LABOR'S EDUCATION AND TRAINING STRATEGY: BUILDING ON FALSE ASSUMPTIONS?

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Public policy on skills training under the former Coalition Government prioritised trade training. The Rudd Labor Government is following suit. This priority is based on the false assumption of widespread skills shortages in the trades. Such shortages as exist are largely confined to the construction industry. By contrast, demand for university-trained professionals, particularly in Australia's service industries, has grown much more strongly. Yet, the output of Australia's domestic graduates has been static over the last decade. Skill shortages currently and for the foreseeable future will mainly lie in occupations requiring university training. There is an urgent need for public policy to reflect this situation.

INTRODUCTION

The incoming Rudd Labor Government believes that skill shortages are an important component of Australia's inflationary breakout. The government's leaders have repeatedly asserted that, unlike the departed Coalition Government, Labor will attack the supply side of the inflationary equation. To this end, the government will promote education and training for skilled occupations where shortages are most evident.

The government has so far announced two key policy commitments on the training supply side. First, it will enhance the quality of school education. Second, it will open up new trainee opportunities for young people in the trades area. Under its Skilling Australia for the Future initiative, administered through the Department of Education, Employment and Workplace Relations, funds have been allocated for 450,000 new training places over four years. An initial 20,000 training places will be made available between April and June 2008 for persons wishing to undertake training to upgrade or update their qualifications in areas of skill shortage at the Certificate II, III and IV level.[1]

Until recently, the Rudd Government has been silent on what it will do to increase domestic training at the university level. This stance changed when the Minister for Education and Minister for Employment and Workplace Relations, Julia Gillard, addressed the *Australian Financial Review* higher education conference on 13 March 2006. She acknowledged that 'over the past decade, Australian higher education has barely stood still in terms of numbers, quality and output, while our competitors have surged ahead'.[2] In support of this contention, she cited various skill shortages, including doctors, teachers and engineers. However, all that was offered by way of a policy response to this situation was the announcement of a Review of Higher Education, which is to report in October 2008.

As indicated, at present, the Labor Government's emphasis is on the Vocational Education and Training (VET) sector, just like the previous Coalition Government. The former Prime Minister, John Howard, repeatedly asserted that parents, educational planners and education providers should focus on trade skills. He claimed that there was excessive emphasis on university education, which he believed was motivated by misguided status aspirations.[3] Reflecting this judgement, the Coalition only marginally increased the number of Commonwealth-subsidised university places for domestic students between 1996 and 2007.

This focus on the VET sector is curious. It has occurred in the face of evidence that we, among others, have collected which shows that the most rapid growth in employment in Australia is amongst professionals, managers and associate professionals, employees who, for the most part, need university credentials as their entry point to these occupations. This rapid growth has occurred at a time when domestic training at university level has been static, a situation that has produced chronic shortages. Such shortages have been alleviated somewhat by a massive increase in the intake of migrant professionals.[4]

This article revisits this disjuncture between labour market demand and policy response via new data on employment levels by industry and occupation over the decade 1996 to 2006. It explores the skill demands of the industries which have dominated employment growth over this decade. This inquiry shows that most of the growth in skilled occupations has been amongst those requiring university credentials. By comparison, the growth in occupations requiring trade or semi-skilled credentials has been far lower.

DATA AND APPROACH

Census data on employment by industry and occupation for 2006 was released late in 2007. The Centre for Population and Urban Research purchased this data in customised form. The Centre holds comparable data for the 1996 census. This allows a comparison of job growth by industry and occupation by location in Australia over the period 1996 to 2006. Job

Table 1: Rate and share of job growth by major industry, Australia, 1996 to 2006

	1996	2006	Change 1996–2006	Change 1996–2006 as per cent of 1996	Share of additional jobs
Agriculture, forestry and fishing	323,936	285,528	-38,408	-11.9	—
Mining	86,117	106,327	20,210	23.5	1.4
Manufacturing	964,570	998,259	33,689	3.5	2.3
Electricity, gas and water	58,913	70,990	12,077	20.5	0.8
Construction	484,300	704,840	220,540	45.5	15.0
Wholesaling	446,776	434,174	-12,602	-2.8	—
Retailing	1,036,385	1,300,223	263,838	25.5	18.0
Accommodation, cafes and restaurants	355,199	433,413	78,214	22.0	5.3
Transport and storage	331,895	403,377	71,482	21.5	4.9
Communications	150,313	131,991	-18,322	-12.2	—
Finance and insurance	296,273	346,822	50,549	17.1	3.4
Property and business services	750,190	976,297	226,107	30.1	15.4
Government administration and defence	373,488	493,484	119,996	32.1	8.2
Education	539,907	678,275	138,368	25.6	9.4
Health and community services	725,219	976,408	251,189	34.6	17.1
GEH subtotal[a]	**1,638,614**	**2,148,167**	**509,553**	**31.1**	**34.7**
Cultural and recreeation services	178,781	200,531	21,750	12.2	1.5
Personal and other services	277,893	323,845	45,952	16.5	3.1
Total	**7,635,036**	**9,101,956**	**1,466,920**	**19.2**	**100.0**

