

SUMMARY ONLY

Australian ICT Industries Update 2003

by

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Preface

This report is part of a series of statistical updates on the information and communication technology industries and their markets. The series aims to provide consistent compilations of statistics on a core set of topics, namely: the ICT industry, the Australian market for Information and Communication Technology (ICT) products and services, and Australia's international trade in ICTs.

For the last two years The Australian Computer Society, through its Computer Systems and Software Engineering Board, has sponsored these updates. They are produced by Professor John Houghton of the Centre for Strategic Economic Studies, Victoria University, Melbourne. The Australian Computer Society exercises no editorial control over the reports.

The series to date includes:

- *Information Industries Update 1999* – Houghton, J.W. (1999), Centre for Strategic Economic Studies, Victoria University, Melbourne.
- *Information Technology Trade Update 1999* – Houghton, J.W. (1999), Centre for Strategic Economic Studies, Victoria University, Melbourne.
- *Information Industries Update 2001* – Houghton, J.W. (2001), Centre for Strategic Economic Studies, Victoria University, Melbourne.
- *Australian ICT Trade Update 2001* – Houghton, J.W. (2001), Centre for Strategic Economic Studies, Victoria University, Melbourne.
- *Australian ICT Trade Update 2002* – Houghton, J.W. (2002), Centre for Strategic Economic Studies, Victoria University, Melbourne.

The ICT Update Reports are updated regularly. They can be ordered from the Centre for Strategic Economic Studies. (See <http://www.cfses.com/infoind.htm>).

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Executive Summary

This report is the sixth in a series of statistical updates on Australia's Information and Communication Technology (ICT) industries. It includes analyses of ICT industry employment, business operations and activities. It features in-depth analyses of ICT related research and development (R&D), employment and business activity State-by-State.

Employment in the Australian ICT industry

The ICT industry employed around 274,000 people in 2001 – approximately 3% of Australia's working population. The information and communication services sectors were the largest, together accounting for 63% of the total.

The number of people employed increased by 7% per annum between 1993 and 2001. Job growth in the information services sector was strong throughout the 1990s, increasing by almost 16% per annum. More mixed employment patterns have been exhibited by other sectors. ICT equipment manufacturing employment accounted for 7.7% of total employment in 1993, but by 2001 its share had fallen to less than 5%.

Jobs in the ICT industry continue to be a relatively highly paid. The industry (excluding the content sector) spent \$14 billion on wages and salaries during 2000-01. The average wage paid was \$58,951 per annum.

Less than half of one per cent of those engaged in the ICT industry in 2001 were proprietors or partners.

Perhaps surprisingly, the ICT industry appears to be male dominated. Almost 67% of all those employed in the industry in 2001 were male, compared with less than 56% of all employed persons in Australia.

There is some evidence of a declining ICT skills in the industry, with the proportion of those in computing and technical occupations almost 9 percentage points lower in 2001 than it had been in 1999. Employment growth in the ICT industry over the two years 1999 to 2001 was driven by increases in non-technical jobs.

More recent labour force data suggest that employment in the ICT industry has been falling since 2001.

Business operations in the Australian ICT industry

There were around 25,200 businesses operating in the Australian ICT Industry in 2001. No less than 73% were information services businesses, the number of which has increased by around 18% per annum since 1993.

The ICT industry is dominated by small businesses. In 2001, almost 96% of all specialist ICT businesses operating in Australia employed less than 20 people.

Foreign ownership is extensive. In 1998-99, foreign-owned businesses accounted for 43% of all employment in the industry and earned 60% of total ICT income. ICT businesses with majority ownership from the United States employ almost as many Australians as do Australian-owned businesses. Income per person employed in foreign-owned businesses is higher than in Australian-owned businesses.

The total income of specialist businesses in the Australian ICT industry reached just over \$80 billion in 2000-01, having increased by around 13% per annum since 1992-93.

ICT industry income is dominated by communications and distribution activities relating to imported ICT equipment. Income from local ICT equipment manufacturing is relatively modest.

