



CONSULTANT ENGINEERING SERVICES

AUSTRALIA

 EMBARGO: 11.30AM (CANBERRA TIME) THURS 3 JUL 2003

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- For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Dean Bloom on Brisbane 07 3222 6404.

NOTES

INTRODUCTION

This publication presents results in respect of the 2001–02 financial year from an Australian Bureau of Statistics (ABS) survey of consultant engineering businesses. This is the fourth time the ABS has conducted this survey. Previous statistics were released for 1987–88, 1992–93 and 1995–96.

The scope of the survey was all employing businesses classified to class 7823 (Consultant Engineering Services) of the *Australian and New Zealand Standard Industrial Classification* (ANZSIC). This class comprises businesses predominantly engaged in the provision of consultant engineering services.

COMPARISONS WITH PREVIOUS SURVEY RESULTS

This survey has been designed primarily to provide a measure of the financial and business structure of consultant engineering businesses operating in Australia. While comparisons are made between 2001–02 survey results and earlier iterations of the Consultant Engineering Services Survey, the survey has not been designed to provide highly accurate estimates of change, so any comparisons made to previous surveys should be used with caution. For further information, see paragraph 15 of the Explanatory Notes.

COMMENTS ON THIS PUBLICATION

The ABS welcomes comments and suggestions from users recommending industries and data items for inclusion in future surveys. These comments should be directed to The Director, Service Industries Business Statistics Centre, Australian Bureau of Statistics, GPO Box 2796Y, Melbourne Vic. 3001.

ROUNDING

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

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ABBREVIATIONS

ABN	Australian Business Number
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ATO	Australian Taxation Office
GDP	gross domestic product
GE	group employer
OPBT	operating profit before tax
PAYG	pay-as-you-go tax
PAYGW	pay-as-you-go withholding
RSE	relative standard error
SE	standard error
TAU	type of activity unit

R.W. Edwards
Acting Australian Statistician

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CHAPTER **1**

SUMMARY OF OPERATIONS

SUMMARY OF
OPERATIONS

At the end of June 2002, there were 10,984 businesses mainly providing consultant engineering services. This represents an average annual increase of 12.2% since June 1996.

There were 64,495 persons employed in consultant engineering businesses with 26,680 of these persons working as engineers and representing 41% of total employment. There were a further 14,138 contract persons providing engineering and related services.

During 2001–02, the total income of consultant engineering businesses was \$9,342 million. Total expenses for consultant engineering businesses were \$8,240 million. Labour costs were the highest single expense (\$3,616 million) representing 44% of total expenses.

Since 1995–96 operating profit before tax has increased from \$351 million to \$1,152 million in 2001–02. The operating profit margin increased from 11% in 1995–96 to 12.5% in 2001–02.

1.1

SUMMARY OF OPERATIONS

		1995-96	2001-02	Average annual percentage change
Businesses at end June	no.	5 514	10 984	12.2
Employment at end June	no.	30 736	64 495	13.1
Number of contract persons at end June	no.	8 212	14 138	9.5
Income				
Income from engineering services	\$m	3 032.9	8 931.3	19.7
Other income	\$m	200.3	^ 410.8	12.7
<i>Total</i>	\$m	3 233.3	9 342.0	19.3
Expenses				
Labour costs	\$m	1 241.6	3 616.3	19.5
Direct payments to contractors and subconsultants	\$m	498.6	1 216.7	16.0
Other expenses	\$m	995.9	3 406.5	22.7
<i>Total</i>	\$m	2 736.2	8 239.5	20.2
Operating profit before tax	\$m	351.0	^ 1 152.3	21.9
Operating profit margin	%	11.0	12.5	. .
Industry value added	\$m	na	^ 1 287.2	na

^ estimate has a relative standard error of between 10% and 25% and should be used with caution
. . not applicable
na not available

INCOME

In 2001–02, total income of the 10,984 consultant engineering businesses was \$9,342 million.

