Abstract: This paper examines the role of and impact of the skilled migration program and international education sector on Melbourne's burgeoning knowledge economy throughout the 2000s. The growing movement of professionals, or knowledge workers, around the world has been interpreted as one consequence of globalisation (Appadurai 1996), with researchers such as Sachar (2006) noting a global ‘race for talent’ has developed, whereby nations such as Australia, Canada and the United Kingdom attempt to attract knowledge workers through international education and skilled migration policies and programs.

Accountancy professionals are used as a case study in this paper to examine the causes behind the growth of knowledge workers within the city's economy and labour market. The research examines the labour market outcomes within Melbourne for accountants over the 2000s, ascertaining the extent to which new entrants into this key profession were supplied locally (as graduates of the Australian higher education system) or globally (via Australia's skilled migration system), following the vast growth in qualified migrant accountants in the mid-2000s. The study concludes that national policies regarding skilled migration and international education provision have had the greatest impact on knowledge worker labour supply for Melbourne and its economy.

The knowledge economy and knowledge-professional workers

Theorisation and attempts to understand knowledge – its various elements such as the scientific, technical and practical – and the vital role knowledge plays in humanity, date back to antiquity and Aristotelian philosophy. The early modern period heralded an emphasis on scientific knowledge and the increasing connection between knowledge and its association with academic disciplines. More recently the term ‘knowledge economy’ has gained currency through the increasing importance of the economic application of knowledge itself:

Knowledge economy is an economy that uses knowledge in the production, exchange and use of goods and services; which produces knowledge goods and knowledge services; and which creates and accumulates knowledge as an asset (Madanipour 2011, p.84).

The ‘knowledge worker’ is a concept first developed by Reich (1992), characterizing the post-industrial economy’s workforce as one increasingly comprised of ‘symbolic analysts’ who:

…solve, identify, and broker problems by manipulating symbols. They simplify reality into abstract images that can be rearranged, jiggled, experimented with, communicated to other specialists, and then, eventually transformed back to reality. The manipulations are done with analytical tools, sharpened by experience… (Reich 1992, p.178).

In the labour market, knowledge workers (who can be classified by the occupation division of professionals) differentiate themselves from other occupational groups by dealing with the application of knowledge, be it specified, technical and/or applied, in their work. Their cachet in the labour market comes from applying this knowledge to problems or situations presented by their clients.

Established research into the history of the professions (sometimes referred to as the ‘professional project’) has determined that professionalism requires the application of a ‘discretionary intangible skill’ (Friedson 2001, quoted from Malhotra & Morris 2009). That is, a form of knowledge that is so difficult it requires training, yet reliable enough to produce results. Historically, professions have also been able to assert a monopoly or control over their work and have to mitigate against their codified knowledge becoming widely understood and critiqued, as ‘in order to sustain professional power some degree of mystique or impenetrability has to be sustained’ (Larson, quoted from Malhotra & Morris 2009, p.899).

Some methods by which professionals carve out and maintain a given jurisdiction include educational attainment and relevant qualifications; public perception; the role of the particular profession in the workplace; licensing arrangements and membership of professional associations.
The accountancy profession in Australia

An example of the measures a professional body may take in order to maintain control of a particular jurisdiction can be seen in the case of accountants. In Australia, there is no legislative or regulatory requirement for the use of the term ‘accountant’. It is possible for the holder of a bachelor degree in accounting to call themselves an accountant. However, there is a widely accepted labour market requirement, albeit un-legislated, that the individual must be a member of an accountancy professional membership organisation in order to practice as an accountant. The two main professional membership organisations for accountants in Australia are the Certified Practising Accountants Australia (CPA Australia) and the Institute of Chartered Accountants Australia (ICAA). In the case of CPA Australia, in order to achieve ‘designation’, an individual is required to hold a bachelor degree in an accredited course which has the necessary core CPA knowledge requirements. The individual is then eligible for a member assessment, which determines whether they can start the professional level CPA course. The professional level course comprises of six segments, and in the event that an individual does not hold a bachelor degree in a CPA accredited course (but has attained, for example, a broader commerce, finance or economics degree) they must also undertake a series of ‘foundation’ level units, followed by the six professional level segments.

The impact of globalisation on accountants and the accounting industry

The accountancy profession has undergone considerable change in recent years as a result of globalisation and the development of the global economy. The industry is now dominated by multinational ‘big 4’, firms that conduct accounting, audit and consulting services across the world (Perera et al. 2003). The presence of these firms across the world’s major cities has seen the sector analysed through the prism of the Global Cities (Sassen 2001) and the World City Network (WCN) (Taylor et al 2010) theories.

