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2 August 2007, no. 3, 2007–08, ISSN 1834-9854

The statistical evidence for offshore outsourcing and its impact on the Australian labour force

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Executive summary

- The outsourcing of services jobs to offshore economies has attracted a lot of media attention.
- Despite the interest in Australia, there are no official statistics that specifically measure this phenomenon.
- OECD research has identified trade and employment statistics which can be used as a proxy for the impact of offshoring in developed economies such as Australia.
- Analysis of these data indicate that, in terms of employment, Australia is a net beneficiary in the international trade in services and, therefore, of offshoring.

Introduction

In the 1970s and 1980s the reduction of trade barriers and developments in transport exposed manufacturing jobs to international competition. Now developments in information and communications technology (ICT) are exposing service based jobs to the same competitive forces. This has created a great deal of concern about the loss of service based jobs to overseas markets. Reports now regularly appear in newspapers and journals about this issue.

A survey of the Parliamentary Library's database of newspaper articles[1] revealed 264 articles on this subject in Australia's major newspapers in 2006. This issue was also the focus of a Parliamentary Library research brief in 2005, which examined the issues involved and the pros and cons of offshoring.[2]

1. Parlinfo.
2. Dr Richard Grant, 'Offshoring jobs: US and Australian perspectives', Research Brief, Parliamentary Library, no. 12, 2004–05.

However, despite the media interest in this topic it is very difficult to quantify this phenomenon. This is because there are no official statistics that directly measure if there is a loss of jobs to offshoring. Most of the information in the press relies upon the offshoring activities of specific high profile companies, such as Qantas or the major banks.

The Finance Sector Union (FSU) has attempted to measure the situation and claims that about five thousand jobs have been outsourced overseas by well known Australian companies in the last two years.[3] It also made claims that up to twenty per cent of Australian jobs could eventually be affected.

The Organisation for Economic Development and Cooperation (OECD) has also attempted to quantify the issues relating to offshoring for a selected group of economies including Australia. Some of the claims in the FSU report were sourced from the findings in the OECD report.

The OECD report

The OECD released its report on the potential impact of offshoring in 2005.[4] In this report the OECD used official statistics on trade and employment to examine the impact of offshoring on the labour markets of these economies. The following will examine the Australian trends using the statistics highlighted by the OECD report.

Trade

An economy's trade statistics can provide information about the international competitiveness and demand for an economy's goods and services. Trade surpluses in individual goods and services indicate areas of comparative advantage. Those areas experiencing strong and or growing surpluses may also indicate growing levels of employment in the relevant occupations. Trade deficits may indicate job losses.

Table 1: Services trade balance (a) $m

Year to June 30	Total services	Computer and information services	Other business services
1996	- 349	15	- 984
1997	587	27	- 747
1998	- 568	207	- 676
1999	- 777	273	- 569
2000	231	73	50
2001	2 131	-4	479
2002	2 027	132	- 74
2003	2 524	129	322
2004	2 050	165	493
2005	380	156	949
2006	771	131	1 352

(a) a negative sign equals a trade deficit

3. *Off-shoring a joint policy paper by the Finance Sector Union of Australia, Australian Services Union, Communications, Electrical and Plumbing Union (Communications Division) and the Community and Public Sector Union*, June 2006.

4. Desiree van Welsum and Xavier Reif, *Potential offshoring: evidence from selected OECD countries*, OECD, July 2005. The countries looked at were Canada, USA and the EU15 excluding Greece, Ireland, Luxembourg, and Portugal.

Source*: International Trade in Goods and Services*, ABS catalogue No.5368.0.

In order to ascertain the impact of offshoring on employment in service based occupations the OECD examined the trade data in ICT-enabled services. Specifically this related to trade in 'computers and information services' and 'other business services'.

In recent years Australia has experienced strong growth in exports in these two categories. In the period 2000–01 to 2005–06 exports for these two categories have grown at an annual average rate of 6.5 per cent, which is twice the rate of total services exports. The OECD analysis found that exports appeared to have a positive impact on employment growth in offshore exposed occupations.

