Expressed As
			\$ OR %
118	* this business	\$	
119	* a domestic related party	\$	
120	* a foreign related party	\$	
121	* a domestic third party	\$	
122	* a foreign third party	\$	
123	TOTAL Sales Revenues of Items 118 to 122 Note: This Total to agree with Items 15, 16 and 17 in the Income section.		\$ 100%
124	Please estimate of the proportion of these revenues derived from the sale of: * mini and mainframe software		\$
125	* microcomputer software		\$
126	* communication and other software not specific to Items 124 or 125		\$
127	TOTAL Sales Revenues of Items 124 to 126 Note: This Total to agree with Items 15, 16 and 17 in the Income section.		\$ 100%

Item	Software Research and Development		
128	* Has this organisation been involved, in this accounting year, in software research and development for the purpose of marketing software products?  Yes <input type="text"/> No <input type="text"/>		
	Give an estimate of the expenses incurred in the conduct of software research and development:		
129	* Salaries and wages (include benefits)	\$	
130	* Other development expenses (specify main type)	\$	
131	TOTAL of Items 129 to 130		\$
132	* Does this business capitalise the above development expenses?  Yes <input type="text"/> No <input type="text"/> Part of <input type="text"/>		

Thank you for completing this questionnaire.

Please write here any comments that would help the department to interpret the information you have given.

To assist processing staff it would be appreciated if you send with this questionnaire, a copy of your accounts for the period covered (eg trading account, profit and loss account, balance sheet).

If you want your accounts returned tick this box.

☐

Signature of person  
filling in this questionnaire: .....

Date ..... / ..... / 1990

Name: .....

Position (Manager, Accountant etc): .....

Telephone Number: .....

Area Code: .....

If Chartered Accountant  
in public practice  
please tick box:

☐



1987-88

# COMPUTING SERVICES INDUSTRY, AUSTRALIA



**NEW ISSUE**

**EMBARGOED UNTIL 11.30 A.M. 7 SEPTEMBER 1990**

# **COMPUTING SERVICES INDUSTRY AUSTRALIA, 1987-88**

**IAN CASTLES**  
**Australian Statistician**

**AUSTRALIAN BUREAU OF STATISTICS**

**CATALOGUE NO. 8669.0**

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## INTRODUCTION

This publication presents statistics for the Computing Services industry collected in the ABS 1987-88 Service Industries Survey. This industry includes all those enterprises mainly engaged in providing hardware and software consultancy and professional services, systems analysis, design and programming services, building of custom designed systems, data processing and preparation services, and microfiche and microfilming services. This is the first time the ABS has surveyed the Computing Services industry in detail, and so there are no comparable statistics for earlier periods available.

All the statistics in this publication have been compiled in respect of *enterprises* (companies, sole proprietorships, partnerships and trusts). Explanatory Notes are provided following the tables in this publication. When interpreting the statistics in this publication allowance needs to be made for sampling error (see Table 9 and the Explanatory Notes).

*More detailed statistics for the Computing Services industry are being prepared for release later in 1990.* These statistics will provide a more detailed picture of the characteristics of particular components of the industry (see paragraph 20 of the Explanatory Notes). Please advise ABS on the form at the end of this publication if you wish to be notified when these more detailed statistics become available.