Source: ABS, customised 1996 and 2006 census datasets held by CPUR
Note: [a] Government administration and defence, Education, Health and community services combined

Table 2: Change in number of tradespersons by industry group and by state/territory 1996 to 2006

	Tradespersons								
	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia[a]
Agriculture, forestry and fishing	-250	-371	-407	-255	-689	-66	64	-14	-1,988
Mining	-921	514	1,320	590	2,093	-139	-191	-5	3,240
Manufacturing	-6,144	-5,321	9,531	-1,462	3,447	8	209	108	370
electricity, gas and water	193	3	1,371	64	22	317	-56	100	2,005
Construction	**16,233**	**26,809**	**25,729**	**7,564**	**13,325**	**1,214**	**185**	**1,332**	**92,338**
Wholesaling	-3,817	-1,357	-63	-665	-591	5	-2	-137	-6,630
Retailing	-1,320	-428	3,690	680	515	-79	136	17	3,205
Accommodation, cafes and restaurants	-90	1,467	651	139	366	125	-3	62	2,689
Transport and storage	-374	33	665	-261	235	-61	12	-57	186
Communication services	-2,926	-1,853	-1,528	-436	-558	-156	-125	-74	-7,656
Finance and insurance	-367	-236	60	23	29	12	5	-21	-495
Property and business services	972	597	1,772	-140	629	-47	100	-11	3,869
Government administration	-466	-986	-201	-200	83	-76	736	-252	-1,434
Education	-597	-586	-285	-367	-419	-300	-61	-17	-2,635
Health and community services	23	-284	255	63	-15	-46	-49	55	-7
Cultural and recreation services	595	954	356	13	56	31	68	1	2,068
Personal services	3,750	3,740	3,199	931	1,093	269	67	229	13,269
Non-classifiable economic units	836	-591	697	90	746	320	22	110	2,230
Not stated and inadequately described	1,465	1,721	528	-1,043	-524	-442	-89	-488	1,125
Total	**6,795**	**23,825**	**47,340**	**5,328**	**19,843**	**889**	**1,028**	**938**	**105,749**

Source: ABS, customised 1996 and 2006 census datasets held by CPUR.
Note: [a] includes not stated and inadequately described.

growth refers to the net outcome of new jobs minus any losses in the industry and occupation in question. The 2001 census data on industry proved to be incompatible with that for the 1996 and 2006 censuses, because the Australian Bureau of Statistics (ABS) used a different methodology for determining the industry of respondents in 2001 to that used in the 1996 and 2006 censuses.[5]

JOB GROWTH BY INDUSTRY IN AUSTRALIA 1996 TO 2006

Table 1 shows the share of total job growth by industry group in Australia over the 1996 to 2006 period. There has been little or no growth in the main goods and commodities producing industries—agriculture, mining and manufacturing. Indeed, in the case of agriculture there has been a decline. Since these are the industries usually thought of as important employers of tradespersons, this raises the question—what is the source of the alleged shortage of tradespersons? One answer may be the construction industry, where there was a massive 45 per cent growth in employment over the decade. To explore this issue requires an analysis of the occupational makeup of changes in employment by industry. We begin with the trade issue before exploring the sources of demand for other forms of skilled labour, particularly professionals.

INDUSTRY CHANGE AND THE EMPLOYMENT OF TRADESPERSONS

Table 2 allows an investigation of the source of growth in employment of persons in trade occupations by industry. The construction industry is distinctive among industries that employ a high proportion of tradespersons. It is growing rapidly and a major share of the additional construction workforce consists of tradespersons. Table 2 indicates that some 92,338 of the total 220,540 overall growth in construction industry employment between 1996 and 2006 was for tradespersons. By contrast, employment in Australia's manufacturing industries grew by just 20,210, and only 370 of this growth comprised tradespersons.