Income from consultant engineering services accounted for 96% (\$8,931 million) of total income, while 2% (\$214 million) was generated from the provision of quantity surveying services.

Sources of income for consultant engineering businesses were spread over a number of fields. Industrial/process engineering services, which accounted for 20% of total income, was the largest contributor. Other fields included Building/structural (9.5%), Electronic/power (7.8%), Oil and gas (7%), Building services (6.1%), Mining (6%) and Urban development (5.9%).

There were variations in average income per business from particular sources of engineering services. Businesses that sourced engineering income from Urban development had the highest average income per business of \$1,300,000 for that particular source and businesses that sourced engineering income from Roads and bridges had the next highest average income per business of \$1,047,000 for that source. Businesses that sourced engineering income from Material handling had the lowest average income per business of \$324,000 from that source.

EXPENDITURE

Total expenses for consultant engineering businesses in 2001–02 were \$8,240 million.

Labour costs was the most significant item, representing 44% (\$3,616 million) of total expenses. Direct payments to contractors/subconsultants accounted for a further 15% (\$1,217 million) of total expenses.

Other expenses included Rent, leasing and hiring (\$304 million), Travelling, accommodation and entertainment (\$183 million), Payments to employment agencies for staff (\$157 million) and Depreciation and amortisation (\$152 million).

**EMPLOYMENT AND
ACTIVITY OF PERSONS
WORKING**

At the end of June 2002, there were 64,495 persons employed in consultant engineering businesses. The majority (80%) were employed on a permanent full-time basis.

In addition to the 64,495 persons employed by consultant engineering businesses, there were 14,138 contract persons providing engineering and related services. Hence, at the end of June 2002, there were a total of 78,633 persons working in consultant engineering businesses. Of these, 60,604 (77%) were males.

There were 5,470 casual employees of consultant engineering businesses, of which 35% (1,902) were female.

EMPLOYMENT AND
ACTIVITY OF PERSONS
WORKING *continued*

The largest proportion of persons working in consultant engineering businesses (26,680 persons or 34%) were performing engineering activity. Of these, only 2,239 (8%) were female. Other activities measured were Administrative/clerical (13,898 persons), Project management (6,992 persons), Drafting (5,565 persons) and Quantity surveying (2,458 persons). Administrative/clerical was the only activity where females out-numbered males, accounting for 80% of persons for this activity.

2.1 SOURCES OF INCOME

	<i>Businesses(a)</i>	<i>Income</i>	<i>Contribution to total income</i>
	no.	\$m	%
Sales of goods and services			
Income from engineering services			
Building/structural	^ 1 831	^ 886.8	^ 9.5
Building services	* 804	^ 574.3	^ 6.1
Roads and bridges	* 483	^ 505.9	^ 5.4
Urban development	* 427	^ 554.9	^ 5.9
Communications and technology	* 586	^ 239.4	^ 2.6
Electronic/power	* 1 328	^ 728.1	^ 7.8
Industrial/process engineering	^ 2 657	^ 1 863.8	^ 20.0
Material handling	* 1 362	^ 441.3	^ 4.7
Mining	* 820	^ 557.1	^ 6.0
Oil and gas	* 1 278	^ 656.7	^ 7.0
Other engineering services	^ 3 801	1 923.0	20.6
<i>Total</i>	<i>10 590</i>	<i>8 931.3</i>	<i>95.6</i>
Income from quantity surveying	** 400	* 213.6	* 2.3
Rent, leasing and hiring income	* 889	^ 32.3	^ 0.3
<i>Total sales of goods and services</i>	<i>10 984</i>	<i>9 177.2</i>	<i>98.2</i>
Other income			
Interest income	^ 3 929	^ 33.6	^ 0.4
Other	^ 2 832	^ 131.2	^ 1.4
<i>Total</i>	<i>^ 4 752</i>	<i>^ 164.9</i>	<i>^ 1.8</i>
Total	10 984	9 342.0	100.0

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

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

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

(a) Businesses may have more than one source of income. Hence, the counts of businesses by income source do not sum to the total.