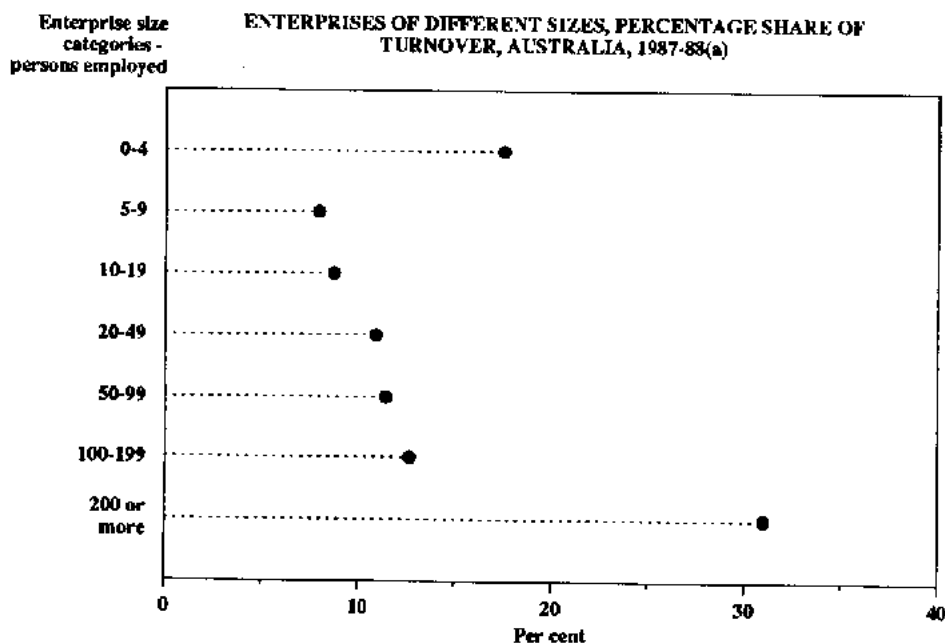
**NOTE ON DATA QUALITY:** In this first ABS survey of the Computing Services industry, the industry has been found to be very diverse and difficult to define and measure for statistical purposes. The statistics are consequently subject to a number of qualifications, in particular concerning the definition of the industry, the classification of enterprises to the industry and the definition of the items which constitute the industry's turnover. As such, the estimates in this publication are of a lower standard than in comparable ABS surveys for other industries. The reasons for this are explained in some detail in the Explanatory Notes which users of this publication are urged to read.

## SUMMARY OF FINDINGS

Some of the significant findings of the 1987-88 survey are—

- The private sector Computing Services industry is estimated to comprise almost 3,700 enterprises, employing over 24,000 people and generating turnover of \$1,628 million in 1987-88.
- Net operating surplus, calculated on the standard ABS basis (ie operating profit before interest, royalties, licence fees and income tax), is \$78.3 million or about 5 per cent of turnover. The industry had royalty, licence fee and interest income of \$101 million and corresponding expenses of \$54 million, a net additional income of about \$48 million. Taking this into account would result in profit before income tax for the industry of \$126 million, or over 7 per cent of gross income.
- 30 per cent of the enterprises selected in the survey reported an operating loss for 1987-88. (Fewer enterprises would be making a loss if interest, royalties and licence fees were to be included in operating revenue.)
- The industry is strongly concentrated in New South Wales, accounting for 49 per cent of the industry's turnover, and to a lesser degree in Victoria, with 33 per cent of the industry's turnover. The industry is also quite large in the ACT.
- Enterprises operating as companies produced 88 per cent of the industry's turnover, trusts a further 9 per cent, and sole proprietorships and partnerships the remaining 3 per cent.

- Some 20 per cent of the people working in the industry work part-time. While only 6 per cent of males are working part-time, 38 per cent of females are part-time staff. Female staff, however, comprise 43 per cent of the people working in the Computing Services industry.
- An estimated 53 per cent of the industry's turnover was derived from hardware/software consultancy, systems analysis, design, and programming; and a further 25 per cent from providing data preparation and processing services.
- Staff expenses are major costs for the industry, comprising almost 42 per cent of the total operating expenses in 1987-88. Payments to subcontractors and consultants were also important, accounting for 12 per cent of operating expenses, while purchases of hardware, software and other goods for resale accounted for a further 12 per cent.
- The average turnover per person working was about \$67,000. The smallest enterprises in the industry (those employing less than 5 persons) had an average turnover of about \$47,000 for each person working. The largest 12 enterprises (which were those employing over 200 persons) had turnover of about \$85,000 per staff member - 81 per cent greater than for the smallest firms.
- 96 per cent of the enterprises in the industry are small businesses (defined as those employing less than 20 persons). These 3,500 small businesses employed 42 per cent of the industry's staff, but accounted for only about 34 per cent of its turnover. The largest 12 enterprises (those employing over 200 persons) employed over 24 per cent of the industry's staff and accounted for 31 per cent of its turnover. Turnover for the different enterprise size groups is illustrated in the chart below.



(a) Note that this data is subject to quite high relative standard errors, as shown in Table 9 and explained in paragraphs 14 and 15 of the Explanatory Notes.