Table 2 also shows that this increase of 92,338 tradespersons in the construction industry accounted for almost all (87.5 per cent) the total growth of 105,749 in the employment of tradespersons across all industries in Australia. This pattern is evident in each state (see Table 2). For example, in Victoria, which exhibited the largest aggregate employment growth of tradespersons in construction (26,809), there was actually a net drop in the employment of tradespersons in other industries (including a sharp drop of such employment in the state's manufacturing industry). This domination of the construction industry in trade employment growth implies that Australia is experiencing a shortage of specialist construction tradespersons rather than a generalised shortage of tradespersons.

As Table 3 indicates, there was rapid employment growth in construction employment in each state. This outcome is largely a consequence of Australia's massive property and infrastructure boom, which has placed intense pressure on the local construction capacity. As a result, the supply of construction workers is stretched in all states. In the case of the mining industry in Western Australia and Queensland, the growth in jobs for tradespersons in mining (2,093 and 1,320 respectively) is small compared with the construction industry (13,325 and 25,729 respectively). While the nationwide demand for construction workers continues, so will the difficulties of attracting such workers to the resource industries located in Western Australia and Queensland.

Table 3: Rate and share of job growth by major industry for selected states 1996 to 2006

	New South Wales			Victoria			Queensland		
	Net job growth/ decline (numbers)	Per cent growth 1996–2006	Share of additional jobs (%)	Net job growth/ decline (numbers)	Per cent growth 1996–2006	Share of additional jobs (%)	Net job growth/ decline (numbers)	Per cent growth 1996–2006	Share of additional jobs (%)
Agriculture	-12,613	-14	-4	-9,341	-13	-2	-9,447	-13	-2
Mining	-1,323	-6	0	629	11	0	8,265	37	2
Manufacturing	-13,675	-4	-4	-10,196	-3	-3	39,357	27	9
Construction	48,278	29	14	58,271	52	15	62,178	61	15
Retail and wholesale	54,081	11	16	73,355	19	19	72,903	26	17
Government administration and defence	25,708	23	7	20,428	29	5	28,222	40	7
Education	40,266	23	12	37,007	28	10	33,935	33	8
Health and community services	71,803	30	21	65,322	37	17	60,344	46	14
GEH[a]	**137,777**	**26**	**40**	**122,757**	**32**	**33**	**122,501**	**40**	**29**
Finance and insurance	21,940	18	6	13,929	18	4	10,458	25	2
Property and business services	63,701	23	18	64,399	34	17	51,748	40	12
Other	48,061	9	14	62,956	17	17	63,172	20	15
Total	**346,227**	**14**	**100**	**376,759**	**20**	**100**	**421,135**	**30**	**100**

	Western Australia			South Australia		
	Net job growth/ decline (numbers)	Per cent growth 1996–2006	Share of additional jobs (%)	Net job growth/ decline (numbers)	Per cent growth 1996–2006	Share of additional jobs (%)
Agriculture	-5,656	-15	-3	-1,169	-3	-1
Mining	11,672	41	7	2,416	68	3
Manufacturing	15,740	20	9	1,755	2	2
Construction	29,643	54	17	16,559	56	18
Retail and wholesale	26,040	18	15	17,568	16	19
Government administration and defence	16,460	54	9	10,603	42	11
Education	14,144	25	8	7,273	17	8
Health and community services	25,631	36	15	20,207	30	22
GEH[a]	**56,235**	**36**	**32**	**38,083**	**28**	**41**
Finance and insurance	2,248	9	1	703	2	1
Property and business services	24,352	32	14	14,746	21	16
Other	14,849	9	8	2,662	2	3
Total	**175,123**	**23**	**100**	**92,620**	**16**	**100**

Source: ABS, customised 1996 and 2006 census datasets held by CPUR

Note: [a] Government administration and defence, Education, Health and community services combined

Trade skills utilised in the construction industry

Table 4 indicates the change in the numbers employed in each of the main trades fields over the period 1996 to 2006. It also shows the share of any growth in employment in these fields which was attributable to employment growth in construction.

There are a number of trades where employment has fallen or has remained stable over the decade 1996 to 2006, including the mechanical and fabrication engineering, automotive, printing, textile and wood trades. The big increases in employment of tradespersons have largely been in areas where the construction industry has been a crucial employer. These, of course, include those employing workers specialised in construction, notably structural construction and final finishes construction tradespersons. In addition, this group includes the electrical and electronics and plumbing trades, where 78 per cent and 98 per cent of the growth in employment, respectively, was attributable to the growth of employment in construction. Even in horticulture, which has shown strong employment growth, 61.8 per cent of this growth was a consequence of increased employment in the construction industry.