2.2

ITEMS OF EXPENDITURE

	<i>Expenditure</i>	<i>Contribution to total</i>
	\$m	%
.....		
Labour costs		
Wages and salaries	3 075.7	37.3
Employer contributions to superannuation	351.9	4.3
Workers' compensation costs	38.0	0.5
Fringe benefits tax	37.3	0.5
Payroll tax	113.4	1.4
<i>Total</i>	3 616.3	43.9
Other expenses		
Payments to employment agencies for staff	157.0	1.9
Direct payments to contractors/subconsultants	1 216.7	14.8
Land tax and rates	^ 9.8	^ 0.1
Travelling, accommodation and entertainment expenses	182.5	2.2
Telecommunications services	94.4	1.1
Motor vehicle running expenses	118.7	1.4
Repair and maintenance	59.5	0.7
Rent, leasing and hiring	304.2	3.7
Computer software expensed	^ 40.5	^ 0.5
Advertising, marketing, promotion and sponsorship	^ 38.9	^ 0.5
Insurance premiums	97.4	1.2
Interest expenses	50.6	0.6
Bank charges other than interest	13.9	0.2
Depreciation and amortisation	152.3	1.8
Bad and doubtful debts	39.5	0.5
Other operating expenses	2 047.4	24.8
<i>Total</i>	4 623.2	56.1
Total	8 239.5	100.0
.....		

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

2.3 CHARACTERISTICS OF EMPLOYMENT

PERSONS			
	Males	Females	Total
Working proprietors and partners at end June 2002	*858	*498	*1 356
Employees at end June 2002			
Permanent full-time	41 399	10 033	51 431
Permanent part-time	^ 2 207	^ 4 031	^ 6 238
Casuals	^ 3 568	^ 1 902	^ 5 470
Total employees	47 174	15 965	63 139
Total employment at end June 2002	48 031	16 463	64 495

- * estimate has a relative standard error of between 25% and 50% and should be used with caution
- ^ estimate has a relative standard error of between 10% and 25% and should be used with caution

2.4 MAIN ACTIVITY OF PERSONS WORKING

PERSONS			
	Males	Females	Total
Project management	6 488	*504	6 992
Engineering	24 442	2 239	26 680
Quantity surveying	^ 2 148	**310	^ 2 458
Drafting	4 802	^ 764	5 565
Administrative/clerical	^ 2 848	11 050	13 898
Other	7 303	^ 1 597	^ 8 901
Total employment at end June 2002	48 031	16 463	64 495
Contract persons providing engineering and related services	^ 12 572	^ 1 566	14 138
Total persons working at end June 2002	60 604	18 029	78 633

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

STATES AND
TERRITORIES

In 2001–02, most consultant engineering businesses were located in New South Wales (4,030 businesses), Victoria (3,089 businesses), Queensland (1,828 businesses) and Western Australia (1,454 businesses).

New South Wales accounted for 37% of businesses, but only contributed 27% to total income. However, both Queensland and Western Australia had high proportions of total income relative to the number of businesses. Queensland had 17% of businesses and 25% of total income and Western Australia had 13% of businesses and 16% of total income.

The average income per business in Australia was \$851,000 with the Northern Territory reporting the highest income per business of \$2,012,000. New South Wales reported the lowest at \$625,000.

Average income per person employed was \$145,000. This ranged from Tasmania with the lowest of \$101,000 per person employed, to Northern Territory with \$284,000 which was the highest. Queensland and Western Australia were both above the Australian average income per person employed with \$170,000 and \$175,000 respectively.

BUSINESS SIZE

Of the 10,984 consultant engineering businesses, 10,597 (96%) had employment of less than 20 persons. However these businesses contributed 36% (\$3,377 million) to total income. There were 47 businesses that had employment of 100 or more persons and they contributed 43% (\$4,033 million) of total income.