TABLE 1. COMPUTING SERVICES INDUSTRY: SUMMARY OF OPERATIONS, AUSTRALIA, 1987-88

Enterprises at end June	Persons employed at end June	Operating expenses				Turnover	Gross product	Net operating surplus
		Wages and salaries	Other staff expenses	Other	Total			
No.	No.	\$m	\$m	\$m	\$m	\$m	\$m	\$m
3,691	24,067	585.5	60.1	904.3	1,549.9	1,628.2	774.6	(a)78.3

(a) Note that the calculation of net operating surplus does not include interest, royalties and licence fees income and expenses. Details for these items are shown separately in Tables 7 and 8.

TABLE 2. COMPUTING SERVICES INDUSTRY: ANALYSIS OF TURNOVER, AUSTRALIA, 1987-88

	Type of legal organisation							
	Companies		Sole proprietorships, partnerships(a)		Trusts		Total	
	\$m	%	\$m	%	\$m	%	\$m	%
Turnover	1,433.1	100.0	49.2	100.0	145.9	100.0	1,628.2	100.0
From which is paid—								
Staff expenses	556.5	38.8	13.5	27.4	75.6	51.8	645.6	39.7
Occupancy expenses	48.5	3.4	1.4	2.8	6.5	4.5	56.4	3.5
Vehicles and equipment expenses	134.7	9.4	4.5	9.1	12.8	8.8	152.0	9.3
Other operating expenses	638.4	44.5	11.5	23.4	46.0	31.5	695.8	42.7
Leaving—								
Net operating surplus	54.9	3.8	18.3	37.2	5.1	3.5	(b)78.3	(b)4.8

(a) Note that the sole proprietors and partners in these businesses are not regarded as having been paid a wage or salary, but derive their remuneration from involvement in the industry by sharing the "net operating surplus" or operating profit, from which must also be paid some other expenses (particularly interest, royalties and licence fees and income tax). (b) These figures would increase to \$126 million and 7.7 per cent if account is taken of interest, royalties and licence fees income and expenses as shown in Tables 7 and 8. These items are not included in the ABS standard definition of net operating surplus and its constituent elements.



TABLE 3. COMPUTING SERVICES INDUSTRY: SUMMARY OF OPERATIONS BY STATE, 1987-88(a)

	<i>Value</i>	<i>New South Wales</i>	<i>Victoria</i>	<i>Queensland</i>	<i>South Australia</i>	<i>Western Australia</i>	<i>Tasmania</i>	<i>Northern Territory</i>	<i>Australian Capital Territory</i>	<i>Total</i>
Enterprises at end June	No.	1,545	1,367	287	221	241	13	*9	188	3,691
Employment at end June										
Proprietors(b)	No.	*219	*124	*101	*115	*68	*9	*1	*43	680
Employees										
Males	No.	6,273	4,435	906	499	639	44	14	377	13,187
Females	No.	4,948	3,214	715	344	556	29	4	390	10,200
<i>Total</i>	<i>No.</i>	<i>11,440</i>	<i>7,773</i>	<i>1,722</i>	<i>958</i>	<i>1,263</i>	<i>82</i>	<i>19</i>	<i>810</i>	<i>24,067</i>
Turnover	\$m	802.3	536.4	93.9	56.9	76.0	5.3	1.8	55.4	1,628.2
Gross product	\$m	370.5	264.7	42.0	28.5	38.4	2.6	0.6	27.3	774.6
Net operating surplus	\$m	*21.5	*39.4	*5.1	*5.1	*4.1	*0.6	0.1	*2.5	78.3

(a) Enterprises operating in more than one State supplied total employment and turnover data for each State in which they operated and ABS has used this data to estimate the other items, by State, in this table. The number of enterprises relates to those operating in each State and as some operate in more than one State, the sum of the State totals does not total to the number of enterprises for Australia. (b) Working principals, proprietors and partners of unincorporated enterprises. \* Indicates a high relative standard error of more than 25 per cent - refer to paragraphs 14 and 15 of the Explanatory Notes.

TABLE 4. COMPUTING SERVICES INDUSTRY: TYPE OF EMPLOYMENT, AUSTRALIA, END JUNE 1988  
(number)

<i>Type of employment</i>	<i>Males</i>			<i>Females</i>			<i>Total</i>		
	<i>Full-time</i>	<i>Part-time</i>	<i>Total</i>	<i>Full-time</i>	<i>Part-time</i>	<i>Total</i>	<i>Full-time</i>	<i>Part-time</i>	<i>Total</i>
Proprietors(a)	309	*112	421	*112	*147	259	421	259	680
Employees	12,417	770	13,187	6,410	3,790	10,200	18,827	4,560	23,387
<i>Total</i>	<i>12,726</i>	<i>882</i>	<i>13,608</i>	<i>6,522</i>	<i>3,937</i>	<i>10,459</i>	<i>19,248</i>	<i>4,819</i>	<i>24,067</i>

(a) Working principals, proprietors and partners of unincorporated enterprises.

