

Australians Working in a Global Economy

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1. Introduction

This paper is an abridged and summarised version of the latest report to ANTA¹ as part of the ongoing CEET program investigating the impact of the emergence of the global knowledge based economy on employment patterns in Australia, (see Maglen, 1994; Maglen and Shah, 1996 and 1998; Maglen and Hopkins, 2000, Maglen, 2001). However, the latest phase of the project also represents a significant departure from previous studies, because it looks directly at the nature and extent of the actual and potential participation of Australian workers in an increasingly globalised series of labour markets. We believe this is the first such study in Australia that has explicitly adopted this as its focus.

Taking this approach has involved a re-alignment and extension of the occupational classification system developed for our previous studies under this project. The results, however, are encouraging. We believe they provide an important insight into the opportunities and threats that globalised labour markets are creating for Australian workers. There are, too, important lessons to be drawn out of this study for education and training, particularly for the VET sector.

2. Background

2.1 Globalisation of the Australian economy

This project follows up on the proposition that if Australia has to compete in a global economy – if more and more Australian firms outside the traditional export industries are having to compete successfully against those operating in other countries - then so too, are more Australian workers.

If the global economy is increasingly a knowledge-based economy then more Australian workers have to be able to compete with knowledge workers globally.

If this is the nature of the world we live and work in then we should be able to see evidence for it in changing employment patterns in Australia.

Since the early to mid 1980s Australia has opened itself up to world competitive forces. This has primarily involved:

- reduced tariffs and other forms of trade protection
- financial deregulation
- floating the Australian dollar
- eased restrictions on foreign investment

¹ CEET Project 2000-2, Report to ANTA *Australians Working in a Global Economy and What This Means for Education and Training*, October 2001.

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- labour markets moving away from central wage fixing to enterprise and individual bargaining etc.
- other micro-economic reforms and the introduction of competition policy
- taxation reform

Over the same period the world economic environment changed. Australia, and its enterprises and workers, have had to adapt and respond to:

- rapid technological change – especially in IT and telecommunications and their convergence through digitalisation
- the liberalisation of world trade through the World Trade Agreement
- the floating of all major trading currencies
- globalisation of financial markets and the proliferation of financial instruments
- growing dominance of direct foreign investment over portfolio investment
- changes in the global corporate response (1) - if entities have to compete globally, then they have to be structured globally, hence the emergence of giant global oligopolies through merger and takeover
- changes in the global corporate response (2) - the adopting of corporate strategies that enhance competitiveness - flatter, less-hierarchical management structures; devolved operational and financial responsibilities; downsizing and outsourcing; leaner and ‘smarter’ production processes, the phasing out of Taylorist and Fordist work practices, and so on.²

All up, employment in Australia now takes place in a different ballpark to what it did fifteen or so years ago.

Where have the changes occurred? How many have been effected? Who have tended to be the winners - those whose worlds have been opened up by globalisation? Who have been the losers – those who have come under threat?

2.2 What are global labour markets?

For employment patterns in Australia to be seen as the outcome of increasing participation by Australian workers in global labour markets requires acknowledging:

- Australians are increasingly part of the world *supply* of labour - where our strengths, skills, knowledge etc. are pitted against those of people in other countries
- the *demand* for Australian workers is increasingly determined not just by local or national considerations but by global factors, and by global clients and customers
- the *price* Australian labour can command more and more is determined by interaction of global demand and supply – ie Australian wage and salary levels and the costs of employing labour in Australia are increasingly

² There are now many books and articles tracing the rise and nature of globalisation. For perhaps one of the best, see Thomas Friedman *The Lexus and the Olive Tree* (2000).

referenced to those applying in other countries, and so cannot get too far out of line with those of our competitors in the rest of the world.

There are, of course, different levels of engagement in global labour markets, and different bases upon which Australians actually, or potentially, compete in them.³

For some, probably only a small number, of those participating in global labour markets competition is direct - that is, they sell their labour directly on to the world markets. Consultants, international sportspersons, artists, musicians and other entertainers are examples of this category of Australian worker. Much more likely, however, Australians compete on global labour markets through the goods and services their enterprises produce. This can be very close up, with small Australian-based firms selling services, or goods/services such as software, systems, etc, directly onto the world market. At the other end of the spectrum is where Australians are employed in large multi-national enterprises that have based part of their global operations in Australia.

For some, being part of global labour markets involves a lot of international travel, and even temporary relocation to other parts of the world. For many it means that an increasing amount of what they do involves dealing with employers, colleagues, customers, clients, suppliers etc electronically - through telephone, fax and, increasingly, through the internet. Global labour markets are increasingly cyber-markets. For others, however, the global connections may remain at one or more steps remove, as it is the goods and services they help produce that are traded globally.

In thinking about the nature and extent of Australia's participation in global labour markets - the key concept is *substitution* - that is, the extent to which the labour of an Australian worker is a substitute for that of someone located overseas. This depends in large measure upon how similar or different his or her skills, knowledge and attributes are, how wide-ranging and effective the labour market information system in place is, how keen buyers are to employ them and how practical it is for them to do so.

If there is nothing much to distinguish an Australian from a foreign worker, that is, if there is a high degree of substitution possibility, then the cost of hiring the Australian becomes the critical issue - the higher the cost relative to those of their overseas counterparts - the more likely buyers will turn elsewhere.

Enterprises can respond to this either by relocating operations elsewhere - to where labour costs are lower - or by raising productivity in their Australian operations (and hence lowering the cost of labour) by investing in more machinery, the latest technology, more streamlined production processes and so on. All of which could

³ This analysis confines its attention to the nature and extent of Australian workers' participation in global labour markets, if they remain located, or are at least based, in Australia. A small, but growing, number of Australians participate in global labour markets by relocating more or less permanently to other countries. These include returning migrants, those who are part of the 'brain drain,' mostly to North America and Europe, and those whose global employers have despatched to distant posts in their far-flung empires. Those who do leave in these ways for our purposes cease to be part of the Australian labour force.

mean they employ less labour. Alternatively they could seek to directly lower labour costs by cutting wages and/or workers' entitlements.