The average labour costs per employee for all consultant engineering businesses was \$56,100 which varied from \$40,000 for businesses with employment of less than four persons to \$70,900 for businesses employing 100 or more persons.

For consultant engineering businesses, 44% of expenses were for labour costs. A further 15% were for direct payments to contractors and subconsultants. When labour costs and direct payments to contractors and subconsultants are combined, this labour proportion of total expenses varies across the different employment ranges, from 47% for businesses employing 5–9 persons to 67% for those employing 0–4 persons and 10–19 persons.

The operating profit margin of all businesses was 12.5%, which ranged from 7.9% for businesses employing 50–99 persons, to 17.5% for business employing less than five persons.

3.1 STATES AND TERRITORIES

	<i>Businesses at end June(a)</i>	<i>Employment at end June</i>		<i>Wages and salaries</i>		<i>Total income</i>	
	no.	persons	%	\$m	%	\$m	%
New South Wales	4 030	20 891	32.4	961.2	31.3	2 517.4	26.9
Victoria	3 089	15 021	23.3	648.3	21.1	^ 2 169.9	23.2
Queensland	^ 1 828	13 787	21.4	672.8	21.9	^ 2 342.1	25.1
South Australia	604	^ 3 289	5.1	^ 144.0	4.7	388.5	4.2
Western Australia	^ 1 454	8 305	12.9	492.0	16.0	1 450.2	15.5
Tasmania	^ 156	^ 1 045	1.6	^ 44.0	1.4	^ 105.5	1.1
Northern Territory	^ 78	^ 552	0.9	^ 26.6	0.9	^ 156.9	1.7
Australian Capital Territory	*175	^ 1 605	2.5	^ 86.8	2.8	^ 211.5	2.3
Total	10 984	64 495	100.0	3 075.7	100.0	9 342.0	100.0

^ estimate has a relative standard error of between 10% and 25% and should be used with caution
 * estimate has a relative standard error of between 25% and 50% and should be used with caution
 (a) Multi-State businesses are counted in each state and territory in which they operated. Hence the counts of businesses for states and territories do not sum to the total for Australia.

3.2 BUSINESS SIZE

EMPLOYMENT SIZE

		0-4	5-9	10-19	20-49	50-99	100 or more	Total
		persons	persons	persons	persons	persons	persons	
Businesses at end June 2002	no.	9 183	^ 921	^ 493	^ 272	68	47	10 984
	%	83.6	8.4	4.5	2.5	0.6	0.4	100.0
Working proprietors and partners	persons	*961	**150	**163	*43	np	np	*1 356
Employees	persons	15 944	^ 6 170	^ 6 665	^ 7 909	np	np	63 139
Total employment at end June 2002	persons	16 905	^ 6 320	^ 6 827	^ 7 952	4 791	21 699	64 495
	%	26.2	9.8	10.6	12.3	7.4	33.6	100.0
Wages and salaries	\$m	557.2	^ 249.2	^ 297.8	^ 397.6	250.5	1 323.5	3 075.7
	%	18.1	8.1	9.7	12.9	8.1	43.0	100.0
Total income	\$m	^ 1 628.7	^ 948.7	^ 799.3	^ 1 246.6	685.4	4 033.2	9 342.0
	%	17.4	10.2	8.6	13.3	7.3	43.2	100.0
Operating profit before tax	\$m	*276.5	*79.8	*124.2	*203.9	53.1	^ 414.7	^ 1 152.3

^ estimate has a relative standard error of between 10% and 25% and should be used with caution
 * estimate has a relative standard error of between 25% and 50% and should be used with caution
 ** estimate has a relative standard error greater than 50% and is considered too unreliable for general use
 np not available for publication but included in totals where applicable, unless otherwise indicated