The point of this information is not to challenge the need for additional training in the trades, but rather to identify those skills that are in demand. We should also put this need into perspective. The 105,749 increase in the number of employed tradespersons over the decade 1996 to 2006 was dwarfed by the 439,000 growth in the number of employed professionals. Yet successive governments have paid much less attention to university training than to trade training. Nor is it a matter of either/or. Australia's post-school training record is poor at both the trade/technical and further education and university level. As of 2006, some 47.7 per cent of all men and women aged 18 to 20 in Australia were not engaged in education or training at the school, technical and further education (TAFE), university or any other post-school training institution.[6] In other words, there is a huge surplus of young Australians who are not in post-school training, but who should be, both for their own and their nation's long-term economic benefit.

In any case, there has been a striking increase in apprentice commencements over recent years. Commencements in apprenticeships in the construction trades increased from 12.8 thousand in 2002 to 19.0 thousand in 2006.[7] The unresolved problem with apprentice commencements is that many do not complete their indentures.

It is sometimes argued that, notwithstanding the low growth in employment in some trades fields, the trades workforce is ageing and that, as a consequence, a sizeable replacement demand is imminent. However, this does not seem to be the case. For the November quarter 2007, the proportion of full-time construction trades workers who were employees and were aged 45 plus was 22.6 per cent as were 30.0 per cent of automotive and engineering trades workers. By comparison, the proportion of all employed professionals in this age group was 35.4 per cent.[8]

SKILL NEEDS IN THE SERVICE INDUSTRIES

We now explore the sources and scale of demand for university-trained personnel. Some preliminary comments on the role of the service industries will help set the scene. The dominance of employment growth in the service industries is evident from Table 1. This shows that 71 per cent of all employment growth in Australia in the decade 1996 to 2006 occurred within the retail and wholesale, finance and insurance and property and business services industries, along with the three service industries closely

Table 4: Change in the number of employed tradespersons by trade, Australia 1996 to 2006, and number and share attributable to changed employment levels in the construction industry

Trade area	Employment level all industries 1996	2006	Change 1996–2006	Employment change in construction industry by trade field 1996–2006 (total numbers)	Share of employment change (all trade areas) due to employment change in construction industry[a] (per cent)
Mechanical and fabrication engineering	178,067	179,800	1,733	1,313	75.8
Automotive tradespersons	120,726	116,436	-4,290	380	—
Electrical and electronics tradespersons	136,240	162,418	26,178	20,329	77.7
Construction tradespersons	540	1,823	1,283	906	70.6
Structural construction tradespersons	122,350	161,647	39,297	39,920	101.6
Final finishes construction tradespersons	43,223	55,569	12,346	9,457	76.6
Plumbers	44,066	56,649	12,583	12,347	98.1
Food tradespersons	83,298	90,263	6,965	106	1.5
Skilled agricultural and horticultural workers	64,185	72,168	7,983	5,074	63.6
Printing tradespersons	32,216	24,088	-8,128	26	—
Wood tradespersons	29,804	29,002	-802	1,261	—
Hairdressers	40,162	47,878	7,716	2	0.0
Textile, clothing and related	20,817	14,488	-6,329	55	—
Miscellaneous and other tradespersons and related workers nfd[b]	81,047	90,261	9,214	1,162	12.6
Total tradespersons	996,741	1,102,490	105,749	92,338	87.3

Source: ABS, 1996 and 2006 customised datasets held by CPUR

Notes: [a] trade areas where employment levels declined between 1996 and 2006 have been omitted

[b] includes defence force tradespersons; nfd = not further defined

linked to government, that is, government administration, education and health, and community services (GEH).

Table 3 shows that, though the proportion varies a little from state to state, this generalisation holds for each mainland state, including Queensland and Western Australia.

There is insufficient space to explore the various reasons why the service industries dominate employment growth. Nevertheless, these reasons include the tendency for the goods-producing industries to outsource service demands to specialist financial and business service enterprises. Thus, few would be surprised at the 30.1 per cent growth in employment in the property and business service industry for Australia between 1996 to 2006. This industry includes the fast growing areas of legal and accounting services, marketing and business management services, technical, scientific and computer services, as well as the property-based industries of real estate agencies and property operators and developers.

