



Globalisation and technical and vocational education and training in Australia

MARK CULLY
GENERAL MANAGER

NATIONAL CENTRE FOR VOCATIONAL EDUCATION RESEARCH

Paper presented to Asian Development Bank Institute workshop on Workforce Development

25 October 2006

Phnom Penh, Cambodia

This paper shows, using Australia as an example, that the impact of globalisation on national TVET systems is complex. It is also shown to be country contingent, depending on the nation's economic and social development, and its prevailing economic and educational institutions. Globalisation poses distinct challenges for TVET, in terms of adapting to economic restructuring, as nations adjust to their areas of comparative advantage. Other challenges that are less often taken into account are the globalisation of training markets, and the entry and exit of skills embodied in people due to migration flows.

Introduction

Globalisation is a phenomena which has spawned many adherents and detractors (Friedman 2005, Bhagwati 2004, Stiglitz 2003), including large social movements opposed to the perceived consequences it has for traditional ways of living, especially in developing countries (Klein 1999).

Commentators distinguish between three phases of globalisation:

- phase 1: the mobility of capital
- phase 2: the mobility of goods (and, increasingly, services)
- phase 3: the mobility of people.

Each of these phases poses distinct challenges for TVET, in terms of adapting to:

- economic restructuring, as nations adjust to their areas of comparative advantage
- competition in education markets as citizens seek the best educational opportunities, and foreign education providers enter the market
- the entry and exit of skills embodied in people due to migration flows.

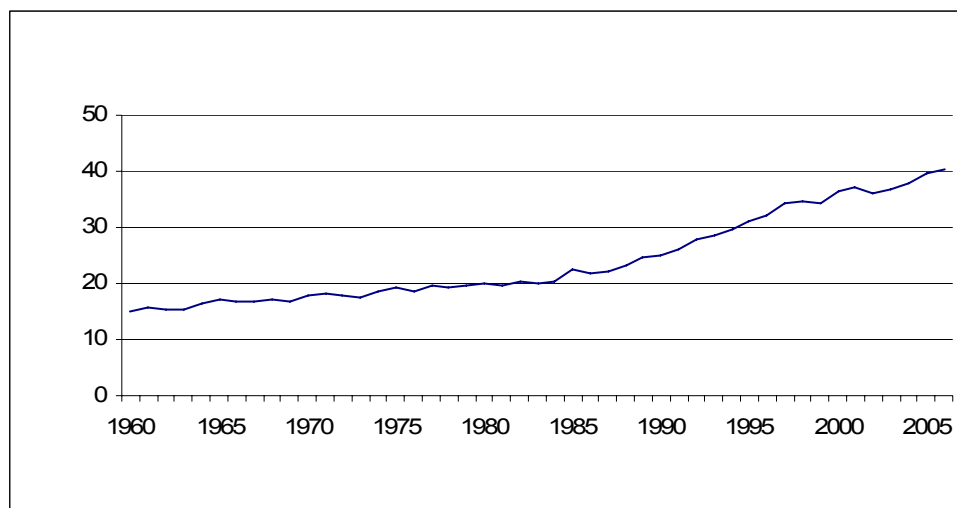
This paper discusses each of these issues in turn, with reference to Australia.

Economic restructuring

The Australian economy is, to all intents and purposes, a highly open economy. This is a relatively recent phenomenon. The so-called “Australian settlement” (Kelly 1994) associated with federation of the six colonies in 1901 incorporated tariff protection for manufacturing industries on the grounds that these were required to allow “infant industries” to develop, wages set by an arbitration system, and controls on immigration (notably, a white Australia policy, intended in part to prevent wages being undercut by cheap labour supplied by nearby countries).

The opening of the economy dates from the 1980s since the floating of the Australian dollar in 1983 and the gradual reduction of tariff protection. Figure 1 shows the percentage of imports and exports as a proportion of GDP rose slowly between 1960 and 1980, and then accelerated from the mid-1980s onwards.

Figure 1: Value of imports and exports as % of GDP, Australia, 1960-2006



The free flow of capital and goods allows employers the option to switch investment from one region of the world to another in search of greater returns. In Australia this has manifested itself most recently in the closure of factories with operations re-located, typically, to China or south-east Asia, and the establishment of call centres and back-room processing for financial services in India. Workers who are made redundant may be unable to find work in the same industry and may have to acquire new skills to regain employment. This has been the fate of many workers in the textiles, clothing and footwear industry (Webber and Weller 2001), and there is continuing uncertainty surrounding the long-term economic viability of a domestic automotive manufacturing industry.