These are the Australian jobs most at threat as globalised labour markets expand, and the workers doing them are most vulnerable

If, on the other hand, there are fewer, or not as close, substitutes for Australian labour, then price is not the only basis upon which Australians compete. Rather it may be on the basis of the quality of the goods and services they help produce, good design, innovative technology, delivery, after sales service, etc. Alternatively, the basis of competition could be more direct with workers going head-to-head on the basis of their skill levels, special talents and expertise, on who is the smarter, cleverer, more innovative, more creative, more flexible, etc.

The fewer the close substitutes for Australian labour services and/or for the goods and services they help produce, the more these workers will, or have the potential to, thrive in global labour markets. These are the ones who are most positively and opportunistically exposed to the emerging global knowledge based economy.

An important corollary to the notion of substitution is that of a *gap in the chain of substitution*. This gap is what separates one market from every other market. The gap can be wide or narrow. Take the example of the humble apple. Apple producers compete with other local apple producers – they are close if not perfect substitutes for one another. But apples are also substitutes for pears, oranges and other fruit produced locally. If the price of apples is too high or the quality too low then buyers turn to other fruit. Apples (and for that matter all fruits) are in turn, substitutes for other foods and therefore compete with them, in price and quality at some level. And food itself competes in the weekly budget against other household expenditures. The gaps in the chain of substitution, therefore – from apples to fruit to other foods to other household items – determine the size and extent of the markets apples compete in. Similarly, effective handling, storage and transport technologies allow apples in one region or country to compete effectively with apple producers in other regions and countries, if artificial barriers between markets (tariffs and other forms of protection and preferential treatment) are not too high, and if prices are favourable. The freer markets are, the more informative and mobile buyers are, and the fewer the barriers between markets, the bigger and more competitive those markets become.

The same applies to labour services.

The level of exposure of Australian workers to global competitive forces varies considerably. We have already noted the cases where globalisation and rapid technological change (and government and corporate responses to them) have greatly narrowed the gaps in the chains of substitution (possibly eliminating them completely) between Australian workers and those offering the same or similar services in other countries. But there are other areas of employment in Australia that, by their very nature, are somewhat insulated from competition from overseas. There are, in other words, significant gaps in the chain of substitution between them and similar markets in other countries, both on the demand and supply side. These are ones where location is a crucial factor, indeed, where close and personal contact between the supplier of labour services and those demanding them is an indispensable characteristic of the market exchange. Being in Australia – or more likely, being in

the immediate neighbourhood – is what matters. The local restaurant, supermarket, building contractor, plumber, television repair service, childcare centre, lawyer or GP, is where buyers in the immediate vicinity turn for their particular services, rather than ones located in Helsinki or Honolulu. Competition between the suppliers of these services and their workers and those in other countries either will never take place, or will only do so if technology changes dramatically, or if the price differential becomes so great as to warrant it.⁴

To summarise - we can identify three broad categories of employment in Australia from the perspective of emerging global labour markets- those occupations which have the potential to participate positively and opportunistically, those for which the opening up of Australia to global labour markets poses a threat, and those that, for locational and technological reasons, are still largely insulated.

3. Methodology

This study takes the 340 occupations identified at the 4-digit level of ASCO (version 2) and divides them initially into three broad groups –

- *The positively/opportunistically engaged group* - those occupations that actually, or have the potential to, interact most positively and opportunistically with the global knowledge economy. They are occupations where being located in Australia does not create a gap in the chain of substitution, that prevents Australians from competing effectively with workers with similar attributes located elsewhere, or vice versa. They are occupations, nonetheless, in which Australians have no perfect or very close substitutes located in other countries, so they are able therefore to market the individuality of their creative talents, conceptual capacities, special expertise, etc, and/or can showcase their goods and services of particular quality and uniqueness for which there is a demand in global markets.
- *The vulnerable group* - those jobs that require skills and involve tasks that are easily replicable. Identical jobs are performed or could easily be performed by workers located in other countries. Foreign workers are, therefore, perfect or very close substitutes for their Australian counterparts. Being located in Australia, moreover, does not, in itself, afford protection from workers located elsewhere. Similarly, the nature of the skills and tasks involved do not afford protection from being replaced by machines, or from being rendered redundant through reorganisation of production processes without any perceptible diminution of output. These are the ones most vulnerable in a global labour market environment.
- *The insulated group* - those jobs that through their very nature are localised in extent, given current price levels and prevailing technology. Location in Australia, in other words, for the time being at least, constitutes a gap in the chain of substitution between Australian workers in

⁴ The exception to this is those Australians working in this country's international tourism and hospitality industry. These are locational in nature and usually involve a high degree of in-person service. However, to the extent to which they are important in the promotion of Australia as a tourist destination and in building and sustaining its reputation for service, these workers are competing with their counterparts in other countries. In that sense they are not insulated from global labour market forces.

these occupations and those providing the same, or very similar, services in other countries. They are, therefore, largely insulated from direct global competition. Similarly, the personal and/or customised nature of the services they provide give them a measure of protection from the threat of replacement by machines.

Note that these cannot be watertight compartments. There are inevitable grey areas - variations within job categories as well as between them. Moreover, categorisations cannot remain constant. What is required to successfully compete can change quickly in such a dynamic environment as the global knowledge based economy.

Note also that these broad categories are not dissimilar to those first suggested by Robert Reich back in the early 1990s - that of symbolic analysts, routine production workers and in-person service workers (Reich 1991). These formed the basis of CEET's previous studies in this project, but, as stressed in the Introduction, the focus and rationale of the occupational classification employed in this report has shifted.