Australia's rapid population growth over the decade has also been an important factor in the generation of service-sector employment. This is because the provision of services is usually employment intensive and, therefore, an expansion in the population base would normally generate a parallel increase in service demands in both the public and private sectors. This is evident in the state-by-state comparisons. For example, Table 3 shows that employment in the retail and wholesale industry in Queensland grew by 72,903 between 1996 and 2006, compared with 54,081 in NSW. This is despite the much larger population of NSW relative to Queensland. The explanation is that population growth in Queensland was 19.7 per cent over the decade compared with 8.9 per cent in NSW (see Table 5).

The biggest surprise with respect to the growth in service-sector demand for workers was the role of the government-related industries. These are the GEH industries, which we have amalgamated for subsequent analysis. This industry sector was responsible for 34.7 per cent of employment growth in Australia over the 1996 to 2006 period. These industries have in common that workers employed in them are either employees of federal, state or local government agencies, or they owe their private-sector employment to funds provided by governments. For example, child care services in Australia are increasingly provided by private providers, like the ill-fated ABC Learning. The ability of these private providers to expand has depended on government subsidisation of their activities. The same point applies to

Table 5: Government, education and health (GEH) job growth, population growth and ratio of population to GEH growth 1996 to 2006

	GEH increase 1996–2006 (per cent)	Population increase (per cent)	Ratio of GEH increase to population increase
Victoria	32.3	12.1	2.7
New South Wales	26.4	8.9	3.0
Queensland	40.5	19.7	2.1
Western Australia	35.7	14.7	2.4
South Australia	27.8	5.4	5.1
Australia	31.1	11.8	2.6

Source: ABS, customised industry by occupation 1996 and 2006 census datasets held by CPUR most of the private providers of health services and educational services in Australia.

The reason for the rapid growth in the GEH sector is partly to do with population growth. As the number of residents increases, so does the need for health, education and other government services. However, in all states, the rate of GEH employment growth far exceeded that of population growth. This is illustrated in Table 5 by the ratio of employment growth to population growth. Employment growth is two to three times population growth, except in South Australia, where it grew at a massive 5.1 times the rate of population growth in that state.

Thus, the expansion of employment in the GEH sector is not just about keeping up with population numbers. Over the past decade, it has involved an intensification of service delivery, at least as it manifests itself in the growth in the number of administrators, teachers, doctors, nurses, welfare officers and the like, as well as a greater government role in new fields such as child care services and pre-school education. The rapid increase in the number of those employed in government administration and defence—which according to Table 1 grew by 119,996 to 493,484 (or 32.1 per cent) over the decade to 2006—is one indicator of this intensification process. In the case of the Commonwealth Public Service (CPS), the Business Council of Australia has recently complained that the expansion of the CPS, from 113,518 in 2000 to 155, 482 in 2007 is 'crowding out' the private sector's access to scarce skills.[9]

The GEH sector makes up a particularly striking share of job growth in the states where the rate of economic growth has been subdued (relative to Queensland and Western Australia). The Northern Territory and the Australian Capital Territory are outliers because they are centres for government activity. Tasmania, South Australia and New South Wales cannot claim this distinction. Yet, as Table 6 shows, some 41.9, 41.1 and 39.8 per cent, respectively, of the share of all employment growth over the period 1996 to 2006 in these three states is attributable to employment in the GEH sector. This compares with the more modest, but still large figure of 32.1 per cent for Western Australia, 32.6 per cent for Victoria and 29.1 per cent for Queensland.

IMPLICATIONS OF SERVICE-INDUSTRY GROWTH FOR SKILL NEEDS

Table 7 provides the foundation for an initial examination of occupation growth by industry. It shows that the restructuring of

Table 6: Share of job growth in government, education and health industries (GEH) 1996 to 2006

	Total GEH job growth	Total job growth	Per cent GEH
Victoria	122,757	376,759	32.6
New South Wales	137,777	346,227	39.8
Queensland	122,501	421,135	29.1
Western Australia	56,235	175,123	32.1
South Australia	38,083	92,620	41.1
NT	5,848	9,252	63.2
ACT	17,779	25,520	69.7
Tasmania	9,065	21,621	41.9
Australia	509,553	1,466,920	34.7

Source: ABS, customised 1996 and 2006 census datasets held by CPUR the Australian economy is favouring workers with post-school credentials, particularly those with university qualifications. Some 61.4 per cent of the 1.47 million growth in employment over the decade 1996 to 2006 occurred within the ranks of people who would normally possess post-school qualifications. Of this 1.47 million growth, managers and administrators accounted for nine per cent, professionals 29.8 per cent, associate professionals 15.5 per cent and tradespersons 7.2 per cent.