Primary and secondary industries (i.e. agriculture, manufacturing, mining, construction) now account for under a quarter of total employment. Fifty years ago, it stood at around half. As in many advanced economies, there has been a prodigious growth in services, both business-to-business and personal services.

The broad response of governments to these developments has been twofold. First, assistance is provided to firms and workers in vulnerable industries to enable them to adjust. The scale and nature of assistance provided has varied according to the industries affected, and the political consequences of allowing adjustment to occur with or without assistance. For workers the assistance might involve redundancy payments, job placement services and re-training. Australia has, however, never adopted large-scale restructuring and re-skilling programs such as those used in Scandinavian countries.

Second, and rather more consistently adopted by governments, is the enhancement of workforce skills as part of a strategy for maintaining or improving the competitiveness of Australian industries relative to those same industries in other countries. They are supported in this by industry bodies. The Australian Industry Group, for example, recently released *World Class Skills for World Class Industries* (2006), which argued that only a small proportion of Australian firms were currently operating at world class level, and to reach that status required the workforce to develop higher-level skills, broader sets of skills, and to have their skills replenished more often.

It is accepted in Australia that economic restructuring brought about by globalisation means the nature of skills required for the economy is a moving target, and can only be predicted at a highly aggregated level for a few years ahead. For this reason Australia has eschewed formal manpower planning and, its more recent guise in south-east Asian countries, human resource development, in favour of a flexible labour market and a framework of nationally accredited skill formation which promotes the mobility of recognised skills. Training providers are registered to deliver and issue qualifications recognised under a national qualifications framework.

A distinctive response in Australia has been to bind industry much more closely into determining course content and curricula through the development of industry-designed “training packages”. These specify the skills needed, rather than how they are to be taught or learnt. They are not curriculum documents, although there are associated materials providing training resources. Their essence is the specification of competences. These competency standards are focused on the skills and knowledge required by employees to operate effectively in the workplace. Training packages are composed of units of competency, which can be combined to build a nationally-recognised qualification. Training packages are industry (and sometimes enterprise) specific.

Training packages have become the most important way of delivering training in Australia. Almost all apprenticeships and traineeships are now undertaken under the auspices of training packages.

The knowledge economy

Overlaid on restructuring brought about by more open economies, the introduction of new information and communication technologies has had enormous impact in many industries, from computer-aided design and just-in-time management of inventories, as well as a range of new and enhanced telecommunication services that has required whole new skill sets to be acquired by workers.

A term coined in the 1960s by the well-known management guru, Peter Drucker, the “knowledge economy” was rediscovered and came into vogue during the 1990s. For governments in many countries, a knowledge economy became a unifying goal with which to frame overall policy direction, including in the area of education and training. The European Union, for example, set itself a goal in its 2000 council meeting in Lisbon to become, by 2010, “the most competitive and dynamic knowledge-based economy in the world”, with lifelong learning seen as one of the means of realising this goal.

This change in discourse, from an information to a knowledge economy, essentially symbolised a shift in focus from the information and communication industries as a driver of economic growth to one where information and communication technologies would be increasingly deployed across all areas of industry.

The implications for working life were captured in Robert Reich’s *The Work of Nations* (1991) where he segmented the workforce into three groups: routine producers, in-person service providers and symbolic analysts. The latter was defined as those who “solve, identify and broker problems by manipulating symbols. They simplify reality into abstract images that can be rearranged, juggled, experimented with, communicated to other specialists, and then, eventually, transformed back into reality” (1991: 178). Examples include engineers, lawyers, journalists, academics and so on, i.e. most of the professional cadre.

Table 1: Occupational composition of employment, Australia, 1996 and 2006

| Major Occupational Group | Employment (000s) | | Growth (%) | |
|--|-------------------|---------|----------------|-----------------------|
| | 1996 | 2006 | % growth 96-06 | Change in share 96-06 |
| Managers and Administrators | 624.1 | 845.5 | 35.5 | 0.8 |
| Professionals | 1389.7 | 1967.4 | 41.6 | 2.7 |
| Associate Professionals | 867.2 | 1282.0 | 47.8 | 2.2 |
| Tradespersons and Related | 1141.2 | 1292.7 | 13.3 | -1.0 |
| Advanced Clerical and Service Workers | 403.2 | 394.3 | -2.2 | -1.0 |
| Intermediate Clerical, Sales and Service Workers | 1394.8 | 1681.6 | 20.6 | -0.2 |
| Intermediate Production and Transport Workers | 793.4 | 860.9 | 8.5 | -1.1 |
| Elementary Clerical, Sales and Service Workers | 862.3 | 963.8 | 11.8 | -0.9 |
| Labourers and Related Workers | 834.4 | 883.7 | 5.9 | -1.3 |
| Total | 8332.8 | 10172.0 | 22.1 | 0.0 |