These three categories are further subdivided into the ten occupational groupings shown in Table 1, by adding the further criteria of the nature and level of the skills involved. The rationale for identifying these ten occupational categories, their selection criteria and detailed analyses of employment patterns in and between them over the period 1986-87 to 1999-2000 are presented in the full October 2001 report to ANTA. Details of the categorisation of the 340 occupations into the ten groupings are provided in Appendix 2 to that report.

This paper concerns itself with looking at the broad changes that have occurred in the nature and level of Australian participation in global labour markets over the period since the mid to late 'eighties. That is, the analysis here is confined to the changes in the composition of employment in and between the three broad occupational categories.

Table 1: Occupational Categories in Global Labour Markets

A.	Positive exposure occupations
1.	Conceptual/creative
2.	Conceptual/technical
B.	Vulnerable occupations
3.	Manufacturing trades
4.	White collar clerical
5.	Blue collar operative
6.	Manual low skill
C.	Insulated occupations
7.	Locational trades
8.	In-person professional
9.	In-person skilled
10.	In-person low skill

4. Results

In 1999-2000 an estimated 4.9 million Australians were working in occupations that were actually or potentially exposed to global labour market forces. Of these about 1.8 million were in occupations where such exposure presented opportunities, whilst just over 3 million were in occupations that were vulnerable. The remainder of those employed in that year, about 3.9 million, were in occupations more or less insulated from competitive global labour market forces.

Figure 1 expresses these numbers in proportional terms, and compares these with the relative composition of Australian employment fourteen years earlier in 1986-87. It shows that whilst Australia's engagement with the global economy grew dramatically over this period the proportion of workers in occupations essentially insulated from this economy actually rose over the period - from 42 to 44 percent. The nature, however, of Australia's exposure changed significantly over the period. Employment in occupations that are positively and opportunistically exposed to competitive global labour market forces increased both absolutely and relatively - from 19 to 21 percent of employment. On the other hand, employment in vulnerable occupations stagnated and declined, and fell from being 39 percent of the total to 35 percent.