Income growth has been strongest for businesses in the distribution (wholesaling) sector. Businesses in the information services sector also enjoyed strong income growth. The slowest income growth was in ICT equipment manufacturing.

Total operating expenditures of specialist ICT businesses in Australia amounted to more than \$73 billion in 2000-01. Labour costs accounted for 22%. ICT usage related expenditures accounted for just over 42%, significantly higher than the level reported in 1998-99.

The recent downturn in the ICT industry is reflected in declining profit margins. Communication services continue to be the most profitable sector in the ICT industry, reflecting industry concentration and the dominance of Telstra in some market segments. Other sectors are much less profitable.

In 2000-01, the distribution and sale of imports accounted for 23.5% of total industry income. Imports accounted for 46% of income from the sale of packaged software, and almost 64% of income from sales of hardware.

State location of ICT industry activities

Almost 44% of all jobs in the ICT industry are in New South Wales (NSW). Victoria accounts for 30%.

Differences between the States in terms of ICT industry job growth are marked. Between 1996 and 2001, ICT industry jobs in the ACT grew by 8.2% per annum, jobs in Western Australia by 4.2% per annum and jobs in Victoria by 3.5% per annum. NSW, Queensland, the Northern Territory, South Australia and Tasmania all experienced below average job growth.

The ACT has the highest ICT industry employment intensity of any State or Territory, with almost 25 ICT industry jobs per 1,000 population in 2001. NSW had around 17.5 and Victoria had 16. All other States were below the national average of 13.5 per 1,000 population.

In 2001, NSW was the base for 42% of all specialist businesses in the ICT industry. Victoria was the base for 30% and Queensland came a relatively distant third, accounting for fewer than 12%.

Over the five years to 2001, rates of growth in the number of ICT businesses varied from a high of 11.6% per annum in Queensland to a low of 4.3% in South Australia (4.3% pa).

Innovation in ICTs

Almost \$1.9 billion was spent on information and communication services related R&D as a socio-economic objective in 2000-01, of which just over \$1.5 billion related to software and services and \$350 million related to hardware. The largest individual category (objective) was computer software & services at \$859 million (46% of total). Communication services was the next largest category at \$605 million (32% of total).

Forty-two per cent of ICT related R&D expenditure occurred in NSW. Victoria accounted for 38%, Queensland for 7%, South Australia for 5%, Western Australia and the ACT for 3% each, Tasmania and the Northern Territory for less than 1%.

Business expenditure on ICT related R&D objectives amounted to almost \$1.7 billion in 2000-01, of which \$1.4 billion was spent on software & services and \$325 million was spent on hardware. NSW accounted for the largest share, at 43%.

Higher education expenditure on ICT related R&D objectives amounted to \$142 million in 2000, of which \$126 million was spent on software & services and \$16 million was spent on hardware. Victoria accounted for the largest share (29%). NSW was a close second (25%).

Commonwealth Government expenditure on ICT related R&D objectives amounted to just over \$60 million in 2000-01, of which \$50 million was spent on software & services and \$10 million was spent on hardware. Commonwealth Government expenditure is concentrated in NSW (48%) and the ACT (25%).

State Government expenditure on ICT related R&D objectives is very small, amounting to just \$2.5 million in 2000-01 – of which more than \$2.3 million was spent on software & services and the remaining \$120,000 was spent on hardware. South Australia received the largest share (34%).

Australian domestic market for ICTs

Estimating the size of the domestic market from ICT industry sales suggests that the market for ICT products and services was worth \$61.5 billion in 2000-01. Communication services accounted for 49% of the total, hardware accounted for 25%, and information services for 24%.

Over the period 1995-96 to 2000-01, domestic market revenues increased by around 10% per annum. The information services market was the fastest growing at almost 14% per annum – with strong growth in computer consultancy and software maintenance services. The communication services market grew by 11% per annum, and the market for ICT hardware grew by just 7% per annum. The communications equipment and mobile markets appear to have enjoyed strong growth, while markets for cables, printers, consumables and some desktop systems declined.