Table 1 shows that the upper echelons of the occupational hierarchy in Australia, most of whom would meet Reich’s definition of symbolic analysts, have grown much faster than all other occupational groups over the past decade. Of the 1.84 million net new jobs created since 1996, 1.21 million of them have been managers, professionals and associate professionals. Although newly created jobs have primarily been at the upper end of the skill spectrum, this does not take

account of job openings arising due to workers retiring or transferring into other occupations. The trades are particularly affected by this phenomena, and it has been a significant contributing factor to the current extent of skill shortages being experienced in many of the trades.

More nuance was added to Reich's work in Australia by Shah and Burke (2003). They estimate that about 60% of the Australian workforce are employed in global labour markets, in the sense that they work in industries which are exposed to global competition. This 60% can be subdivided into one group, of around 20%, where globalisation has provided enhanced opportunities (e.g. business professionals), and a second group of around 40%, where globalisation has made their jobs more vulnerable (e.g. skilled trades, other blue collar workers). They forecast that employment is likely to grow fastest for the globally advantaged occupations and lowest of all for globally vulnerable occupations, with occupations insulated from globalisation – largely, in person service work – growing at a rate between the other two.

Education international

Globalisation also presents many opportunities, and Australia has been quick to grasp the potential for this in some areas, nowhere more so than in the provision of education. Among OECD countries, Australia has by far the highest proportion of overseas students among its higher education intake at 18.7%, well in excess of the OECD average of 7.2% (OECD 2006: Table C3.1). The main countries from which students come to Australia are China, India, New Zealand and South Korea.

In recent years, the vocational education and training sector in Australia has followed the lead of the higher education sector and also begun to internationalise. In 2005, 66,100 visas were issued by the Department of Immigration for overseas students to enrol in a vocational education and training course in Australia, up from 57,300 one year earlier (NCVER 2006). The top five intake countries were China, Thailand, Japan, Indonesia and South Korea.

Offshore delivery is also growing, with an estimated 23,300 students taking part in courses delivered by TAFE institutes in 2004, up from 18,300 one year earlier.¹ Two-thirds of the students studying in Australian TVET courses were in China. It was most common for students to be undertaking courses at diploma or advanced diploma level.

The advent of global training markets in Australia, as noted, lags considerably behind that of higher education markets in Australia. This most likely reflects the dominant mode of planning TVET provision to match domestic needs (in comparison with Australian universities who have much more autonomy in planning course delivery) and the extent to which Australian higher education qualifications are valued internationally in comparison with Australian TVET qualifications (which under the Australian Qualifications Framework do not include degrees or associate degrees).²

The globalisation of training markets is being driven by entrepreneurial providers, both public and private, and only a small proportion of it is tied to foreign aid programs. Moran and Ryan (2004) argue that there are two distinct sources of demand. First, from industry, who are interested in developing specific skills and competencies among their workforces. The second source is from students themselves who are primarily interested in obtaining degree level qualifications from an English speaking country.

¹ The extent of offshore delivery by private training providers is not known.

² Completion of an Australian TVET qualification can, however, be used as a pathway to obtain entry into an Australian higher education course.

In numerical terms, serving an overseas market is currently a very small fraction of total TVET activity in Australia. However, its rapid growth has drawn attention from regulators in Australia who are responsible for quality assurance (i.e. registration and accreditation of training providers and courses) in Australia's TVET system. They are concerned to ensure that Australia's reputation – its “brand” – for high quality training delivery remains untarnished. A transnational quality strategy has been put in place to manage this. A key issue is whether Australian quality assurance arrangements are sufficiently (and, indeed, whether they should be at all) adaptive to overseas markets.

Moran and Ryan recommend using bilateral and multilateral forums to establish quality assurance frameworks modelled on Australia's in countries whose frameworks are not yet mature, and mutual recognition arrangements. This, they believe, is likely to better position Australian providers to open up new markets.