Even in the manufacturing sector, where the net growth in jobs was relatively small (32,204), all of this growth was attributable to increased employment of managers and administrators (18,465) and professionals (20,103). Net growth in trades occupations in manufacturing was just 370 jobs over the period 1996 to 2006.

Table 7 also shows that the service industries have been the main employers of additional professionals, managers and associate professionals in Australia. In the case of professionals, 90 per cent of the 438,840 net growth in professional employment occurred within the four service occupations discussed above. More than half of this growth, or 230,932, occurred in the GEH sector alone.

The GEH sector is also a significant employer of managers and administrators and associate professionals. Over the decade 1996 to 2006, the sector absorbed 27.5 per cent of the growth in employment in Australia of managers and administrators and 28.5 per cent of the growth in employment of associate professionals.

Table 8 provides a further elaboration on these employment trends, focussing just on persons classified as professionals. It indicates the extent of employment growth by broad professional field (computing, medicine and so on) over the decade 1996 to 2006 within each of the industries under consideration.

The largest aggregate growth was in the business field where there was an increase of 114,171 persons holding professional occupations. As might be expected, a major component of this employment growth (42,470) occurred in the property and business services industry. There was also a large increase in the number of health professionals (75,544) and educational professionals (67,008), almost all of whom were employed in the GEH industry sector. By contrast, the 46,290 growth in employment in the science, building and engineering professions was fairly modest.

POLICY IMPLICATIONS

It is highly unlikely that these trends will abate. The Rudd Government's own electoral commitments to education and health service delivery are just one example of the many influences favouring continual job growth in services and thus of further growth in demand for university trained personnel.

Yet the Rudd Government initiatives, as they impact on post-school education, have so far followed the preceding Coalition Government's diagnosis of the skill shortage problem. Labor has focussed on the trade and to some extent the technology R&D level. As indicated, it has promised to finance some 450,000 training places over four years at the Certificate II, III and IV levels.

There has been little critical scrutiny of this training places initiative. It appears to be as much a welfare initiative as a skill initiative. The first tranche of some 20,000 training places are to be offered in 2008 to people who are marginal to the labour market—in that, despite the current jobs boom, they are still looking for work.[10] This tranche appears to follow from the Coalition Government's skill voucher program. This program sought to get unemployed and low-skilled people into the labour market by helping them gain some qualifications, even if at the semi-skilled Certificate II level.

Table 7: Change in employment in skilled occupations and other occupations between 1996 and 2006 and share of occupational growth in government, Australia

Industry group	Skilled occupations						
	Managers and administrators[a]	Professionals	Associate professionals	Tradespersons	Total skilled occupations	Other occupations	Total[b]
Agriculture, forestry and fishing	-297	596	917	-1,988	-772	-10,699	-13,793
Mining	2,797	4,966	2,225	3,240	13,228	7,238	20,238
Manufacturing	18,465	20,103	1,797	370	40,735	-6,179	32,204
electricity, gas and water	2,924	4,893	1,184	2,005	11,006	1,229	12,079
Construction	21,014	9,906	20,097	92,338	143,355	76,025	220,611
Wholesaling	5,946	3,609	-1,897	-6,630	1,028	-14,957	-14,050
Retailing	401	10,647	31,667	3,205	45,920	218,353	263,863
Accommodation, cafés and restaurants	1,417	-217	21,755	2,689	25,644	52,052	78,197
Transport and storage	4,907	5,183	1,989	186	12,265	58,544	71,254
Communication services	2,430	5,351	-7,675	-7,656	-7,550	-10,693	-18,304
Finance and insurance	10,359	20,362	28,268	-495	58,494	-11,256	50,585
Property and business services	20,552	104,432	45,875	3,869	174,728	49,516	227,126
Government administration	15,235	49,975	21,780	-1,434	85,556	35,688	120,167
Education	10,580	83,759	10,302	-2,635	102,006	37,266	138,711
Health and community services	10,437	97,198	33,232	-7	140,860	108,316	251,419
GEH	**36,252**	**230,932**	**65,314**	**-4,076**	**328,422**	**181,270**	**510,297**
Cultural and recreation services	1,858	4,344	5,621	2,068	13,891	9,903	23,862
Personal services	2,297	5,260	9,127	13,269	29,953	15,232	44,313
Non classifiable economic units	418	8,004	2,346	2,230	12,998	-1,750	9,896
Not stated	142	469	201	1,125	1,937	6,405	-27,449
Total	**131,882**	**438,840**	**228,811**	**105,749**	**905,282**	**620,233**	**1,472,794**
GEH as per cent of additional jobs 1996–2006	27	53	29	-4	36	29	35
Occupations' share of total growth (per cent)	9	30	16	7	61	42	100