Table of Contents

1	INTRODUCTION.....	1
1.1	OUTLINE OF THIS REPORT	1
2	DEFINING ICTS AND THE ICT INDUSTRIES	3
2.1	MAPPING ICTs.....	3
3	THE AUSTRALIAN ICT INDUSTRY	7
3.1	EMPLOYMENT IN THE ICT INDUSTRY	7
3.1.1	<i>Employment by sector.....</i>	7
3.1.2	<i>Employment trends in the ICT industry</i>	8
3.1.3	<i>Entrepreneurship and professionalisation in the ICT industry</i>	10
3.1.4	<i>Recent employment trends: is there a downturn?.....</i>	12
3.2	NUMBER OF BUSINESSES IN THE ICT INDUSTRY	14
3.2.1	<i>ICT businesses by sector.....</i>	14
3.2.2	<i>ICT business size.....</i>	15
3.3	ICT INDUSTRY INCOME	17
3.3.1	<i>Income by sector.....</i>	17
3.3.2	<i>Income growth trends by sector.....</i>	19
3.3.3	<i>Income per employee.....</i>	20
3.4	INDUSTRY EXPENDITURES	21
3.4.1	<i>Wages and salaries.....</i>	23
3.5	PROFIT MARGINS IN THE ICT INDUSTRY	23
3.6	SPECIALISATION IN THE ICT INDUSTRY	24
3.7	LOCAL PRODUCTION, IMPORTS AND EXPORTS	25
3.8	FOREIGN OWNERSHIP IN THE ICT INDUSTRY	27
4	THE LOCATION OF ICT INDUSTRY ACTIVITY	31
4.1	LOCATION OF ICT INDUSTRY BUSINESSES	31
4.2	LOCATION OF ICT INDUSTRY JOBS.....	34
4.3	ICT INTENSITY STATE-BY-STATE	38
5	INNOVATION IN ICT INDUSTRIES AND TECHNOLOGIES	41
5.1	R&D IN THE ICT INDUSTRY	41
5.1.1	<i>R&D in ICT manufacturing industry.....</i>	41
5.1.2	<i>R&D intensity in ICT manufacturing.....</i>	44
5.2	R&D IN INFORMATION AND COMMUNICATION TECHNOLOGIES	44
5.2.1	<i>ICT sciences R&D as a field of research.....</i>	45
5.2.2	<i>ICT R&D as a socio-economic objective.....</i>	48

5.3	ICT R&D ACTIVITY BY SECTOR, OBJECTIVE AND LOCATION.....	50
5.3.1	<i>Business expenditure on ICT R&D by objective and state.....</i>	<i>52</i>
5.3.2	<i>Higher education expenditure on ICT R&D by objective and state.....</i>	<i>54</i>
5.3.3	<i>Commonwealth expenditure on ICT R&D by objective and state.....</i>	<i>56</i>
5.3.4	<i>State government expenditure on ICT R&D by objective and state.....</i>	<i>58</i>
5.3.5	<i>Private non-profit organizations expenditure on ICT R&D.....</i>	<i>58</i>
6	CONTRIBUTION TO THE NATIONAL ECONOMY.....	61
6.1	CONTRIBUTION TO VALUE ADDED.....	61
6.2	CONTRIBUTION TO EMPLOYMENT.....	63
6.3	CONTRIBUTION TO THE TRADE.....	64
7	THE ICT MARKET IN AUSTRALIA.....	67
7.1	THE AUSTRALIAN ICT MARKET.....	67