Figure 1

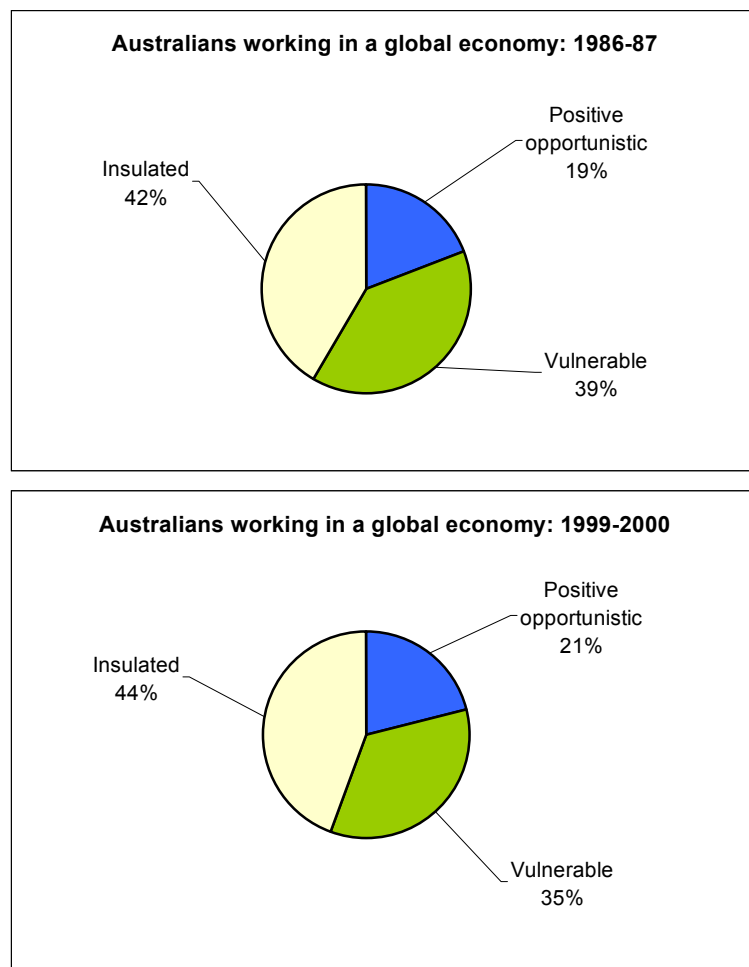


Figure 2

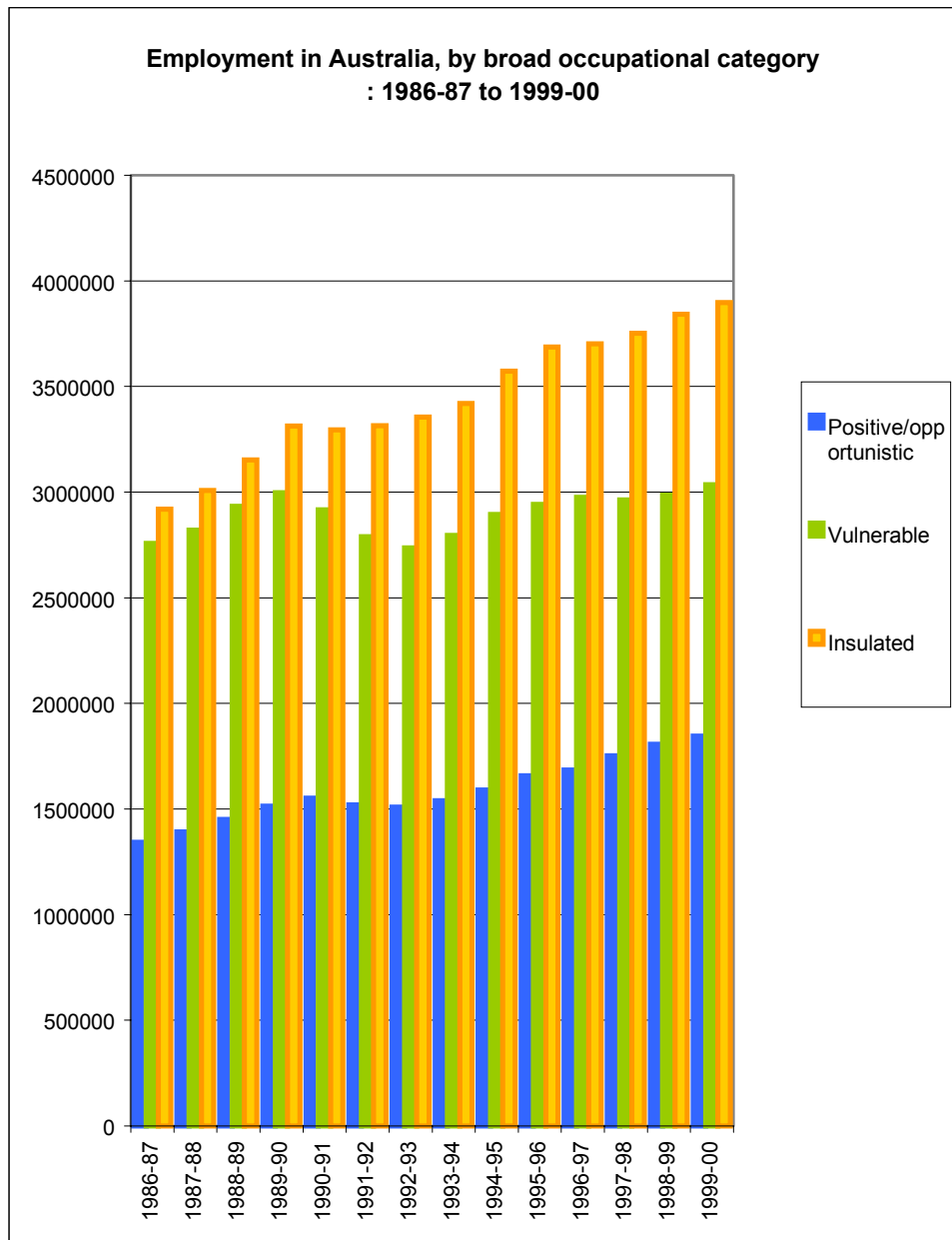
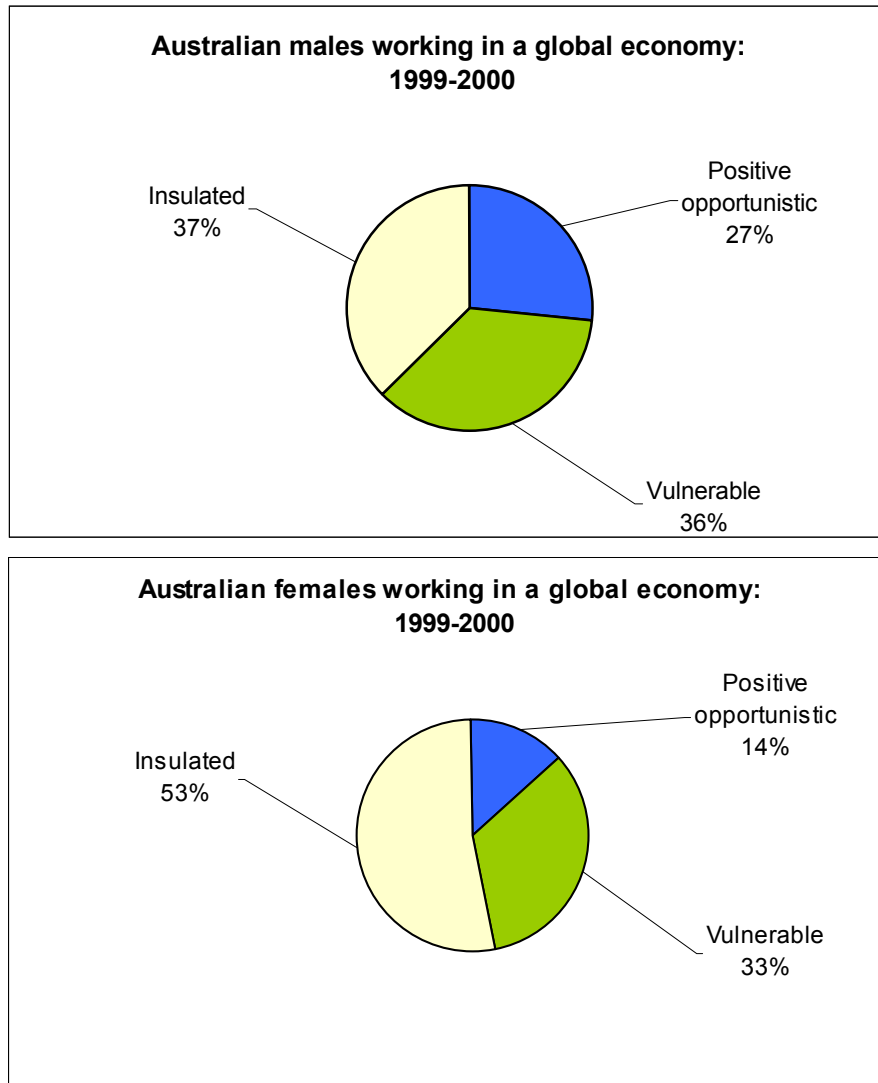


Figure 2 shows that employment in the most vulnerable occupations was hardest hit by the recession in Australia of the early nineteen nineties. It declined steeply from 1990-91 to 1992-93 and whilst it rose after that, had barely recovered pre-recession levels by the end of the decade. Employment in those occupations that are more positively and opportunistically exposed to global labour markets was much less affected by the recession and continued a strong growth over most of the period from 1986-87 to 1999-2000. Similar trends occurred in the more insulated professions.