The global use of international accounting standards has also seen the profession regarded increasingly as a key ‘portable’ occupation, whereby the skills and knowledge of accountants can be relatively easily transferred across international jurisdictions, and this, together with the international coverage of the major accounting firms, has seen the occupation become a key one within the ‘mobile global worker’ class. In 2004 the Institute of Chartered Accounts of Australia (ICAA) ran a highly successful advertising campaign consisting of images of key global city destinations such as London and Paris to convey the international portability of an accounting qualification and associated membership (Westerman & Urban 2005).

Global demand for workers – the race for talent

The increasing movement of professional workers around the globe has been interpreted as another consequence of globalisation (Appadurai 1996). In a 2001 study Iredale outlined various theories relating to professional or knowledge worker migration: human capital theory asserts simply that people will relocate to find employment and wages most appropriate to their formal education training. By 1989, Salt and Findlay argued for a framework that would include such elements as the new international division of labour (NIDL), as well as ‘…the nature of careers, the role of intra-company labour markets and the lubrication provided by recruitment and relocations agencies (Iredale 2001, p.9).

A third theoretical stream emerged by the 1990s known as the ‘structuration’ approach, whereby it was argued that private capital and the state engage in recruitment to fill labour market needs, directly recruiting workers and exerting indirect control over this by setting the qualifications required for employment (Goss & Lindquist 1995). Iredale also asserted that bilateral and multilateral trade agreements increasingly served to facilitate the flow of international labour, with such state and regional level agreements serving as ‘lubricators’ to speed up industry led labour market and skills outcomes (Iredale 2001, p.9).

Higher education, skilled migration and global workers

Linking the higher education system to skilled migration programs has become a common method for many developed world economies (for example, Canada, the USA, Australia and New Zealand) to offset a series of labour market, economic development, skill shortage and population growth issues, and reflects the broader development in the global movement of skilled workers. Shachar (2006) posits that the effect of linking higher education and skilled migration is four-fold: it serves to offset fertility declines in developed nations; it meets labour and economic demand for (ever-greater) numbers of highly skilled workers; it provides a ready supply of graduates for home countries employment needs (and graduates who are already reasonably familiar with the relevant society and
culture having studied there for the previous three to four years) and finally, using the prospect of potential permanent residency has become a key recruitment tool in the increasingly competitive international student market.

**Australian skilled migration**

Policies regarding both international education and migration in Australia became entwined in the late twentieth and early twenty-first centuries. The 1990s saw a shift in Australia’s migration policies and systems away from family (reunion) migration and towards skilled migration, in order to address labour market problems such as skill shortages and to begin to offset the looming economic and demographic consequences of Australia’s ageing population.

Australia’s ‘two step’ skilled migration system was introduced by the federal Howard government in 1997. The term ‘two step’ refers to the gaining of study visas for international students to study at Australian universities (step one), followed by application of permanent residency upon completion of the Australian degree (step two). Under the points system used throughout 1997-2011, extra points were awarded to overseas students applying for permanent residency who completed an Australian qualification in a subject area listed under the Migrant occupation in demand list (MODL), introduced in 1999, followed by the Critical skills list (CSL) introduced in 2008 (Hawthorne 2008). Under this General skilled migration (GSM) system, skilled migration applicants who had completed courses in Australia were able to apply for residency as they remained in the country. Previously they had been required to apply offshore (Phillips & Spinks 2012).

Linking the international education and skilled migration systems in Australia since the early 2000s has served to offset skills and labour shortages in key knowledge worker/professional occupations in information technology, accountancy and engineering services industries as undergraduate degree courses in these subject areas became increasingly unpopular with domestic students. The promise of high points towards permanent residency applications upon completion of these courses bolstered international student enrolments, maintained sustainable enrolment levels in courses across Australian university faculties and ensured a local labour supply for the key professions.

Chart 1 on major occupation groups of Victorian skilled stream applicants demonstrates that professional workers comprised the vast majority of skilled migrant applicants, even in the midst of the MODL era of 2004-05 to 2007-08, when hairdressers and cooks were placed on the skilled migrant list and there was a subsequent dramatic increase of students in the vocational education and training (VET) system seeking to qualify and gain permanent residency. Professional occupations averaged over 60% between 2000-01 and 2011-12, going as high as 73% and 71% over 2004-05 and 2005-06.