TABLE 5. COMPUTING SERVICES INDUSTRY: DETAILS OF OPERATIONS BY SIZE OF ENTERPRISE, AUSTRALIA, 1987-88(a)

<i>Employment size category at end June</i>	<i>Enterprises at end June</i>	<i>Employment at end June</i>	<i>Wages and salaries</i>	<i>Turnover</i>	<i>Gross product</i>	<i>Net operating surplus</i>
	No.	No.	\$m	\$m	\$m	\$m
0-4 persons	3,075	6,000	119.8	282.6	181.2	40.7
5-9 persons	308	2,025	44.0	126.9	56.8	*7.8
10-19 persons	150	1,981	52.1	140.0	69.3	*10.7
20-49 persons	86	2,537	78.4	176.2	67.2	*-26.4
50-99 persons	40	2,620	71.7	184.8	88.4	*2.4
100-199 persons	20	3,035	74.4	204.0	*114.7	*20.0
200 or more persons	12	5,869	139.5	500.4	189.0	25.0
<b>Total</b>	<b>3,691</b>	<b>24,067</b>	<b>579.9</b>	<b>1,614.9</b>	<b>766.6</b>	<b>80.2</b>

(a) Excludes enterprises not in operation at the end of the year. \* Indicates a high relative standard error of more than 25 per cent - refer to paragraphs 14 and 15 of the Explanatory Notes.

TABLE 6. COMPUTING SERVICES INDUSTRY: TYPE OF LEGAL ORGANISATION, AUSTRALIA, 1987-88(a)

<i>Type of legal organisation</i>	<i>Enterprises at end June</i>	<i>Employment at end June</i>	<i>Wages and salaries</i>	<i>Turnover</i>	<i>Gross product</i>	<i>Net operating surplus</i>
	No.	No.	\$m	\$m	\$m	\$m
Company	2,451	19,856	501.2	1,423.4	653.7	57.1
Partnership, sole proprietorship	547	1,258	12.2	48.4	32.7	18.1
Trust	693	2,953	66.4	143.0	80.2	*5.0
<b>Total</b>	<b>3,691</b>	<b>24,067</b>	<b>579.9</b>	<b>1,614.9</b>	<b>766.6</b>	<b>80.2</b>

(a) Excludes enterprises not in operation at the end of the year.

TABLE 7. COMPUTING SERVICES INDUSTRY: COMPONENTS OF TURNOVER AND INTEREST,  
ROYALTIES AND LICENCE FEES INCOME, AUSTRALIA, 1987-88

	<i>Enterprises</i>		<i>Items</i>	
	No.	\$m		%
Components of turnover(a)				
Hardware / software consultancy and systems analysis, design and programming	3,328	859.3		52.8
Computer education and training	271	27.9		1.7
Data processing / preparation services	714	411.4		25.3
Software sales				
- on commission(b)	88	4.7		0.3
- other	324	59.9		3.7
Hardware sales				
- on commission(b)	157	*23.6		1.4
- other	506	196.3		12.1
Microfishing and microfilming services	*45	21.1		1.3
Other gross income	674	23.9		1.5
Turnover	3,795	1,628.2		100.0
Non-operating income				
Interest	1,208	12.6		
Royalties and licence fees	125	*88.8		

(a) Note particularly the comments on this data in paragraph 18 of the Explanatory Notes. (b) Gross commissions received from sales.