3.3

SELECTED RATIOS

EMPLOYMENT SIZE

		0-4 persons	5-9 persons	10-19 persons	20-49 persons	50-99 persons	100 or more persons	Total
Total income per person employed	\$'000	^ 96.3	^ 150.1	117.1	156.8	143.0	185.9	144.8
Income from engineering services to total income	%	95.0	97.6	85.2	93.8	92.3	98.6	95.6
Total expenses per person employed	\$'000	^ 80.0	^ 139.5	98.9	131.2	132.1	168.4	127.8
Labour costs per employee	\$'000	40.0	46.0	51.6	58.1	62.1	70.9	56.1
Labour costs to total expenses	%	^ 50.0	^ 33.0	52.2	44.3	47.0	42.1	43.9
Employed persons to contract persons	no.	^ 3.1	*3.6	*9.7	^ 6.6	11.6	4.8	4.6
Direct contractor/subconsultant payments to total expenses	%	*16.6	*13.8	^ 14.4	^ 15.2	7.9	15.5	14.8
Operating profit before tax per person employed	\$'000	*16.4	*12.6	*18.2	^ 25.6	11.1	^ 19.1	^ 17.9
Operating profit margin	%	^ 17.5	*8.5	*15.8	^ 16.9	7.9	^ 10.4	12.5

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

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

EXPLANATORY NOTES

- INTRODUCTION**
- 1** This publication presents results of employing consultant engineering businesses, for the reference year 2001–02. This is the fourth time the Australian Bureau of Statistics (ABS) has conducted this survey. Previous statistics were released for 1987–88, 1992–93 and 1995–96.
- SCOPE**
- 2** The scope of the survey was all employing businesses classified to class 7823 (Consultant Engineering Services) of the 1993 edition of the *Australian and New Zealand Standard Industrial Classification* (ANZSIC). This class comprises businesses predominantly engaged in the provision of consultant engineering services.
- COVERAGE**
- 3** The frame used for consultant engineering services, like most ABS economic surveys, was taken from the ABS Business Register. The ABS Business Register is primarily based on registrations to the Australian Taxation Office's pay-as-you-go withholding (PAYGW) scheme, and prior to 1 July 2000 the group employer (GE) scheme. The frame is updated quarterly to take account of new businesses and businesses which have ceased employing.
- 4** Businesses which have ceased employing are identified when the Australian Taxation Office (ATO) cancels their PAYGW registration (or previously their GE registration). In addition, from July 1999, businesses which did not remit under the GE scheme for the previous five quarters were removed from the frame. A similar process has recently been adopted to remove businesses which do not remit under the PAYGW scheme.
- 5** The introduction of The New Tax System has a number of significant implications for ABS business statistics, and these are discussed in the *Information Papers: ABS Statistics and The New Tax System* (cat. no. 1358.0) and *Improvements in ABS Economic Statistics [Arising from The New Tax System]* (cat. no. 1372.0).
- IMPROVEMENTS TO COVERAGE**
- 6** Data in this publication have been adjusted to allow for lags in processing new businesses to the ABS Business Register, and the omission of some businesses from the Register. The majority of businesses affected, and to which the adjustments apply, are small in size.
- 7** Adjustments have been made to include new businesses in the estimates in the periods in which they commenced operations, rather than when they were processed to the ABS Business Register. Adjustments of this type will continue to be applied in future periods.
- 8** For more information on these adjustments, please refer to the ABS publication *Information Paper: Improvements to ABS Economic Statistics, 1997* (cat. no. 1357.0).

STATISTICAL UNIT

9 In the Consultant Engineering Survey, the statistical unit used to represent businesses, and for which statistics are reported, is the Australian Business Number (ABN) unit, in most cases. The ABN unit is the business unit which has registered for an ABN, and thus appears on the ATO administered Australian Business Register. This unit is suitable for ABS statistical needs when the business is simple in structure. For more significant and diverse businesses where the ABN unit is not suitable for ABS statistical needs, the statistical unit used is the type of activity unit (TAU). A TAU is comprised of one or more business entities, sub-entities or branches of a business entity within an Enterprise Group that can report production and employment data for similar economic activities. When a minimum set of data items is available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of the Australian and New Zealand Standard Industrial Classification (ANZSIC)). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision and the TAU is classified to the predominant ANZSIC subdivision.