**Chart 1. Number of Victorian skilled stream applicants by major occupation group category, 1999-00 to 2012-13**

![Chart 1](image)
Chart 2 demonstrates the considerable growth in general skilled migration (GSM) applications in Victoria, with numbers between 2,200 and 2,400 towards the end of the 1990s before expanding considerably after 2000-01, and peaking at 13,986 in 2007-08. The growth in skilled migrant applications over this time was in the skilled independent category. Estimates made by Koleth (2010) suggest that half of these were on-shore applications (in many cases, previous international students). The effect of the programme changes made after the GFC can be seen, as the numbers fell over 2008-09 and particularly in 2009-10, but in recent years the numbers have increased once more. The effect of the Evans era policy changes can also be seen with an increasing proportion of skilled visas falling under the ‘employer sponsored’ category from 2010-11 onwards (and to a lesser extent the Business innovation and investment category), so much so that this category achieved almost the same proportion of applicants (29.9%) as the skilled independent category (30.0%) by 2012-13.

Chart 2. Migration programme outcome Skill Stream Primary Applicants (Principal) by category, Victoria, 1996-97 to 2012-13

Growth of the international education industry in Australia, Victoria and Melbourne

By 2014, international education was an $8.7 billion services export industry for Australia. The chart below demonstrates the bulk of the export revenue is generated by the international higher education sector, with the deregulation of international student fees in 2008 offsetting the fall in enrolments and associated goods and services spending (this is spending on food, rent/accommodation and other living expenses incurred by the international student while living in Australia), as well as declines in international vocational education and training (VET) students fees and goods and services expenditure.
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Chart 3. Value of Australian International education exports by sector and expenditure

At the state level, ‘Education-related travel’ (or international education) is now the largest Victorian export (out of both goods and services), worth $5.2 billion in 2014. Chart 4 demonstrates the increasing value of the services export over the period 2000 to 2009, growing from $1.02 billion in 2000 to $5.2 billion by 2009. The sector suffered a decline between 2010 and 2012, but has returned to 2009 levels according to the most recent trade figures.

Chart 4. Value and year on year growth rate of Victorian Education-related travel exports, 2000-14
The importance of skilled migration and international education in the Victorian economy over the 2000s

Australia (and Victoria) experienced record migration growth throughout the period 2001 and 2011, fuelled by the buoyant economy and generous skilled migration policies set in place by the Howard government starting in 1997, and largely continued by the Rudd government from 2007 onwards. Both Victorian Labor Premiers Steve Bracks and John Brumby were known as supporters of high immigration intakes into the state, believing strongly in the economic benefits of population growth. The high population growth figures were also welcome after the period of economic downturn in the 1990s, when net migration out of the state occurred (Searle & O’Connor 2013).

Chart 5. Year on year population growth and growth rates, Greater Melbourne, 1992-2013

![Graph showing year on year population growth and growth rates in Greater Melbourne, 1992-2013.](Source: ABS 2013, Regional Population Growth, Australia, 2012-13, cat. no. 3218.0, ABS, Canberra)

International education in Victoria during the 2000s

After trade based occupations were placed on the Migrant Occupation in Demand (MODL) at the Federal level in 2005, substantial increases in VET sector courses in hospitality and personal services occurred, courtesy of the placement of chefs and hairdressers on the MODL. Chart 6 illustrates the expansion of internationals students in Victoria’s VET sector, particularly from 2005 onwards.

Chart 6. Victorian international student enrolments by sector

![Graph showing Victorian international student enrolments by sector from 2002 to 2014.](Source: Department of Education and Training, International Education Group)
As student numbers in these courses began to increase dramatically (Birrell, B, Healy & Kinnaird 2007; Hawthorne 2010), the issue erupted in 2009 after violent incidents involving Indian international students sparked demonstrations in Sydney and Melbourne and led to public attention being drawn to the issue via the Australian and international media. A review of the skilled migration system was undertaken in 2008 under the Rudd government, led by the then Migration Minister, Senator Chris Evans. This saw the level of skilled migration scaled back, partly in light of the GFC and the perceived need to protect local workers and jobs. The MODL was replaced with the Critical skills list (CSL) which largely excluded trades related occupations and focused on professional occupations, and heralded a move towards a more ‘demand driven’ system, whereby employer sponsored visas were given greater priority (Phillips & Spinks 2012, p.4).

