Demographic impacts on the future supply of vocational skills

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An important issue is the impact of ageing on the supply of vocational skills over the next 15 years. This research analyses the effects of ageing on the 'how many' and 'what type' dimensions of the supply of vocational skills.

Introduction

The ageing of the Australian population is a national issue. How ageing impacts on the supply of vocational skills is not well understood. This study analyses the effects of ageing on both the quantitative (how many?) and qualitative (what type?) dimensions of the supply of vocational skills. It provides an analysis over a 15-year period to 2020 of projected vocational education and training (VET) employment and VET qualifications by occupation and age group.

From the nine major occupational groups, five are identified as those which utilise vocational skills intensively (among workers aged 25–49). The *tradespersons* category is the only occupation where a majority of workers have VET qualifications. The other VET-intensive categories include: *associate professionals*; *managers and administrators*; *intermediate clerical, sales and service workers*; and *advanced clerical and service workers*.

We use cohort analysis methods to understand workforce dynamics over time. The histories of employment in each occupation and for each age group between and within occupations over time are irregular, and so changes in employment shares need to be smoother. Based on the changing age structure of the workforce and the pattern of qualifications among the different age groups, the supply of workers with VET qualifications (within each occupation) is projected.

Impacts of the ageing population on labour supply

Over the next 15 years, the workforce will continue to grow (by 1.7 million people), but its age structure will change significantly. The share of the prime-age group (25–49) reached a maximum of 48% of those of working age (15–65) in 1996 and has fallen steadily since then. It will decrease from 45% in 2005 to 37% in 2020. By 2014, there will be as many people aged 50–65 as there are people aged 25–49. The older group will comprise 45% of the working-age population by 2020.

This study shows that ageing will increase outflows, mainly through the retirement of the baby boomer generation. However, the age distribution of new entrants will remain constant for males and get a little younger for females.

The trend of more people leaving the workforce and virtually no change in the number of young people entering the workforce suggests an increased need for workers who are not young. Moreover, there will be growing demands on the VET sector to assist in increasing the skills of people who are currently marginal to the workforce (for example, disadvantaged or unemployed people).

Projections of employment in VET-related occupations

The supply of skills is a difficult thing to observe. People obtain work skills by undertaking formal education courses and obtain formal qualifications in the process. We can measure supply as the numbers of people who have particular *qualifications*. But many people who have a qualification do not use that qualification directly in their job, and many people who work in a skilled or semi-skilled job have no formal qualifications, or have one not relevant to the job. Thus a reliance on measuring qualifications is not sufficient.

RESEARCH OVERVIEW 2.1

Program 2: The nature of the labour supply

The research consortium, *A well-skilled future: Tailoring vocational education and training to the emerging labour market*, comprises researchers from the National Institute of Labour Studies and the Centre for Post-compulsory Education and Lifelong Learning. Managed by the National Centre for Vocational Education Research (NCVER), it aims to investigate future work skill needs and work organisation arrangements, and their implications for VET.

A WELL-SKILLED FUTURE

Tailoring VET to the emerging labour market

Another way to measure supply is to assume that everyone who does a skilled job has the necessary skills for the job and therefore is part of the supply of those skills. With this approach, the changes of the overall employment and its distributions among occupations and across age groups can be deemed to be the supply of labour.

Based on recent patterns of growth, the categories of *generalist managers*; *specialist managers*; *business and administration associate professionals*; *skilled agricultural and horticultural workers*; and *intermediate service workers* will be the largest and probably the fastest growing occupations. In contrast, there is likely to be a decline in employment of *farmers and farm managers*; *automotive tradespersons*; *food tradespersons*; and *secretaries and personal assistants*. Within the trades, *construction tradespersons* and *skilled agricultural and horticultural workers* are anticipated to grow in share by approximately 1.0 and 1.8 percentage points over the period 2005–20, respectively. In absolute terms, this means an additional 36 000 and 30 000 people, respectively.

For all the VET-related occupations, the share of older workers (especially those aged 55+) will rise as the share of prime-age workers declines. Those occupations with the most rapidly ageing profile will be for *associate professionals* and *advanced clerical and service providers*, including *science and engineering related associate professionals*; *health and welfare associate professionals*; and *secretaries and personal assistants*. By 2020 almost all of the non-trade occupations are expected to have more people aged over 55 than under 25. *Tradespersons and related workers* (especially automotive, construction and food) have the youngest age profile and this is expected to persist for the next 15 years.

Projections of VET skills supply in VET-related occupations

We predict a more rapid increase in the supply of qualified people in each of the major occupations than in the number employed. By 2020, the total number of people with VET qualifications projected to be employed in the five VET-related occupations will, at around 2.81 million, be almost half a million more than in 2004. Most of the increase will be in *intermediate clerical workers* and *associate professionals*, with women predominating in the former and men predominating in the latter. The smallest increases will be in *advanced clerical and service workers* and *tradespersons and related workers*.

People with VET qualifications enter occupational groups in varying ways, and at different ages. They enter the trades (and farming) at a young age and start to leave the occupation by their mid-20s. In contrast, people become *managers*, *associate professionals* and *intermediate clerical workers* at every age up to the mid-40s. The age and stage in the life course of the student body will differ, according to the type of VET qualifications being sought.

Implications for VET

The changes in age profile have implications for the VET sector. In the non-manual occupations, older workers are close substitutes for prime-age workers and are likely to be as, if not more, productive. This is less true for the more manual VET occupations, including the trades.

Both groups of older workers have large amounts of skills obtained from experience, but lower levels of formal education than younger workers. Therefore, they are likely to find it harder to use the formal VET system to update their skills or to shift to the skills needed for a new occupation. The VET sector will be required to design and deliver courses for such workers to meet their particular requirements. These requirements include:

- having a quick return (in terms of higher wages or better job prospects) on the costs of obtaining the VET skill, as workers over the age of 55 may not remain in the workforce for a long period
- being able to manage a diverse range of backgrounds among students, as most will have obtained their skills from informal on-the-job experience, rather than from some more standard curriculum
- accommodating people who, while wanting flexible course delivery to fit into their complex adult lives, will often be not very proficient in the use of the latest information technologies.

The formal recognition of prior learning is likely to be important as a means of engaging older workers in skills development opportunities provided by the VET system.

This overview is based on the research report, *Demographic impacts on the future supply of vocational skills*. Visit <http://www.ncver.edu.au/publications/1721.html> for more information.

RESEARCH OVERVIEW 2.1

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