Table 2: - Occupations potentially affected by offshoring (a)

Engineering managers	Legal Professionals
Information Technology Managers	Economists
Sales and Marketing Managers	Urban and Regional Planners
Policy and Planning Managers	Journalists and Related Professionals
Chemists	Authors and Related Professionals
Geologists and Geophysicists	Branch Accountants and Managers (Financial Institution)
Life Scientists	Financial Dealers and Brokers
Environmental and Agricultural Science Professionals	Financial Investment Advisers
Medical Scientists	Computing Support Technicians
Other Natural and Physical Science Professionals	Customer Service Managers
Architects and Landscape Architects	Other Managing Supervisors (Sales and Service)
Quantity Surveyors	Secretaries and Personal Assistants
Cartographers and Surveyors	Bookkeepers
Civil Engineers	Credit and Loans Officers
Electrical and Electronics Engineers	Advanced Legal and Related Clerks
Mechanical, Production and Plant Engineers	Insurance Agents
Mining and Materials Engineers	Desktop Publishing Operators
Accountants	Keyboard Operators
Auditors	Accounting Clerks
Marketing and Advertising Professionals	Payroll Clerks
Computing Professionals	Bank Workers
Librarians	Insurance Clerks
Mathematicians, Statisticians and Actuaries	Money Market and Statistical Clerks
Business and Organisation Analysts	Switchboard Operators
Other Business and Information Professionals	Telemarketers
Medical Imaging Professionals	

(a) By Australian Standard Classification of Occupations.
Source: Desiree van Welsum and Xavier Rief, *Potential Offshoring: Evidence From Selected OECD countries*, OECD, July 2005.

This strong growth in business services exports has resulted in an increase in the surplus for 'computer and information services' and turned a deficit into a billion dollar surplus for 'other business services' (Table 1). This is at a time when Australia has experienced record trade deficits in aggregate goods and services. All things being equal, this strong growth should have led to an increase in employment in these industries in Australia. When the labour force data are examined, see below, there has been a dramatic increase in a number of occupations exposed to offshoring activities.

Labour force

The OECD identified certain occupational characteristics that provided offshore outsourcing opportunities in the modern ICT-based economy. These were:

- intensive use of ICTs
- an output that can be traded/transmitted/enabled by ICTs
- highly codifiable[5] knowledge content, and
- no face- to-face contact requirements.

Using these criteria the OECD identified those occupations (shown in Table 2) that could be potentially outsourced.

From the data in Table 3 it can be seen that about 19 per cent of employed Australians are in occupations that could be potentially affected by offshoring. Since 2001, growth in employment has varied significantly across these occupations. Some have seen a large increase in employment, whilst a few have experienced decreasing employment. At the aggregate level net jobs growth for these occupations has been positive.

Analysing the data

The OECD tested the data for any links between employment growth and offshoring for Australia and other leading OECD economies for the period 1995 to 2003. It examined the impact of offshore outsourcing on employment as a function of:

- trade
- investment
- the industrial structure of the economy
- technological adoption/integration, product market regulations
- employment protection, and
- human capital.

The OECD's analysis found there was no clear evidence that:

> … increasing imports of other business and computer and information services are associated with a reduction in the share of employment potentially affected by offshoring at the aggregate level.[6]

The OECD report concludes that:

> … in the OECD countries analysed, ICT enabled services, offshoring (as proxied by trade and investment) has not yet led to a relative decline in the occupational share of location independent ICT-using occupations.[7]

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5. Technical knowledge is very procedural or regulated by standards, for example accounting.
6. ibid.
7. ibid.