List of Tables

TABLE 3.1	EMPLOYMENT IN THE ICT INDUSTRY, 1993 TO 2001	8
TABLE 3.2	EMPLOYMENT CHARACTERISTICS IN THE ICT INDUSTRY, 1999-2001	10
TABLE 3.3	EMPLOYMENT BY ACTIVITY, 2001	11
TABLE 3.4	QUARTERLY ICT INDUSTRY EMPLOYMENT, 2001 AND 2002	13
TABLE 3.5	NUMBER OF BUSINESSES IN THE ICT INDUSTRY, 1993 TO 2001	15
TABLE 3.6	SIZE OF ICT BUSINESSES BY EMPLOYMENT, 1993 AND 2001	16
TABLE 3.7	ICT INDUSTRY INCOME, 1992-93 TO 2000-01	18
TABLE 3.8	ICT INDUSTRY INCOME PER EMPLOYEE, 1992-93 TO 2000-01	21
TABLE 3.9	EXPENDITURES BY SPECIALIST ICT BUSINESSES, 2000-01	22
TABLE 3.10	WAGES AND SALARIES, 2000-01	23
TABLE 3.11	OPERATING PROFIT MARGIN 1995-96 TO 2000-02	24
TABLE 3.12	SPECIALISATION IN THE ICT INDUSTRY, 2000-01	24
TABLE 3.13	INCOME SHARES OF OWN PRODUCTION, IMPORTS AND EXPORTS	27
TABLE 3.14	FOREIGN OWNERSHIP AMONG ICT SPECIALISTS, 1998-99	28
TABLE 3.15	FOREIGN OWNERSHIP IN ICT INDUSTRY BY COUNTRY, 1998-99.....	29
TABLE 4.1	SPECIALIST ICT BUSINESSES BY STATE AND SECTOR, 2001	33
TABLE 4.2	JOBS IN SPECIALIST ICT BUSINESSES BY STATE, 2001	34
TABLE 5.1	R&D IN ICT MANUFACTURING INDUSTRIES, 1994-95 TO 2000-01.....	42
TABLE 5.2	R&D INTENSITY IN ICT MANUFACTURING INDUSTRIES, 2000-01	44
TABLE 5.3	ICT SCIENCES R&D AS A FIELD OF RESEARCH (FOR), 2000-01	46
TABLE 5.4	BUSINESS R&D EXPENDITURE ON ICT SCIENCES (FOR), 2000-01.....	47
TABLE 5.5	ICT R&D AS A SOCIO-ECONOMIC OBJECTIVE (SEO), 2000-01	48
TABLE 5.6	BUSINESS R&D EXPENDITURE ON ICTS, 2000-01(SEO)	49
TABLE 5.7	ICT R&D EXPENDITURE BY OBJECTIVE AND STATE, 2000-01 (\$M).....	51
TABLE 5.8	BUSINESS EXPENDITURE ON ICT R&D BY OBJECTIVE AND STATE	52
TABLE 5.9	HIGHER EDUCATION EXPENDITURE ON ICT R&D BY STATE	54
TABLE 5.10	COMMONWEALTH EXPENDITURE ON ICT R&D BY STATE	56
TABLE 5.11	STATE EXPENDITURE ON ICT R&D BY OBJECTIVE AND STATE	58
TABLE 7.1	THE AUSTRALIAN DOMESTIC MARKET OF ICT INDUSTRY BUSINESSES (\$M)	68