**The impact of skilled migration and international education on Melbourne during the 2000s**

The impact of the great expansion of Melbourne’s international student population was felt perhaps most acutely in Melbourne’s city centre, as a great proportion of the city’s international students both lived and studied there. Indeed, international students have been credited as key contributors towards the rejuvenation of Melbourne’s city centre over the 1990s and 2000s, with some geographers hypothesising that the initial residential expansion of the city centre in the early 2000s was a result of the conversion within the Hoddle Grid (e.g. Melbourne’s central business district (CBD) area) of vacant commercial property to residential property that catered to Melbourne’s then burgeoning international student population (Tsutsumi & O’Connor 2006). The impact of their presence flowed through to education and training business establishments, as many ‘shop front’ universities and higher education institutions were located in the CBD throughout the 2000s, as well as many (largely private) VET providers and English language instruction and testing (ELICOS) establishments (Rood & Leung 2006). The increasing student population located in Melbourne’s CBD also drove demand for retail and food services, fuelling the expansion of CBD-based businesses in those sectors.

**Accountants in Victoria and Melbourne**

In the 2011 Census, accountants were the second largest of all 4 digit level professional occupations in Greater Melbourne after nurses, with employment at 31,861 workers, up from 24,888 in 2001 or a compound annual growth rate (CAGR) of 2.5% over the ten years.

**Table 1: Top ten 4 digit Professional occupations in Greater Melbourne, 2011**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>No. employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Registered nurses</td>
</tr>
<tr>
<td>2</td>
<td>Accountants</td>
</tr>
<tr>
<td>3</td>
<td>Primary school teachers</td>
</tr>
<tr>
<td>4</td>
<td>Secondary school teachers</td>
</tr>
<tr>
<td>5</td>
<td>Software and applications programmers</td>
</tr>
<tr>
<td>6</td>
<td>Management and organisation analysts</td>
</tr>
<tr>
<td>7</td>
<td>Advertising and marketing professionals</td>
</tr>
<tr>
<td>8</td>
<td>Human resource professionals</td>
</tr>
<tr>
<td>9</td>
<td>Solicitors</td>
</tr>
<tr>
<td>10</td>
<td>University lecturers and tutors</td>
</tr>
</tbody>
</table>

Source: ABS Census 2011

While most (39.4%) accountants based in Greater Melbourne worked in the associated subindustry of Accounting services, the profession has a ‘long tail’ in term of industry of employment, with the remainder of accountants employed in smaller numbers and proportions across a vast range of subindustries engaged in all aspects of the city’s economy, demonstrating the universality of the profession to the economy and workplaces as a whole.
Accountants in Australia’s skilled migration program

While there was a pronounced demand for accountants in Australia over the 2000s that saw the profession listed as a key skill in demand through the migration program, the demand for the profession in the workforce has declined more recently and this has been the subject of public discussion, particularly over the last two years (Tadros and King 2014; Tadros 2014; Rollins 2014).

In the 2015-16 joint submission made by the CPA and ICAA to the Department of Industry regarding the status of the accounting profession on the Skilled Occupation List, a report undertaken by Applied Economics recommended that accountants remain on the Skilled Occupation List (SOL) due to the shortage of accountants in regional areas, and a decreasing supply of domestic accounting student graduates (Lewis 2014). An earlier submission made by CPA and ICAA in 2014 also cited tight labour market conditions for accountants, as well as the ‘high’ quality of migrant accountants, the importance of international education to the Australian economy and the need to meet migration targets as key reasons why accountants should remain on the list (CPA 2014).

Accountant skilled migration levels

Accountants were placed on the MODL throughout much of the 2000s, and were within the top five occupations for the primary applicant skilled stream in Victoria throughout the 2000s, as well as the highest single sub occupation for skilled stream application to Victoria between 2005-06 through to 2010-11, by which time they comprised over 25% of all skilled stream applications to Victoria. In more recent years the numbers of applications for accountants together with their proportion of the total have fallen.

Chart 7. Number of primary applicants in the skill stream by occupations group and proportion of accountants, Victoria, 2000-01 to 2012-13

Labour supply of accountants in Melbourne and Victoria

Labour market theory posits that demand for labour on the part of employers is met by supply of workers, and that wages will shift in response to changes in supply and demand. The labour supply must cover not only the workers who are exiting or no longer participating in the workforce (due to factors such as retirement or family duties), but ideally must meet the level of demand currently required by the economy. In the case of professional occupations such as accountants, this labour supply, not yet universally but nevertheless increasingly, is provided by graduates. While there is
some unevenness within the process of higher education level qualification attainment and eventual participation in the labour market, for the purposes of this study higher education completion rates for accountancy-related courses at Victorian universities is used to measure future labour supply for the profession. I have used graduates from only Victorian universities to illustrate labour supply at the Victorian state level, as previous research has indicated as high as 93.2% of Victorian graduates find work in Victoria (Hugo et al. 2000, p.82).