The exposure to competitive global labour markets differs substantially between males and females. Whilst males are much more exposed to these forces than are females, 63 percent compared to 47 percent, Figure 3 shows that most of this difference is in the extent to which males and females are positively and

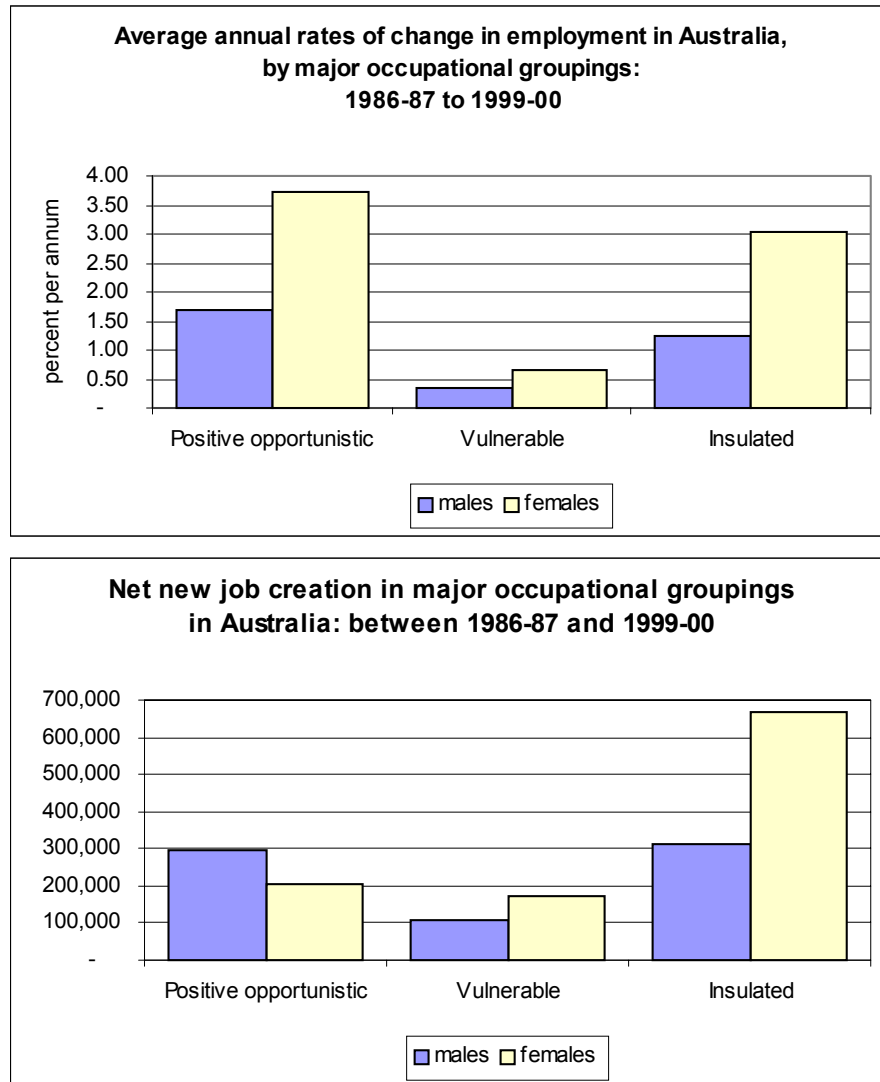
Figure 3



opportunistically engaged in competitive global labour markets. Twenty seven percent of males in employment in Australia in 1999-2000 were in positively and opportunistically exposed occupations, whereas only 14 percent of female employment was in the same group of occupations. In contrast, the difference between the proportion of males and females in vulnerable occupations is comparatively small - 36 percent as against 33 percent.

If the degree of exposure of male and female workers to global labour markets differs substantially, so too do the changes that have occurred in their employment patterns in this respect over the period. Figure 4 shows that the much stronger rate of growth in female employment since the mid nineteen eighties, compared to that of males, is reflected in all three broad occupational groupings. The difference in relative growth rates is particularly pronounced amongst the group of occupations most positively and opportunistically exposed to global labour market forces and those most insulated from them. In both instances female growth rates were more than double those of