Table 3: Employment in occupations potentially affected by offshoring — Persons

	Year ending August 2006		Change in employment 2001 to 2006	
	Annual average employment ('000)	Percentage of total employment	Change ('000)	Annual average percentage change
Engineering Managers	15.1	0.1	8.6	18.5
Customer Service Managers	38.3	0.4	19.1	14.8
Urban and Regional Planners	10.0	0.1	4.1	11.2
Other Business and Information Professionals	22.7	0.2	9.2	11.0
Information Technology Managers	45.2	0.4	17.9	10.6
Mining and Materials Engineers	6.1	0.1	2.4	10.2
Chemists	10.4	0.1	3.8	9.7
Sales and Marketing Managers	121.3	1.2	39.8	8.3
Marketing and Advertising Professionals	59.8	0.6	18.8	7.8
Computing Support Technicians	41.8	0.4	12.5	7.4
Journalists and Related Professionals	21.2	0.2	6.3	7.3
Cartographers and Surveyors	12.3	0.1	3.5	6.8
Geologists and Geophysicists	9.8	0.1	2.7	6.7
Environmental and Agricultural Science Professionals	23.8	0.2	6.5	6.5
Financial Dealers and Brokers	62.0	0.6	15.7	6.0
Advanced Legal and Related Clerks	20.0	0.2	4.9	5.8
Telemarketers	16.8	0.2	4.1	5.7
Medical Imaging Professionals	11.1	0.1	2.6	5.4
Insurance Agents	10.4	0.1	2.2	4.8
Electrical and Electronics Engineers	31.1	0.3	6.5	4.8
Legal Professionals	59.8	0.6	12.2	4.7
Civil Engineers	33.0	0.3	6.4	4.4
Architects and Landscape Architects	19.4	0.2	3.6	4.1
Policy and Planning Managers	18.0	0.2	3.2	3.9
Payroll Clerks	29.7	0.3	5.0	3.7
Auditors	10.3	0.1	1.6	3.4
Credit and Loans Officers	27.2	0.3	4.0	3.2
Accountants	142.2	1.4	19.0	2.9
Mathematicians, Statisticians and Actuaries	6.0	0.1	0.7	2.3
Business and Organisation Analysts	47.0	0.5	5.0	2.3
Librarians	13.2	0.1	1.3	2.0
Bookkeepers	138.4	1.4	12.1	1.8
Mechanical, Production and Plant Engineers	21.6	0.2	1.4	1.3
Economists	3.8	0.0	0.2	1.2
Other Natural and Physical Science Professionals	4.9	0.0	0.1	0.4
Computing Professionals	165.6	1.6	2.9	0.4
Life Scientists	7.8	0.1	0.1	0.3
Financial Investment Advisers	29.4	0.3	0.4	0.3
Other Managing Supervisors (Sales and Service)	47.5	0.5	0.7	0.3
Authors and Related Professionals	5.1	0.1	0.0	0.1
Branch Accountants and Managers (Financial Institution)	16.7	0.2	0.0	0.0
Medical Scientists	16.2	0.2	- 0.4	-0.5
Quantity Surveyors	2.9	0.0	- 0.1	-0.7
Insurance Clerks	19.8	0.2	- 0.8	-0.8
Money Market and Statistical Clerks	2.2	0.0	- 0.2	-1.9
Secretaries and Personal Assistants	173.6	1.7	- 26.8	-2.8
Bank Workers	52.9	0.5	- 14.7	-4.8
Keyboard Operators	92.7	0.9	- 28.6	-5.2
Accounting Clerks	114.4	1.1	- 44.8	-6.4
Switchboard Operators	8.5	0.1	- 4.3	-7.8
Desktop Publishing Operators	1.2	0.0	- 1.6	-15.2
Total offshore exposed	1 919.9	19.0	148.4	1.6
Total employment	10 090.9	100.0	1 056.5	2.2

Source: *Labour Force Statistics Australia, Detailed Quarterl*y, ABS, catalogue No. 6291.0.55.003.

From the data presented in Table 3 it can be seen that employment growth in those occupations potentially affected by offshoring has been mixed. Overall employment has grown more slowly in this category than for total employment. However, many of the individual occupations have seen growth rates well above the rate for total employment.

Sone of those occupations, such as keyboard operators, switchboard operators and desktop publishers, that have experienced declines in employment are located in areas affected by technological change. The OECD concluded that it was not possible to say whether offshoring or technological changes are responsible for this trend. Interestingly, an occupation often associated with the use of overseas workers — telemarketer — has enjoyed strong employment growth in Australia in recent years.

Conclusion

Alarmist articles about massive job losses through outsourcing to overseas companies do not seem to be substantiated by an analysis of the data. Whilst there has been some decline in employment in some occupations, other occupations have seen substantial increases. OECD research was unable to ascertain if the declines in employment in some occupations were due to offshoring or other factors. Finally, the Australian trade data would suggest that Australia is a major beneficiary of the offshoring activities other countries.