TABLE 8. COMPUTING SERVICES INDUSTRY: COMPONENTS OF OPERATING EXPENSES AND INTEREST, ROYALTIES AND LICENCE FEES, AUSTRALIA, 1987-88

Type of expense(a)	Value	Percentage of total operating expenses
	\$m	%
Operating expenses		
Wages and salaries	585.5	37.8
Workers' compensation insurance	4.1	0.3
Employer contributions to superannuation and pension schemes	27.2	1.8
Payroll tax	22.6	1.5
Fringe benefits tax	6.3	0.4
Total staff expenses	645.6	41.7
Rent, leasing of land and buildings		
Rates and land taxes	53.3	3.4
Depreciation on buildings	1.1	0.1
Total occupancy expenses	54.4	3.6
Depreciation on fixed assets (not buildings)		
Motor vehicle running expenses	77.6	5.0
Rent, leasing of motor vehicles	18.9	1.2
Rent, leasing of other equipment	13.5	0.9
Total vehicles and equipment expenses	110.0	7.1
Payments to sub-contractors and consultants		
Sales commission payments	190.2	12.3
Purchases of hardware, software and other goods for resale	7.0	0.5
Repair and maintenance expenses, electricity and fuel	180.8	11.7
Insurance (not workers' compensation)	33.8	2.2
Other operating expenses(b)	6.6	0.4
Total operating expenses	277.5	17.9
	1,549.9	100.0
Non-operating expenses		
Interest		
Royalties and licence fees	30.4	
	23.3	

(a) Definitions of some of these items are shown in the Explanatory Notes. (b) Includes telecommunications, postage, accounting costs, paper, printing, stationery, travelling expenses, office supplies, staff recruitment costs, etc.

TABLE 9. COMPUTING SERVICES INDUSTRY: RELATIVE STANDARD ERRORS, MAJOR VARIABLES, BY STATE AND  
EMPLOYMENT SIZE, 1987-88(a)  
(per cent)

	<i>Enterprises at end June</i>	<i>Employment at end June</i>	<i>Turnover</i>	<i>Gross product</i>	<i>Net operating surplus</i>
<i>State</i>					
New South Wales	6	8	5	6	67
Victoria	5	9	10	12	29
Queensland	14	8	7	8	35
South Australia	12	9	11	13	41
Western Australia	13	8	11	13	58
Tasmania	24	18	18	17	29
Northern Territory	32	17	4	7	10
Australian Capital Territory	12	12	13	14	38
<i>Australia</i>	<i>3</i>	<i>6</i>	<i>5</i>	<i>6</i>	<i>25</i>
<i>Employment size category</i>					
0-4 persons	4	5	6	6	13
5-9 persons	12	12	13	15	43
10-19 persons	13	12	12	12	38
20-49 persons	17	16	15	24	52
50-99 persons	17	16	18	20	141
100-199 persons	22	23	25	29	56
200 or more persons	18	18	4	6	7
<i>Total</i>	<i>3</i>	<i>6</i>	<i>5</i>	<i>6</i>	<i>25</i>

(a) Explanation of sampling errors is given in the Explanatory Notes.

## EXPLANATORY NOTES

### Introduction

This publication presents statistics for the Computing Services industry obtained from the Service Industries Survey conducted by the ABS in respect of 1987-88. This was the first ABS survey of this industry, and the statistics provide only a partial view of the nature of computing services in Australia. There are also a number of deficiencies in the basic methodology which have not been wholly resolved, and these are outlined under the various headings in the notes that follow.

2. More detailed statistics for the Computing Services industry will be released later in 1990 (see paragraph 20 below). Please complete the form with this publication if you wish to be advised when they are available. The Computing Services industry is one of a number of professional and business services industries covered by the 1987-88 Service Industries Survey. Details of the other industries included in the survey are shown in the form at the end of this publication.

3. These statistics continue the series of service industries surveys which began with the publication of statistics for a number of personal and travel related service industries in respect of 1986-87. (Details are shown in paragraph 23 below.)

4. The 1987-88 Service Industries Survey was conducted as a component of the ABS's program of integrated industry surveys. This program has been developed so that data from each industry within the program conform to the same basic conceptual standards. The Service Industries Survey is therefore conceptually comparable (at the *enterprise* level) with periodic collections undertaken for the mining, manufacturing, electricity, gas, construction, transport, wholesale trade and retail industries.

### Statistical Unit

5. The statistical unit for which statistics are reported in the 1987-88 Service Industries Survey is the enterprise. The enterprise is defined as a unit covering all the operations in Australia of a single operating legal entity (sole proprietorship, partnership, company, trust, etc) which is in effect a single "business". A number of enterprises in this industry operate from more than one location, including some in different States.