10 Further details about the ABS economic statistical units used in this survey, and in other ABS economic surveys (both sample surveys and censuses), can be found in Chapter 2 of the *Standard Economic Sector Classifications of Australia (SESCA), 2002* (cat. no. 1218.0).

COMPARISON WITH OTHER
ABS STATISTICS

11 Annual data for consultant engineering businesses is published in *Australian Industry* (cat. no. 8155.0). There are important differences between the statistics published in the *Australian Industry* and *Consultant Engineering Services* publications and users should use caution when making comparisons between the two sets of estimates. The estimates in the *Australian Industry* publication provide a consistent annual measure of economic activity by industry (as defined by the ANZSIC), which allows the analysis of year on year change in key data items for consultant engineering businesses.

12 The *Australian Industry* publication presents summary statistics for detailed ANZSIC classes. The aims of the publication are to show the relative importance of each industry class to the Australian economy, and to allow patterns of change of growth to be analysed across detailed segments of the Australian economy. The industry estimates presented in *Australian Industry* are used in the compilation of National Accounts, and in the derivation of economy-wide indicators such as gross domestic product (GDP).

13 The *Consultant Engineering Services* publication complements the annual series of key data items for the industry with a detailed examination of the structure of consultant engineering businesses for the reference year of the survey.

14 The main difference between the estimates for the two surveys was coverage of non-employed units in *Australian Industry*.

HISTORICAL COMPARISONS

15 While comparisons are made between 2001–02 and earlier survey results, the reader should bear in mind that the survey has not been designed to support accurate estimates of change and should exercise caution. It should be noted that compared to the 1995–96 and 2001–02 surveys, the 1987–88 and 1992–93 surveys used a different source for identifying the population of consultant engineering businesses.

STATE AND TERRITORY DATA

16 Data was collected from the Australia-wide operations of each consultant engineering business. Businesses which operated in more than one state or territory, were asked to provide a dissection of total income, employment and wages and salaries to enable state and territory statistics to be compiled and comparisons undertaken.

RELIABILITY OF THE DATA

17 When interpreting the results of a survey, it is important to take into account factors that may affect reliability of the estimates. Such factors can be classified as either sampling or non-sampling error. The estimates presented in this publication are subject to sampling and non-sampling error.

18 The estimates in this publication are based on information obtained from a sample of businesses in the surveyed population. Consequently, the estimates in this publication are subject to sampling variability, that is, they may differ from the figures that would have been obtained if all units had been included in the survey. One measure of the likely difference is given by the standard error (SE), which indicated the extent to which an estimate might have varied by chance because only a sample of units was included.

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

20 Sampling variability can be measure by the relative standard error (RSE) which is obtained by expressing the SE as a percentage of the estimate to which it refers. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and this avoids the need to refer also to the size of the estimate.

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

RELATIVE STANDARD ERRORS

	2001-02
	%
Businesses at end June	5.0
Employment at end June	3.8
Number of contract persons at end June	9.9
Income	
Income from engineering services	5.4
Other income	17.5
<i>Total</i>	5.2
Expenses	
Labour costs	3.7
Direct payments to contractors and subconsultants	9.8
Other expenses	7.0
<i>Total</i>	4.8
Operating profit before tax	12.3
Operating profit margin	9.3
Industry value added	11.2

22 As an example of the above, the estimate of total income for consultant engineering businesses is \$9,342 million (table 1.1) and the RSE for this item is 5.2 percent, giving an SE of \$485.8 million. Therefore, there would be two chances in three that, if all units had been included in the survey, a figure in the range of \$8,856.2 million to \$9,827.8 million would have been obtained, and 19 chances in 20 (i.e. a confidence interval of 95%) that the figure would have been within the range of \$8,370.4 million to \$10,313.6 million.

RELIABILITY OF THE DATA

continued

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

REFERENCE PERIOD

24 Data contained in the tables in this publication relate to consultant engineering businesses which operated in Australia at any time during the year ended June 2002. Counts of businesses include only those businesses that were operating at 30 June 2002.