Source: ABS, customised 1996 and 2006 census datasets held by CPUR

Notes: [a] Does not include farmers and farm managers

[b] Total includes not stated and inadequately described

Table 8: Change in employment in professional occupations and the share of professional employment growth accounted for by the GEH between 1996 and 2006

Industry group	Science, building and engineering	Computing	Business (except computers)	Medical practitioners	Other health (incl. nursing)	School teachers	Other education	Social welfare	Other social	Other professional	Total
Agriculture, forestry and fishing	736	36	528	0	-64	-124	-70	-41	63	-468	596
Mining	2,567	217	1,743	-17	-2	-9	38	23	162	244	4,966
Manufacturing	3,909	2,459	7,188	-45	-266	-35	139	18	5,082	1,654	20,103
electricity, gas and water	2,132	720	1,505	-3	5	-3	84	5	222	226	4,893
Construction	3,442	708	3,866	0	6	-16	98	88	1,110	604	9,906
Wholesaling	-241	903	896	-37	181	19	76	-9	1,807	14	3,609
Retailing	657	2,099	3,902	-23	2,328	-209	1	-45	1,633	304	10,647
Accommodation cafes and restaurants	-138	96	989	-34	-236	-314	-843	57	411	-205	-217
Transport and storage	576	737	2,321	22	-15	23	217	79	391	832	5,183
Communication services	1,856	950	1,524	-2	0	-15	40	-16	778	236	5,351
Finance and insurance	-37	4,705	13,863	-44	-297	-45	60	59	1,131	967	20,362
Property and business services	15,689	20,729	42,470	-126	2,284	-1,528	848	1,011	22,989	66	104,432
Government administration	8,805	4,400	17,161	-178	2,530	-1,283	964	8,485	6,135	2,956	49,975
Education	2,276	2,460	3,095	-16	498	57,663	12,663	1,719	1,238	2,163	83,759
Health and community services	3,750	1,251	6,413	11,530	57,519	-647	309	15,030	1,456	587	97,198
GEH	**14,831**	**8,111**	**26,669**	**11,336**	**60,547**	**55,733**	**13,936**	**25,234**	**8,829**	**5,706**	**230,932**
Cultural and recreation services	190	588	433	-11	-29	-48	-82	-8	3,644	-333	4,344
Personal services	300	764	2,761	-11	-23	-414	-938	1,220	1,563	38	5,260
Non classifiable economic units	-322	2,029	3,087	-5	82	69	337	216	2,127	384	8,004
Not stated	143	113	426	-87	130	23	-40	-18	-118	-103	469
Total	46,290	45,964	114,171	10,913	64,631	53,107	13,901	27,873	51,824	10,166	438,840
GEH as per cent of total change	32.0	17.6	23.4	103.9	93.7	104.9	100.3	90.5	17.0	56.1	52.6

Source: ABS, customised 1996 and 2006 census datasets held by CPUR

Under the banner *Skilling Australia for the Future*, registered training organisations (RTOs) are invited to tender for the provision of the training places for the initial 20,000 offering. Tenderers are required to offer places for a wide range of professional, associate professional, trade and sub-trade occupations, as well as for semi-skilled occupations including sales assistants, checkout operators and cashiers and cleaners.[11] The training is to cover just three months from April to June 2008, though there will be extensions in some fields in a subsequent tender. Under these circumstances, it is likely that most of the places will be offered at the semi-skilled end of the spectrum.

This program seems admirable for the purpose of helping to get the small minority of aspiring workers who can't find employment into jobs. It remains to be seen how the subsequent rollout of the 450,000 training places will work out. Perhaps the program will focus more on Certificate III or above qualifications.[12] On 26 March, the Government announced a further 50,000 places which are intended to address skill shortages in the health workforce. This initiative, like the first tranche, is confined to TAFE and VET level training.[13]

It is hard to see how this program will contribute to delivering more construction tradespersons. The problem in this area is not lack of training places. The TAFEs which provide the classroom instruction in the skilled trades are not appealing for funding to create more places, nor are the private sector RTOs. The latter have shown a capacity to grow like mushrooms whenever there is extra demand for VET training.