### Definition of the Computing Services Industry

6. The Computing Services industry is basically defined according to the 1983 edition of the Australian Standard Industrial Classification (ASIC), class 6381. However, the 1983 edition of the ASIC, in respect of this industry does not adequately define the industry as it existed in the late 1980's. Consequently, for these statistics, an attempt has been made to include in the industry all those enterprises classified to ASIC class 6381 mainly providing the following services: hardware and software consultancy and professional services, systems analysis

design and programming, building of custom designed systems, data processing and preparation services and microfiche and microfilming services.

7. A range of related computer services activities came to notice during this survey, and enterprises selected in the survey which were mainly engaged in these activities were included in the industry where it was judged that the activities were closely identified with the common perception of the definition of the computing services industry. This is a procedure not in accord with ABS's usual standards and procedures for defining industries, but was unavoidable in the circumstances given the lack of a firm basis for defining the industry, which is rapidly diversifying, volatile and probably growing quite strongly.

8. While it has been difficult to be very precise in describing the activities of the enterprises *included* in the industry, enterprises which have been *excluded* from the industry include those mainly engaged in:

- wholesaling, installation, repairing, renting and leasing computer hardware and equipment, wholesaling of software (these enterprises are classified to ASIC class 4734 Business Machines Wholesalers)
- manufacturing computer hardware and related equipment (these enterprises are classified to ASIC class 3352 Electronic Equipment nec)
- duplicating purchased software developed by other enterprises (these enterprises are classified to the manufacturing sector)
- computer education and training (these enterprises are classified to ASIC class 8244 Education nec)

9. The computing services industry includes those enterprises *mainly* engaged in providing computing services as described above. Where they undertake other activities (such as those described in paragraph 8) as secondary activities, then the statistics include information about these activities. This is illustrated in Table 7, which shows, for example, that a significant amount of the industry's turnover is derived from sales of purchased software and hardware and computer education and training. However, most sales of hardware and software, maintenance of equipment and computer training is undertaken in Australia by firms which are *not* classified to the Computing Services industry but are classified to the industries listed in paragraph 8.

10. There are several other aspects of the definition of the Computing Services industry to which it has been possible to only give cursory examination in compiling the statistics in this publication. Some of these issues are:

- It is desirable to distinguish, for example, between income derived from the provision of data processing/preparation services (classified to the Computing Services industry) and the provision of staff to undertake computing-related tasks for clients, including data processing (classified to ASIC class 8491 Employment Services). It has generally been possible to do this in these statistics.
- It is preferable to clearly differentiate between enterprises operating as computer services bureaux, ie providing shared processing time on a remote computer, and firms providing processing services *facilitated* by computer, eg payroll services, data base information services, insurance claims processing, etc. Enterprises undertaking the former have generally been included in the statistics. However, it is desirable to exclude enterprises undertaking the latter activities, but it has not always been possible to do this.
- In determining whether an enterprise should be classified to the Computing Services industry on the basis of its *predominant* activity, it was necessary to determine the relative importance of different activities to the operations of each enterprise. For example, where enterprises involved in computer consultancy or systems design and similar activities also resold purchased hardware or software, it was very difficult, but necessary, to determine the predominant income earning activity. Untangling package arrangements in such situations has proved very difficult and somewhat subjective.

#### Methodology

11. The survey was conducted by a mail enumeration of all the larger enterprises and a sample of the smaller enterprises classified to the Computing Services industry (ASIC class 6381). Enterprises included in the 1987-88 Service Industries survey were selected from the ABS's register of businesses which was supplemented by lists provided by the Australian Taxation Office.

12. Data were collected from the Australia-wide operations of each enterprise. Enterprises which operated in more than one State were asked to provide a dissection of employment, wages and salaries and turnover by State, to enable State statistics to be compiled and to allow the estimation of the other items by State.

#### Quality of the Estimates

13. Inaccuracies in these statistics are increased by the lack of precision in defining the boundaries of the industry, the fluidity of these boundaries and the consequent difficulties of accurately classifying enterprises to the industry. Inaccuracies may have also occurred because of insufficient coverage, inadequacies in the source of information, imperfections in answers provided by respondents and errors made in the coding and processing of data. Inaccuracies of this kind are referred to as non-sampling

error and may occur in any statistical collection. It is not possible to accurately estimate the size of non-sampling error, however, efforts have been made to minimise these errors by employing careful questionnaire design, trying to obtain responses from all selected enterprises and employing efficient operating procedures. However, for this first ABS survey of the Computing Services industry, it has not been possible to reduce these sources of inaccuracy to a level comparable with similar ABS surveys of other industries.