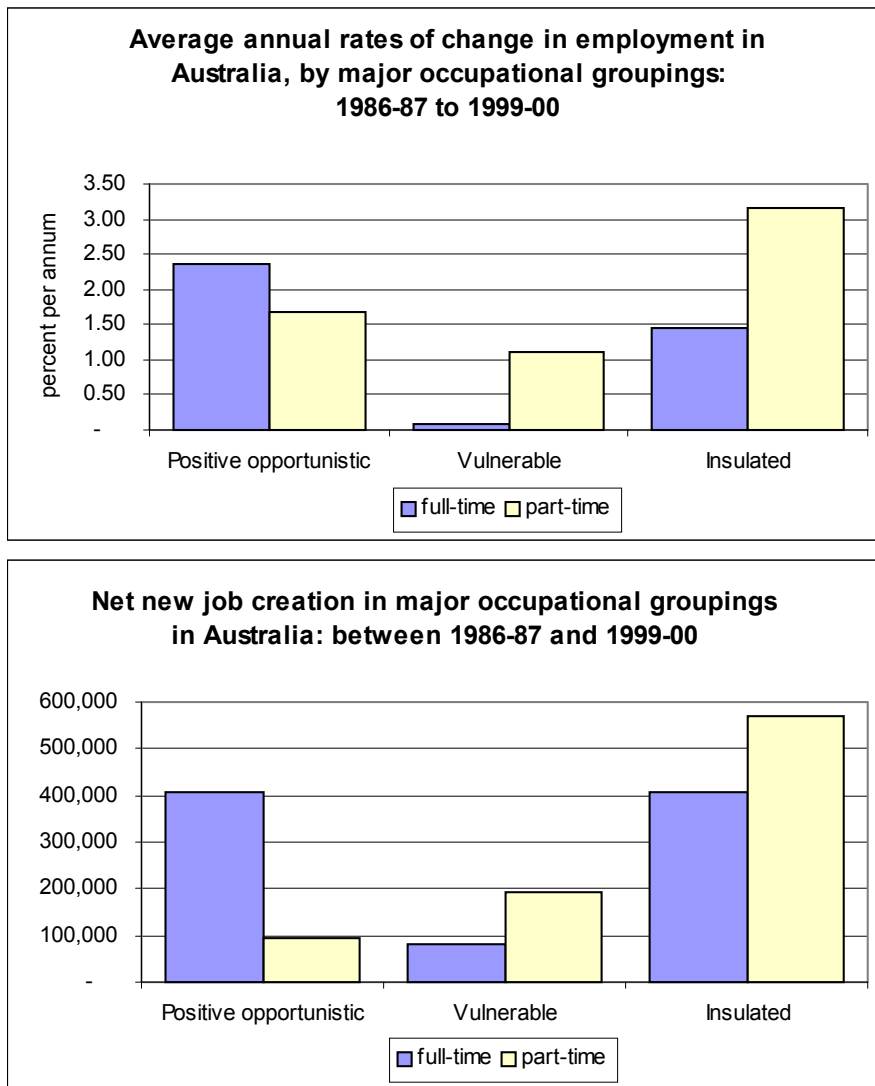
Figure 4



males. However, growth was off two different bases, so that as is evident in Figure 4, the majority of net new jobs created that were positively and opportunistically exposed to global labour market forces were taken by males. On the other hand, the much stronger growth in employment for females in insulated jobs meant that they secured over twice the number of net new jobs created here.

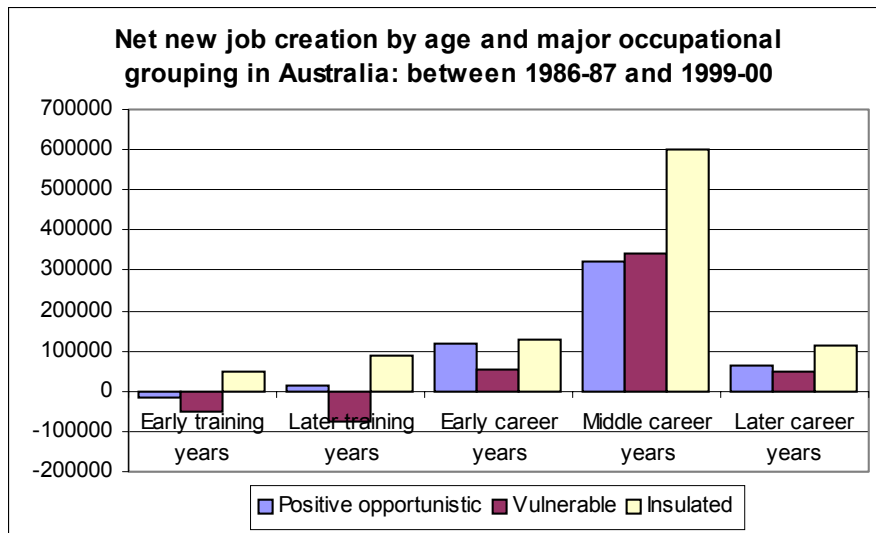
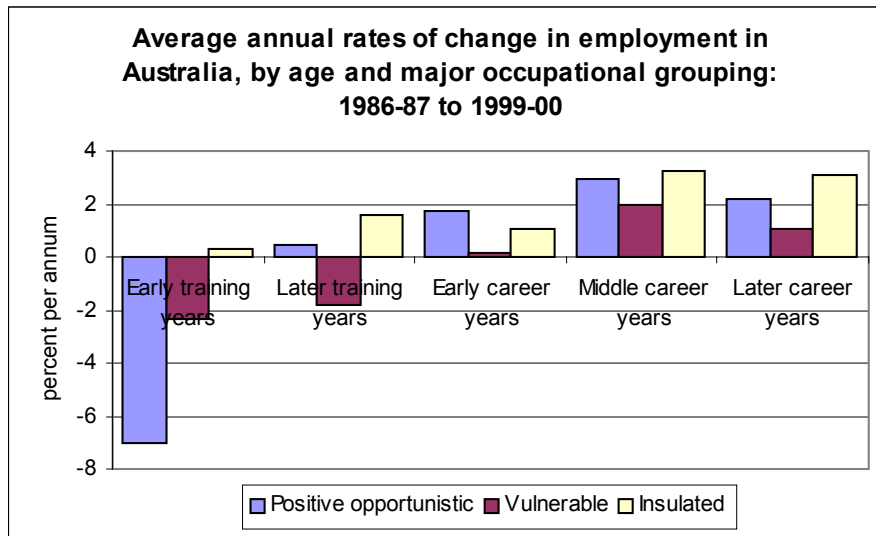
Occupations most positively and opportunistically exposed to global labour market forces tend typically to be full time in nature, and the growth in employment in these occupations, as evidenced in Figure 5, has been most strongly full time. Full time employment in the most vulnerable occupations virtually stagnated over the period between 1986-87 and 1999-2000. The only growth that did occur in these occupations was of a part time and contingent nature. What is also evident from Figure 5 is that most of the growth in employment in occupations insulated from global labour market forces was also of a part time and contingent nature.