The main reason for shortages in the supply of traditional tradespersons is a deficiency in the number of employers willing to provide indentures for apprentices and/or of young people willing to take up and finish their indenture. All the training

Table 9: Commencing domestic undergraduate students, Australia, 2002 to 2006 by broad field of education

	2002	2003	2004	2005	2006	Growth/ decline (number)	Growth (per cent)
Sciences	15,692	15,657	16,032	15,796	15,471	-221	-1.4
IT	10,042	8,609	7,129	6,254	5,508	-4,534	-45.2
Engineering	10,902	10,699	10,436	10,531	10,888	-14	-0.1
Architecture	3,589	3,674	3,795	4,294	4,992	1,403	39.1
Ag/Env	4,783	4,737	4,718	3,695	3,559	-1,224	-25.6
Health	21,612	20,860	21,635	24,687	27,520	5,908	27.3
Education	20,890	18,579	19,032	20,599	20,747	-143	-0.7
Mgt & Commerce	31,491	29,940	29,923	31,881	32,400	909	2.9
Soc & Cult	46,592	43,066	41,578	46,006	47,291	699	1.5
Creative Arts	14,676	14,219	14,316	15,350	16,744	2,068	14.1
Food/Hosp.	36	1	1	55	36	0	0.0
Mixed	1,607	1,731	1,877	1,761	1,761	154	9.6
Total	181,912	171,772	170,472	180,909	186,917	5,005	2.8

Source: Department of Employment, Science and Training, Higher education student statistics collection, 2002 to 2006 place initiative will do is to further subsidise training in these fields. It will save the apprentice or perhaps the employer from having to pay the circa $1200 annual fee for TAFE classroom training. The initiative will not deal with the more fundamental problem, referred to above, of high drop out rates from indentures, especially drop outs due to low wages for apprentices.[14]

INACTION ON THE HIGHER EDUCATION FRONT

In contrast to this flurry of actions regarding trade places, all we have from the Rudd Government on the much more important higher education front is the initiation of a higher education review. This may or may not lead to an expansion in university training at some unknown date. Yet, the case for such expansion—as outlined above—is already clear.

Table 9 provides further information which supports this contention. The Table details the latest (unpublished) information on the commencements at the undergraduate level at Australian universities for domestic students by major field of study between 2002 and 2006. As can be seen, there was very little increase at all in domestic commencements over this period—despite the expansion in employment at the professional, managerial and associate professional level over this time. Commencements actually fell in engineering, IT and science.

Why this inaction? There is no doubt about the extent of professional and associate professional skill shortages. A good indicator of employer judgements about skill shortage priorities is their willingness to sponsor skilled migrants under the business long-stay 457 visa category. It is a good indicator because of the cost involved in sponsoring and moving personnel to Australia under this visa. There were 55,980 finalised nominations of principal applicants in 2006–2007. The great majority were for professionals, including 6,210 computing, programming and software designers, 4,060 nurses, 3,610 general practitioners and doctors in training and over 3,000 engineers.[15]

Unlike the trade area, there are Government enforced limits to the availability of university places. Universities cannot offer Higher Education Contribution Scheme (HECS) liable places beyond the number specified each year by the Commonwealth. A tiny minority of domestic students in the fields of medicine and law used to enrol as full-fee students. This option, too, is about to be removed by the Rudd Labor Government.

The situation is curious. There is a far greater need for additional training at the university level than there is at the vocational level. The Rudd Government has so far not indicated any willingness to pay for additional university places. Yet it is prepared to subsidise up to 450,000 vocational training places.

Perhaps the labour market myths that lay behind Coalition Government's prioritisation of trade training continue to prevail within the Labor Government administration. Perhaps it is about costs. The funds needed to provide for an additional university place are more than ten times greater than the annual cost of TAFE instruction in the trades.

Perhaps the Rudd Government, like its Coalition predecessor, intends to rely on overseas migration as a source of cheap skills acquisition in the managerial, administrative and professional areas. If this is the reason for the higher education policy vacuum, it is problematic. Firstly, the immigration solution to skills supply is an imperfect one, as the accompanying article in this issue of *People and Place* shows. Secondly, there is an ethical dimension to such an approach—reliance on the overseas solution ignores the primary obligation of government to provide opportunities for domestic aspirants for education, training and good jobs.

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