14. The estimates for the Computing Services industry are derived from information obtained from a sample of enterprises and as such are subject to sampling error; that is, they may differ from the statistics that would have been produced if information had been obtained from all enterprises. A measure of the likely difference is given by the relative standard error, which indicates the extent of which an estimate might have varied by chance because only a sample of units was included. Relative standard errors for the major data items are shown in Table 9. There are about two chances in three that a sample estimate will vary by less than one standard error from the figure that would have been obtained if a complete census was taken and about 19 chances in 20 that the difference will be less than two standard errors. For example, net operating surplus for the Computing Services industry for 1987-88 is estimated to be \$78.3 million with a relative standard error of 25 per cent (or \$19.6 million). This means there are two chances in three that a comparable complete collection of the industry would have given a figure within the range of \$58.7 million to \$97.9 million, and 19 chances in 20 that the figure would have been within the range of \$39.1 million to \$117.5 million. Some of the standard errors associated with the estimates contained in this publication are high, ie. greater than 25 per cent. These estimates are indicated by '\*'. In this situation it is important for users to ensure that the estimates are reliable enough for the particular purposes for which they are to be used. Where the standard errors exceed 50 per cent, the estimates should be taken only as a general indication of the magnitude of the particular item.

15. In summary, the estimates in this publication are subject to relatively high levels of sampling and non-sampling error. As a consequence, the statistics are not of as high a standard as usual in comparable ABS surveys of other industries. In this situation it is important for users to exercise the necessary caution in using estimates in this publication.

#### Survey Disclosure Rules

16. In accordance with the *Census and Statistics Act 1905* under which the information was collected, no data are published that would disclose the operations of an individual enterprise.

#### Accruals Basis

17. Respondents were asked to report all data on an accruals, rather than a cash basis of accounting; that is, to report data relating to income earned during the year, whether received or not, and to expenditure incurred during the year, whether paid or not.

### Definitions

18. The financial data in Tables 1, 2, 3, 7 and 8 relate to enterprises which operated at any time during 1987-88 and in Tables 5 and 6 relate to enterprises which were in operation at the end of the year.

*Enterprises at end June* is the number of enterprises in operation at end June 1988, excluding those which only operated earlier in the 1987-88 year. The sum of the State totals, however, does not equal the total for Australia. This is because enterprises can operate in more than one State. Consequently they can contribute to more than one State total. However, the same enterprise only contributes once to the total for Australia.

*Employment at end June* refers to full or part-time employees, and the proprietors, partners and principals of unincorporated enterprises. Note that in Table 3, the dissection of each State's total employment into the proprietors and employees categories has involved estimation of this dissection by ABS for enterprises operating in more than one State.

*Turnover* is gross income from computing and other services provided, and all other operating revenue. Turnover also includes the "secondary activities" of enterprises classified to this industry, as described in paragraph 9. Receipts from interest, dividends and sales of fixed tangible assets, royalties and licence fees are excluded. In Table 7, turnover is subdivided into nine broad categories. Care should be taken in using this data as some enterprises had difficulty estimating this dissection, particularly where sales are "bundled", for example, including consultancy, systems design and development, provision of hardware, maintenance and training as a package arrangement. Another difficulty exists where firms develop and then market multiple copies of software. Revenue in this situation has been included in either of the items "software consultancy and systems analysis, design and programming", or "royalties and licence fees" depending upon the circumstances under which products are marketed.

By convention, interest, royalties and licence fees are not included as part of turnover, but are listed separately in Table 7. Note that this also impacts on the definition of Gross Product and Net Operating Surplus.

*Gross Product* is turnover (as defined above) less business expenses except for staff expenses (wages and salaries, employer contributions to superannuation and pension schemes, workers' compensation insurance), depreciation and interest. This item is intended to approximate as closely as possible "gross product at factor cost" as defined for the Australian National Accounts.

*Net operating surplus* is turnover (as defined above) less business expenses except for non-operating expenses (particularly interest, royalties and licence fees). This item is a basic measure of operating profit (before income tax and non-operating income and expenses) for an industry. Note that for this item (and for Gross Product above) no account has been taken of the level of stocks held by enterprises. If there were large changes in the level of

stock holding, for example, of hardware items held for resale, then this would change the value of Net Operating Surplus (and Gross Product) in these statistics.