DATA AVAILABLE ON REQUEST

25 For information about these statistics, or the provision of unpublished data, please contact Ann Santo on 03 9615 7910.

ACKNOWLEDGEMENT

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

GLOSSARY

Administrative/clerical	This item refers to staff involved in office management, accounting, information technology or clerical functions which provide administrative support to the major activities of the consultant engineering business.
Average annual percentage change	<p>A percentage change, p, from 1995–96 to 2001–02 is converted into an average annual change, a, as follows.</p> $a = (1 + p)^{1/6} - 1$ <p>The average annual percentage change is not an arithmetic average of the actual percentage changes from year to year. It is labelled the 'average' change because if any value increases by a% every year for six years, then at the end of the six years it will have grown by a total p%.</p>
Bad and doubtful debts	Bad and doubtful debts is the amount of accounts receivable that are either written off, or estimated to be uncollectable during an accounting period, that are expenses in a period's profit calculations.
Building/structural	This income item refers to commercial and domestic construction (including high rise).
Building services	This item includes building services such as lifts, plumbing, air conditioning, security and wiring.
Casual employees	These are persons employed by the business who are not entitled to take paid holidays.
Communications and technology income	This item includes income generated from work in the areas of telecommunications, information technology and software development. It does not include income from the design or installation of electrical work, which is included under Electronic/power and Building services respectively.
Computer software expenses	Computer software expenses is the cost of computer software that has been fully charged to profit as an expense in the current accounting period.
Contract persons	These are persons paid for by the engineering business, for whom pay-as-you-go tax (PAYG) is not deducted.
Depreciation and amortisation	Financial charges made to the accounts to reflect that part of the value of the asset which may be regarded as having been used up in producing revenue in a particular accounting period. Depreciation generally refers to physical (tangible) non-current assets, and amortisation generally refers to intangible non-current assets.
Direct payments to contractors/subconsultants	This item includes payments to contractors and subconsultants to provide engineering services.
Drafting	To draw up engineering or architectural plans in the written form.
Electronic/power	Income from this item relates to industries which investigate and apply the movement of electrons in valves and semiconductors to produce power.
Employees	Employees are all persons who receive remuneration in any part of the reference period, excluding working proprietors and partners, external consultants and subcontractors. This item includes working directors, and other employees working for the business during the last pay period ending in June. Employees absent on paid or prepaid leave are included.

Employer contributions to superannuation funds	Employer contributions to superannuation funds are the cost of the employer's superannuation contributions during the reference period made on behalf of employees including salary sacrificed amounts.
Employment at end June	Employment represents all employees and working proprietors and partners on the payroll for the last pay period ending in June 2002. Employees absent on paid or prepaid leave are included. Non-salaried directors, subcontractors and persons solely paid by commission without a retainer are excluded.
Fringe benefits tax	Fringe benefits tax is payable by employers when certain benefits in excess of normal wages or salaries (e.g. free or discounted goods or services) are received by their employees (or associates of employees) in connection with their employment.
Full-time employees	This item refers to those who work 35 hours or more per week and are entitled to paid leave.
Income from engineering services	This includes income from the provision of consultant engineering services but excludes income from engineering services such as cadastral or other surveying, town planning or engineering construction.
Industrial/process engineering income	This item includes income generated from the planning, organising, supervision and management of the operations of industries to ensure economical, safe and effective use of materials, energy and people. It includes the responsibility for developing and implementing manufacturing processes and standards as well as ensuring efficiency and quality of product.
Industry value added	This item represents the value added to the economy by the industry. It is calculated as the sales of goods and services plus government subsidies and changes in levels of trading inventories, minus purchases of goods and selected expenses.
Insurance premiums	Expenses incurred by a business in respect of different types of insurance policies but excluding workers' compensation and compulsory third party motor vehicle insurance.
Interest expenses	Outflows of funds related to the cost of borrowing money. This item includes interest on bank loans, loans from partners, interest in respect of finance leases, interest equivalents such as hedging costs and expenses associated with discounted bills.
Interest income	This item includes income earned through the lending out funds owned by the entity, including interest received from bank accounts, loans and finance leases, and earnings on discounted bills.
Labour costs	This item includes staff-related costs such as wages and salaries, employer contributions to superannuation funds, workers' compensation costs, fringe benefits tax and payroll tax.
Land tax and rates	Land tax is an annual tax assessed to the owner of the land. Land rates are annual charges levied by local government for the provision of local government services. This is a combination of these two items.
Material handling	The handling of crude or raw matter for working upon or developing.
 Mining	This income item refers to the action, process, or industry of extracting ores, etc., from mines.
Motor vehicle running expenses	Costs incurred using 'on-road' motor vehicles owned by the business for business purposes. These include parking fees, bridge or road tolls, fuel and oil expenses, repair and maintenance expenses, registration fees and compulsory third party insurance premiums.
Oil and gas	Oil relates to any of a large class of hydrocarbons or esters which are used for anointing, perfuming, lubricating, illuminating, heating, etc. Gas is a substance consisting of atoms or molecules which are sufficiently mobile for it to occupy the whole of the space in which it is contained.