Figure 5



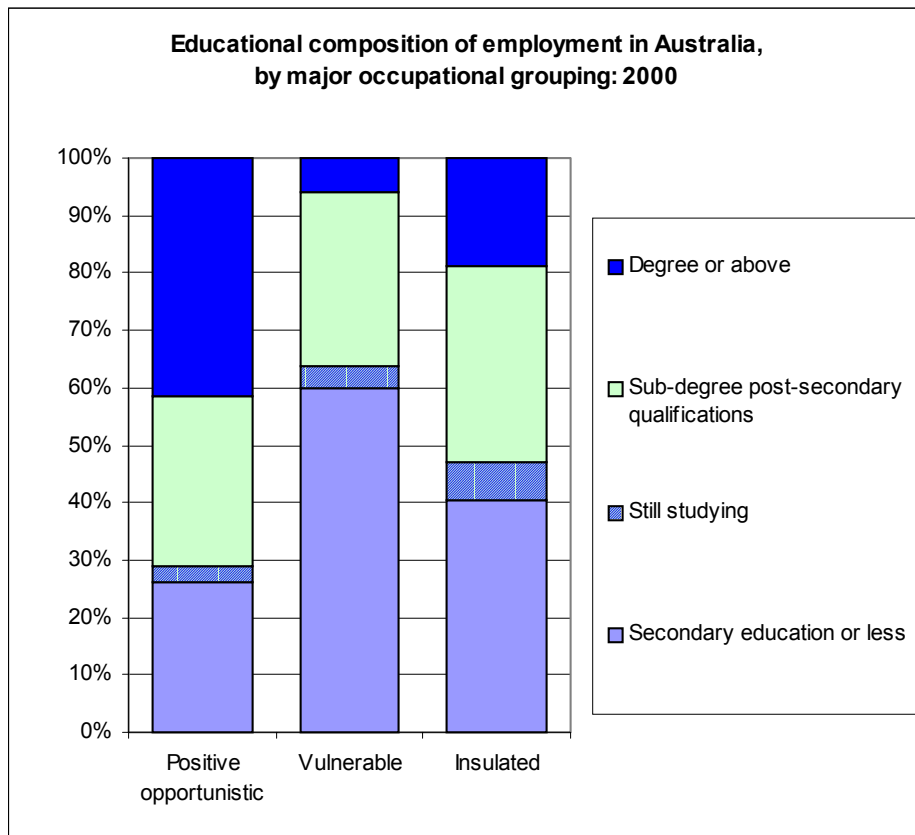
The Australian workforce has aged since the mid nineteen eighties, as the so-called ‘baby boomers’ have moved through their working lives. Over the same period economic and social changes have seen a greater participation of women, especially older women, in the workforce. Along with these changes has been the growth in full time and part time education and training and the prolongation of entry into the workforce. The latter has meant that for many young people work is not the main game, rather it is a means of funding their way through their studies. These changes are reflected in Figure 6. It shows that the strongest growth, both absolutely and relatively, in employment over the period 1986-87 to 1999-2000 has been in the middle career years of 35 to 54. What Figure 6 also shows, however, is that over and above these demographic changes, there have been noticeable differences in the extent to which Australians at different stages of their working lives, have participated

Figure 6



in global labour markets. In this respect, what is most striking is the low and declining level of participation by young people in their early and later training years (between the ages of 15 and 25). However, not only has the number of young people entering vulnerable areas of employment declined over the period, but perhaps more surprisingly their participation in occupations more positively and opportunistically exposed to global labour market forces has also declined. Their participation in employment has increasingly concentrated in the more insulated occupations. What is more, that participation has been increasingly within the lowest skill categories of those occupations, and more and more on a part time and contingent basis. What is clear from Figure 6 is that, up to this point at any rate, older workers, especially those in their mid career years, have been at the vanguard of Australia's most positive and opportunistic participation in global labour markets.

Figure 7



Figures 7 and 8 show that there is some relationship between educational qualifications and the nature and extent of Australian workers' exposure to global labour markets. Figure 7 looks at this relationship from the perspective of the educational background of those in the three broad occupational groupings. It shows substantial differences between them. Whereas, on the one hand the majority of those in vulnerable occupations have low levels of educational qualifications (about 60 percent have no post-secondary qualifications in 1999-2000) the great majority (over 70 percent in 1999-2000) in the positive/opportunistic group of occupations, did have. The difference between the two occupational groups is most marked in the representation of those with degrees and above in their ranks. In 1999-2000 those with university qualifications accounted for over 40 percent of those in occupations most positively and opportunistically exposed to labour market forces but only 5 percent of those in the most vulnerable occupations.

What is also noticeable in Figure 7 is the more or less uniform representation across the three broad occupational groups of those with post-secondary qualifications at the sub-degree level (that is, those who have certificates and diplomas as their highest qualification). As this level of education qualification broadly corresponds with the VET sector, it shows the general pervasiveness of this level of qualification across broad areas of employment.