*Operating Expenses* refers to all business operating expenses but excludes interest, royalties and licence fees, income tax, dividends, capital losses and capital expenditure. A detailed dissection of operating expenses into eighteen separate items is given in Table 8. Note that:

*Wages and salaries* is gross earnings of employees before taxation and other deductions. Drawings of working proprietors, partners and principals of unincorporated enterprises are excluded.

*Total staff expenses* In Tables 1, 2 and 8, various items separately identified as expenses of employing staff have been grouped together as *total staff expenses*. Some staff expenses have not been included here, but are included in *other operating expenses*, for example, training costs and travelling expenses.

*Payments to sub-contractors and consultants* includes payments to other enterprises (apart from sales commissions), including self-employed persons, for carrying out work for the enterprises surveyed.

*Other operating expenses* includes all other operating expenses not already enumerated in Table 8. Examples include paper, printing and stationery, travelling expenses, legal and accounting expenses, telecommunications, staff recruitment costs, office supplies and consumables, cleaning expenses etc.

### Acknowledgement

19. A number of the comments made above have benefited considerably from the Canadian experience in surveying this industry, as discussed in the Statistics Canada publication, *Computer Services Industry, 1987*, Cat. No. 63-222, issued in March 1990.

### More detailed statistics for the Computing Services industry

20. More detailed statistics for the Computing Services industry for 1987-88 are presently being compiled and will be available later in 1990. These statistics are planned to examine the different operating characteristics, such as employment, turnover and net operating surplus, of:

- specialist enterprises
- small, medium and large enterprises
- enterprises operating in the various States

The statistics will also include additional details such as profitability and other operating ratios and detailed business expenses items. The information will be formatted to allow businesses to compare operations with ABS statistics for groups of similar businesses. However, the comments made earlier in these notes concerning certain deficiencies in the statistics, will not be resolved in sub-



sequent releases of statistics for 1987-88.

21. Please complete and return the form enclosed with this publication and ABS will advise you when these additional statistics become available.

#### Other Service Industries Survey publications

22. Summary statistics for each of the industries included in the 1987-88 Service Industries Survey have already been published in the bulletin *Professional and Business Services, Summary Statistics, Australia, 1987-88* (Cat. No. 8662.0). Statistics for other Professional and Business Services industries included in the 1987-88 ABS Service Industries Survey are being released during 1990. Publications for these industries will contain similar detail to the Computing Services industry publication. Refer to the form enclosed with this publication for particulars.

23. Statistics from the 1986-87 ABS Service Industries Survey are available at \$7.50 each from ABS bookshops (quote the catalogue number). This series included:

ASIC CODE	INDUSTRY	ABS CAT. NO.
5711	Motor vehicle hire	8652.0
5741	Travel agency services	8653.0
9133	Motion picture theatres	8654.0
9231	Cafes and restaurants	8655.0
9232-3	Hotels, bars and accommodation	8656.0
9241-3	Licensed clubs	8657.0
9340	Laundries and dry cleaners	8658.0
9351-2	Hairdressers and beauty salons	8659.0
9361	Photography services nec	8660.0
	Tourist attractions statistics	8661.0

#### Other ABS publications

24. Current publications produced by the ABS are listed in the *Catalogue of Publications and Products, Australia* (1101.0). The ABS also issues, on Tuesdays

and Fridays, a *Publications Advice* (1105.0) which lists publications to be released in the next few days. The Catalogue and Publications Advice are available from any ABS office.

#### Symbols and other usages

- n.a. not available
- nil or rounded to zero
- \* estimates preceded by an asterisk indicate a relative standard error for that estimate of more than 25 per cent

25. Where figures have been rounded, discrepancies may occur between the sums of the component items and totals.

#### Electronic Services

DISCOVERY. Key \*656# for selected current economic, social and demographic statistics.

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## SERVICE INDUSTRIES STATISTICS

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Service Industries Surveys — ABS (W71C)  
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Phone: 06 252 5633  
Fax: 06 251 6009

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## IF PAYMENT ENCLOSED:

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Australian Bureau of Statistics  
P.O. Box 10  
BELCONNEN ACT 2616

There will be two further releases of statistics during 1990 for each of the industries included in the 1987-88 Surveys. You can obtain copies of the publications now available by ticking the boxes below and sending your payment to ABS. If you wish to be added to our mailing list to be advised when further releases of statistics are made, tick the boxes for the relevant industries.

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