Operating profit before tax (OPBT)	Operating profit before tax is a measure of profitability of a business during the reference period, taken before extraordinary items are brought into account and prior to the deduction of income tax and appropriations to owners (i.e. dividends paid, drawings). It is generally derived by subtracting total expenses from total income, and adding the difference between closing inventory and opening inventory for the period.
Operating profit margin	This represents the percentage of a business' sales of goods and services which becomes profit after all operating expenses have been deducted. It is derived by expressing total OPBT as a percentage of total sales of goods and services.
Other engineering services	This includes consultant engineering services not elsewhere classified such as hydraulic engineering, marine engineering, feasibility and planning studies and drawing office services.
Other operating expenses	This item includes payments for incentives, royalties, electricity costs, accounting fees, fringe benefits costs, license fees and advertising costs.
Payments to employment agencies for staff	These are payments made to an employment agency for the supply or recruitment of staff.
Payroll tax	This item is a tax levied by state and territory governments upon the amount of wages and salaries paid by a business.
Permanent part-time employees	This item refers to those who work less than 35 hours per week and are entitled to paid leave.
Project management	The overall planning and management activities of a large scale project in its entirety.
Quantity surveying	A branch of engineering related to the measurement of materials required for a project.
Telecommunications services expenses	This item includes all payments (of a non-capital nature) for telecommunication services which engage wire, cable or radio transmission. They include the cost of fixed and mobile telephone services, facsimile services, internet services and leased lines for computers.
Travelling, accommodation and entertainment expenses	Costs incurred for transportation or in providing accommodation to staff when business activities occur away from the normal place of business. Entertainment expenses are the costs incurred for the provision of entertainment activities, either for staff of the business or clients.
Urban development	This item includes development aspects such as traffic, transportation and water.
Wages and salaries	This item refers to the gross wages and salaries (including capitalised wages and salaries) of all employees of the business. The item includes severance, termination and redundancy payments, salaries and fees of directors and executives, retainers and commissions of persons who received a retainer, bonuses, and annual and other types of leave. Provision expenses for employee entitlements (e.g. provisions for annual leave and leave bonus, long service leave, sick leave, and severance, termination and redundancy payments) are also included. Payments related to consultants, subcontractors and persons paid solely by commission without a retainer are excluded.
Workers' compensation costs	This item refers to compulsory insurance cover taken out by all employers, except for self-insured workers, according to legislative schemes to cover employees suffering injury or disease in the course of or arising out of employment.
Working proprietors and partners of unincorporated businesses	This includes working partners and proprietors of unincorporated businesses, and working principals or directors of incorporated businesses.

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ISBN 0 642 47848 1

RRP \$20.00