Movement of skills

Another way in which globalisation is intruding on to the territory of TVET in Australia is through the movement of people. Australia has long been a settlement country with a high intake of migrants. After World War II, Australia launched a massive immigration program, believing that having narrowly avoided Japanese invasion, it must “populate or perish”. Since the end of World War II around 6 million people have migrated to Australia. Among the current population, one in four were born overseas. Prior to the 1970s, under the white Australia policy, immigration was restricted to people from European countries, immigrants arriving predominantly from the United Kingdom, Ireland with significant numbers coming also from Yugoslavia, Greece and Italy.

With the pool of potential immigrants from Europe shrinking over the past few decades, Australia has broadened its scope to foster immigration from Asia and elsewhere. The cultural mix of immigrants to Australia has diversified to the extent that permanent arrivals now originate from more than 150 countries. This has enhanced Australia's ability to become quite selective (in terms of selection criteria) regarding who it chooses to accept, an example being age. The age profile of migrants is younger than that of the Australian population, and is younger still for skilled migrants with three in five aged under 35 years.

In the most recent year for which data is available (2004-05), most migrants came from the United Kingdom, China, India, South Africa, the Philippines and Malaysia. One of the factors driving this composition is foreign citizens newly graduating with a higher education or TVET qualification (at Certificate level III or higher) can now apply for immigrant status without leaving Australia or gaining relevant work experience.

Table 2: Migration program outcomes, Australia, 1997-98 to 2004-05

| Migration Category | 1997–1998 | 1998–1999 | 1999–2000 | 2000–2001 ⁽²⁾ | 2001–2002 ⁽²⁾ | 2002–2003 ⁽²⁾ | 2003–2004 ⁽²⁾ | 2004–2005 ⁽²⁾ |
|------------------------------|-----------|-----------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Skilled | 34,670 | 35,000 | 35,330 | 44,730 | 53,520 | 66,050 | 71,240 | 77,880 |
| % of total | 51.7 | 51.5 | 50.3 | 55.5 | 57.5 | 61.1 | 62.3 | 64.9 |
| Family | 31,310 | 32,040 | 32,000 | 33,470 | 38,090 | 40,790 | 42,230 | 41,740 |
| % of total | 46.7 | 47.2 | 45.6 | 41.5 | 40.9 | 37.7 | 36.9 | 34.8 |
| Special Eligibility | 1,110 | 890 | 2,850 | 2,420 | 1,480 | 1,230 | 890 | 450 |
| % of total | 1.7 | 1.3 | 4.1 | 3.0 | 1.6 | 1.1 | 0.8 | 0.4 |
| Total Program ⁽¹⁾ | 67,100 | 67,900 | 70,200 | 80,610 | 93,080 | 108,070 | 114,360 | 120,060 |

(1) Figures have been rounded and total may not be the exact sum of components.

(2) Program numbers do not include New Zealand citizens or holders of Secondary Movement Offshore Entry (temporary), Secondary Movement Relocation (Temporary) and Temporary Protection Visas.

Since the mid-1980s, when Australia began to restructure its economy to meet the challenges of globalisation, migration policy has focused on skilled workers. Skilled workers are selected on the basis of points allocated for criteria including age, knowledge of English, recognised skills, and work experience in a list of skilled occupations. Table 2 shows that skilled migration has increased considerably relative to family migration over the past decade, and in the most recent year accounted for two in three of all permanent migrants.

In addition to permanent migration, Australia also allows short-term migrants under the temporary 457 visa (also known as the business long-stay visa). This enables people from overseas to work in Australia for a notional period of four years. The 457 visa is essentially an employer-demand driven visa. There is no cap on the number which can be issued each year nor is there any annual government target. Whilst 457 visas are generally perceived as a means of mitigating skilled labour shortages in Australia, they are not restricted to fields in which shortages exist – employers can sponsor skilled migrants in any field they choose.

The number of 457 visas granted in 2005-06 was projected to be around 40,000, representing an increase of over 40% over the previous year. If realised, this would be about the same as the number of skilled visas expected under the permanent migration program. Based on the trends of recent years, there may be more temporary skilled 457 visas granted than skilled permanent visas in future years.

The discussion thus far has focused on migration, but emigration is also an important issue in Australia. It has been estimated that at least 750,000 Australians are living overseas on a long-term or permanent basis. These are predominantly young, highly educated, professionals. This is sometimes referred to as the “brain drain”, although in more recent times it has been spoken of as a “brain circulation” recognising that Australia is a net importer of skills, and also that many expatriates do return home to Australia with more advanced skills than when they left.