Figure 8

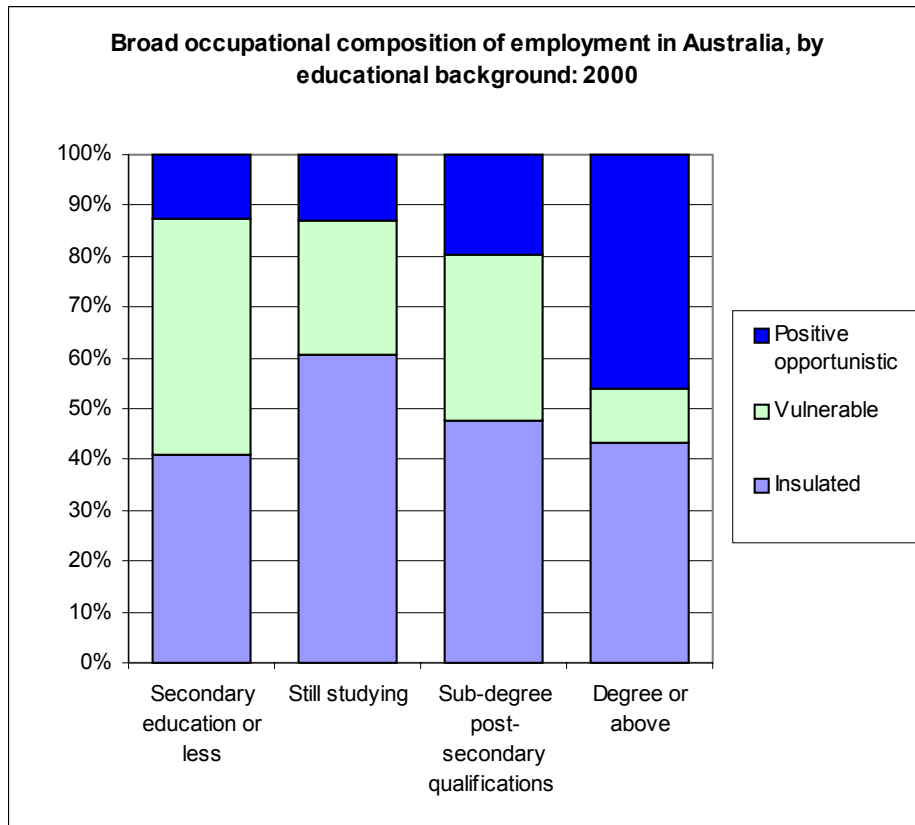


Figure 8 both reinforces this picture but also highlights a range of differences. It looks at the relationship between education and occupation from the perspective of the broad occupational groups those with different levels of educational qualifications are employed in.

From this perspective we can see that the labour market experiences of those with sub-degree post secondary qualifications are more akin to those with lower levels of education (those with secondary education or less but who are not studying) than they are to those of workers with university qualifications. Whereas almost fifty percent of university graduates find employment in occupations most positively and opportunistically exposed to global labour market forces, only about twenty percent of those with VET level qualifications do so. This compares to the roughly thirteen percent of workers with no post-secondary qualifications working in the same occupations. On the other hand, whereas only about ten percent of university graduates are employed in vulnerable occupations, over thirty percent of those with VET qualifications are exposed in this way.

5. Conclusions

When viewing employment patterns in Australia, and how they have changed over the last fifteen years or so, from the standpoint of what they auger for the future as the world economy becomes ever more globalised and knowledge-based, a number of alternatives present themselves.

One is that if Australia is to remain globally competitive and, indeed, if it is to avoid becoming globally irrelevant, more and more of its workers must be able, in one way or another, to participate positively and opportunistically in global labour markets. That is to say, they must be employed, or be employable in, those occupations that are essentially conceptual/creative in nature, and/or in those conceptual/technical occupations that either support or are allied to them. For Australians to gain and retain employment in these globally-related occupations, it is axiomatic that they will have to do so on *world best-practice* terms. This poses a tremendous challenge for the way in which we prepare young people for work and in the way in which we continue their training and professional development. The onus is very much, therefore, on Australia's education and training system. In this respect, the evidence presented in this report should be cause for concern for the VET sector. Whilst it no doubt is an important contributor to a number of specific occupations within this group, overall it is not playing nearly as significant a role as the higher education sector.

To be successfully employed in conceptual/creative occupations in many instances, perforce, requires high levels of specific skills and knowledge, but the overriding characteristics of these occupations are their requirements for flexibility, innovativeness, creativity, enterprise, adaptability and the willingness to take risks. It is vital, therefore, that these characteristics be incorporated into curriculum development and teaching practice in VET programs and, indeed, across the board in all levels of education and training – starting with pre-school and primary and going through to higher education. English is the *lingua franca* of global business, finance, communications, scientific research and, indeed, of most areas of the global knowledge-based economy, and so a very high premium is attached to verbal and written fluency in the language. Very high levels of IT literacy are also mandatory in many occupations that are positively and opportunistically exposed to global labour market forces, not just those directly related to IT and telecommunications. Again it is axiomatic that the IT systems and facilities they have at their disposal must be state-of-the-art if Australians are to compete successfully on the global stage, and that so too are their education, training and professional development. Whilst the country invests heavily in IT and telecommunications infrastructure, it is in respect to education, training and professional development that we are in danger of not just slipping behind our competitors, but into irrelevance as well.

An alternative focus for the future is upon trying to maximise job creation, to ensure as much as possible all those seeking employment can find it. In this context, preparing people for entry into the conceptual/creative and conceptual/technical group of occupations, will not in itself be sufficient. Currently they only employ about one in five Australians in the workforce, and realistically, they are never likely to provide jobs for everybody. What this study shows is that occupations that are more insulated from the globally competitive labour markets are more capable of creating additional employment opportunities. Most of these are of an in-person nature. Employers place great store on personal characteristics, how well employees present to customers, clients, suppliers, etc, not just on specific job-related competencies. The implications of these trends for the education and training sector is that it needs to be able to build up the interpersonal communication skills of those entering the labour force and those wishing to remain in it. Given also that most of the new insulated jobs that are being created are on a part time and contingent basis, education and

training institutions need to give serious consideration to preparing young people for different interconnections between work and leisure.

What appears from this study to be the least desirable alternative is for the education and training sector to continue to prepare young people for occupations which are increasingly vulnerable to the forces of global labour market competition. The study shows that employment in these areas is either stagnating or in long-term decline, and whilst there will continue to be a need for these occupations and to meet the replacement demand as workers depart from them, neither Australia's globally competitive position nor its capacity to create new jobs is served well by these occupations. Given that many of these occupations have traditionally been a major focus of the VET sector, the trend for the sector to broaden its focus and re-direct its energies should be accelerated.

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