Domestic student completion rates for accountancy courses in Victoria over the 2000s, growing at a CAGR of 1% between 2001 and 2012, indicate there was stagnating local supply. In contrast, student completions for international students grew at a CAGR of 17%. The expansion of international student accounting completions from 260 in 2001 to 1,527 by 2012 saw the proportion of international undergraduate students completions grow from 29% of the total in 2001 to 67%, or over two thirds, by 2012.

Other business, management and commerce related undergraduate courses that contained a component of accounting show a similar decline in domestic student completion, and rapid growth of international student completions. For these courses, domestic student completion declined by 1% CAGR over the period 2001-2012, while international student completion increased by 11% CAGR over the same time. Thus international student completion in these courses grew from 36% of the total completions in 2001 to 66% by 2012.

Chart 8. Number of accounting field of study undergraduate completions from Victorian universities, 2001-2012

Source: Department of Education and Training
Research undertaken by Jackling et al in 2012 found that the majority of students had fixed career goals by the time they had finished school, and that Australian school students perceived accounting to be a dull and boring profession. Further research by Jackling (2010) found there was greater intention on the part of domestic high education accounting students compared to their international counterparts in pursuing a career in the profession upon graduation, implying that the lure of permanent residency was the cause of high international student enrolments in the subject area. Other research indicates there was some discrepancy between the standard of Australian training of overseas accountancy graduates and their post study employment expectations, with graduates feeling they were often overlooked for employment in Australia after graduation. Jackling’s 2007 research indicated employers felt their English language skills were not sufficient for the rigours of the large accountancy firms, which is in line with similar studies into labour market outcomes for recent accountancy qualified migrants (Birrell, R & Rapson 2005).

**Location of accountants in Greater Melbourne, 2001-11**

Previous research into Australian migration patterns has established the tendency for most recent migrants to Australia to settle in the two major capital cities, Sydney and Melbourne (Hugo 2008, pp.556-557), and the recent report commissioned by the CPA and ICAA found accountancy as a profession is overwhelmingly metropolitan, with study’s analysis of 2011 Census data indicating over 80% of accountants in 2011 were located in Australia’s capital cities (Lewis 2014, p. 7). While regional skills visa schemes were administered by various state level governments throughout the 2000s, and Chart 2 shows the skilled regional visa stream growing over the period 2000-01 to 2006-07 when it peaked at 8,678 applicants, further studies indicate such programs are largely unsuccessful in terms of luring recent migrants away from the major capitals to settle in often depopulating regional areas (Hugo 2008, p.569; Tran, Roos & Giesecke 2012).

Spatially, the employment pattern of accountants demonstrates a high concentration in the city centre (7,480 accountants were based in the CBD alone) followed by the inner eastern suburb of Hawthorn and the outer eastern suburb of Waverley, (where there is a high level of manufacturing and retail activity, as well as the education and health-related Monash University and Medical precinct). Map 2 demonstrating change between 2001 and 2011 shows the greatest growth in the city centre, followed by the Southbank-Docklands precinct and the inner eastern suburbs, spreading over to the Waverley area. Certain eastern and northern SLAs experienced a decline in the number of accountants working there, reflecting broader industry (mainly manufacturing industry) declines in those areas.
Conclusions

This paper has examined the development of the globally mobile knowledge worker and his/her place in Melbourne's professional labour market and ever-increasing skilled migrant population, using accountants as a case study. While the presence of professionals or knowledge workers such as accountants has contributed to the image of Melbourne as a knowledge city and the promotion of an associated knowledge economy, this has occurred in tandem with the development of Australia’s 'two step' migration scheme linking international education provision with possible permanent residency status.

The study has outlined the importance of international education to the Victorian, and more specifically Melbourne, economy in terms of both export revenue and higher education enrolments. Indeed, the higher education data suggests without international student enrolments, local accountancy and finance undergraduate courses would face considerable pressure due to declining domestic enrolments. The placement of accountants as an occupation in demand on the CSL and SOL over the 2000s has seen it appeal to international students who wish to gain points for permanent residency applications, and as the labour market demand for accountants has waxed and waned over recent years, industry groups such as CPA and ICAA have lobbied for it to remain as a designated in demand occupation.

While the industry associations have pointed to regional skills shortages as a reason for the profession to remain on the CSL/SOL in the face of more recently contestable labour market demand for the occupation, other studies indicate that as accountancy is a largely metropolitan occupation, the high numbers of skilled migrants entering the profession are likely to find employment in Australia's major cities. Indeed, their presence, as both former international students and/or recent skilled migrant professionals has been a key contributing factor towards the development of Melbourne as a knowledge city.

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