List of Figures

FIGURE 2.1	THE ICT MAP	4
FIGURE 2.2	THE ICT MAP WITH APPROXIMATE ANZSIC MAPPING	6
FIGURE 3.1	SECTOR SHARES OF EMPLOYMENT IN THE ICT INDUSTRIES, 2001 (%).....	7
FIGURE 3.2	EMPLOYMENT IN ICT INDUSTRY, 1993 TO 2001	9
FIGURE 3.3	EMPLOYMENT IN ICT INDUSTRY BY JOB AND GENDER, 1999 AND 2001	12
FIGURE 3.4	QUARTERLY ICT INDUSTRY EMPLOYMENT, 2001 AND 2002 (INDEXED).....	13
FIGURE 3.5	SHARE OF ICT BUSINESSES BY SECTOR, 2001 (%).....	14
FIGURE 3.6	ICT BUSINESS SIZE, 2001 (SHARE)	16
FIGURE 3.7	ICT INDUSTRY INCOME BY SECTOR, 2000-01 (%).....	17
FIGURE 3.8	PERCENTAGE CHANGE IN INDUSTRY INCOME, 1992-93 TO 2000-01 (%).....	19
FIGURE 3.9	PERCENTAGE CHANGE IN INDUSTRY INCOME, 1992-93 TO 2000-01 (%).....	20
FIGURE 3.10	EXPENDITURE SHARES IN ICT INDUSTRY SECTORS, 2000-01 (%)	22
FIGURE 3.11	INCOME SHARES OF OWN PRODUCTION, IMPORTS AND EXPORTS, 2000-01	25
FIGURE 3.12	CHANGE IN THE SHARE OF DOMESTIC PRODUCTION IN TOTAL INCOME (%)	26
FIGURE 3.13	SHARES OF EMPLOYMENT AND INDUSTRY INCOME BY OWNERSHIP (%).....	28
FIGURE 4.1	STATE LOCATION OF ICT BUSINESSES, 2001 (%).....	31
FIGURE 4.2	LOCATION BY ICT INDUSTRY BY SECTOR, 2001 (%)	32
FIGURE 4.3	GROWTH IN ICT BUSINESSES BY STATE, 1996-2001 (% PER ANNUM).....	34
FIGURE 4.4	LOCATION OF ICT INDUSTRY JOBS BY STATE, 2001 (%)	35
FIGURE 4.5	LOCATION OF ICT INDUSTRY JOBS BY SECTOR, 2001 (%)	36
FIGURE 4.6	PERCENTAGE CHANGE IN THE NUMBER OF JOBS BY STATE, 1996 TO 2001	38
FIGURE 4.7	ICT INDUSTRY EMPLOYMENT INTENSITY BY STATE, 2001.....	39
FIGURE 5.1	ICT MANUFACTURING INDUSTRIES' R&D EXPENDITURES BY STATE (%)	43
FIGURE 5.2	SHARE OF R&D EXPENDITURE ON ICT SCIENCES (FOR), 2000-01.....	45
FIGURE 5.3	COMPOSITION OF BUSINESS R&D EXPENDITURE ON ICT SCIENCES, 2000-01..	47
FIGURE 5.4	SHARE OF R&D EXPENDITURE ON ICTs (SEO), 2000-01 (%)	49
FIGURE 5.5	SHARE OF TOTAL ICT R&D EXPENDITURE BY OBJECTIVE, 2000-01	50
FIGURE 5.6	STATE SHARES OF TOTAL ICT R&D EXPENDITURE, 2000-01	51
FIGURE 5.7	BUSINESS EXPENDITURE ON ICT R&D BY OBJECTIVE, 2000-01	53
FIGURE 5.8	BUSINESS EXPENDITURE ON ICT R&D BY STATE, 2000-01.....	53
FIGURE 5.9	HIGHER EDUCATION EXPENDITURE ON ICT R&D BY OBJECTIVE, 2000	55
FIGURE 5.10	HIGHER EDUCATION EXPENDITURE ON ICT R&D BY STATE, 2000	55
FIGURE 5.11	COMMONWEALTH EXPENDITURE ON ICT R&D BY OBJECTIVE, 2000-01	57
FIGURE 5.12	COMMONWEALTH EXPENDITURE ON ICT R&D BY STATE, 2000-01	57
FIGURE 5.13	STATE GOVERNMENT EXPENDITURE ON ICT R&D BY OBJECTIVE, 2000-01	59
FIGURE 5.14	STATE GOVERNMENT EXPENDITURE ON ICT R&D BY STATE, 2000-01	59
FIGURE 6.1	SHARE OF ICT INDUSTRY VALUE ADDED, 2000 (%)	61
FIGURE 6.2	SHARE OF ICT MANUFACTURING VALUE ADDED, 2000 (%)	62
FIGURE 6.3	SHARE OF ICT SERVICES VALUE ADDED, 2000 (%)	63
FIGURE 6.4	SHARE OF ICT INDUSTRY EMPLOYMENT, 2000 (%).....	64
FIGURE 6.5	SHARE OF ICT SECTOR EXPORTS, 2000 (%).....	65
FIGURE 6.6	ICT SECTOR TRADE BALANCE, 2001 (%)	65
FIGURE 7.1	AUSTRALIAN ICT MARKET SHARES, 2000-01 (%)	67
FIGURE 7.2	COMPOSITION OF THE AUSTRALIAN ICT MARKET, 1992-93 TO 2000-01 (\$M).69	