Australia is a clear net gainer in terms of inflow and outflow of skilled people. The net gain of skilled migrants, both permanent and temporary, in 2004-05 was 45,900, more than double what it was around a decade earlier. Table 3 shows the main driver in the total net flow is the professional component.

Table 3: Net inflow of skilled migrants, by occupation, Australia, 1995-96 to 2004-05

| Occupation | 1995-1996 | 1996-1997 | 1997-1998 | 1998-1999 | 1999-2000 | 2000-2001 | 2001-2002 | 2002-2003 | 2003-2004 | 2004-2005 |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Managers | 7,346 | 6,653 | 7,217 | 8,623 | 8,580 | 8,551 | 7,793 | 7,822 | 6,900 | 6,612 |
| Professionals | 14,181 | 11,368 | 9,363 | 9,073 | 14,192 | 17,653 | 15,866 | 20,852 | 27,338 | 29,054 |
| Associate Professionals | 4,319 | 3,684 | 2,171 | 2,110 | 2,123 | 3,019 | 2,669 | 2,658 | 3,169 | 4,093 |
| Tradespersons | 5,056 | 4,242 | 3,755 | 4,325 | 4,033 | 3,816 | 3,047 | 4,930 | 6,205 | 6,098 |
| Total Skilled Occupations | 30,902 | 25,947 | 22,506 | 24,131 | 28,928 | 33,039 | 29,375 | 36,262 | 43,612 | 45,857 |

If we marry the data provided in Tables 1 and 3, the importance of skilled migration as a source of skill formation becomes apparent. For example, the number of tradespersons employed in Australia grew by 151,100 in the ten years to 2006. Over (approximately) the same period, the net number of people migrating as tradespersons rose by 45,500, or 30% of the new jobs created.³ For professionals, the story is remarkably similar. The net gain in the number of professionals was 168,900, equal to 29% of the new jobs created in the past decade.

³ This is included to demonstrate the scale. There is no surety that migrants with a particular skill or vocation are able to find work in their field.

Employer groups have been advocating a larger skilled intake as a response to skill shortages and have also been pressuring government to expedite migration processes. Some have also called for the use of temporary guest worker programs as a means of alleviating overall labour shortages in some regional parts of Australia.

Partly in response to these arguments, the government has recently announced that an off-shore skills assessment process will be put in place in five of the main source countries for skilled migrants (South Africa, United Kingdom, India, Sri Lanka and the Philippines). Initially this will be for trades experiencing skills shortages but later will extend to other occupations in the skilled migration program. This will be mirrored by a parallel on-shore assessment arrangement for those who are living in Australia and want skills achieved overseas recognised, and provisional licensing so that people with recognised overseas qualifications can work under supervision for short periods while they complete licensing requirements.

Conclusion

This paper has served to show, using Australia as an example, that the impact of globalisation on national TVET systems is complex. It is also shown to be country contingent, depending on the nation's economic and social development, and its prevailing economic and educational institutions.

References

- Australian Industry Group 2006, *World class skills for world class industries: employers' perspectives on skilling in Australia*, Ai Group, Sydney.
- Bhagwati, J 2004, *In defense of globalization*, Oxford University Press, New York.
- Friedman, T 2005, *The world is flat: a brief history of the globalized world in the twenty-first century*, Allen Lane, London.
- Kelly, P 1994, *The end of certainty: power, politics and business in Australia*, Allen & Unwin, St. Leonards, N.S.W.
- Klein, N 1999, *No logo: taking aim at the brand bullies*, Picador, New York.
- Moran, L & Ryan, Y 2004, *The Australian Quality Training Framework and globalisation of training markets*, ANTA, 2004.
- NCVER (National Centre for Vocational Education Research) 2006, *Australian vocational education and training statistics: students and courses 2005: summary*, NCVER, Adelaide.
- OECD (Organisation for Economic Co-operation and Development) 2006, *Education at a glance: OECD indicators 2006*, OECD, Paris.
- Reich, R 1991, *The work of nations: preparing ourselves for 21st-century capitalism*, Simon & Schuster, London.
- Shah, C & Burke, G 2003, *Future job openings: Australia in the knowledge economy*, Centre for the Economics of Education and Training, Clayton, Victoria.
- Stiglitz, J 2003, *Globalization and its discontents*, W.W. Norton, New York.
- Webber, M & Weller, S 2001, *Refashioning the rag trade: internationalising Australia's textiles, clothing and footwear industries*, UNSW Press, Sydney.