

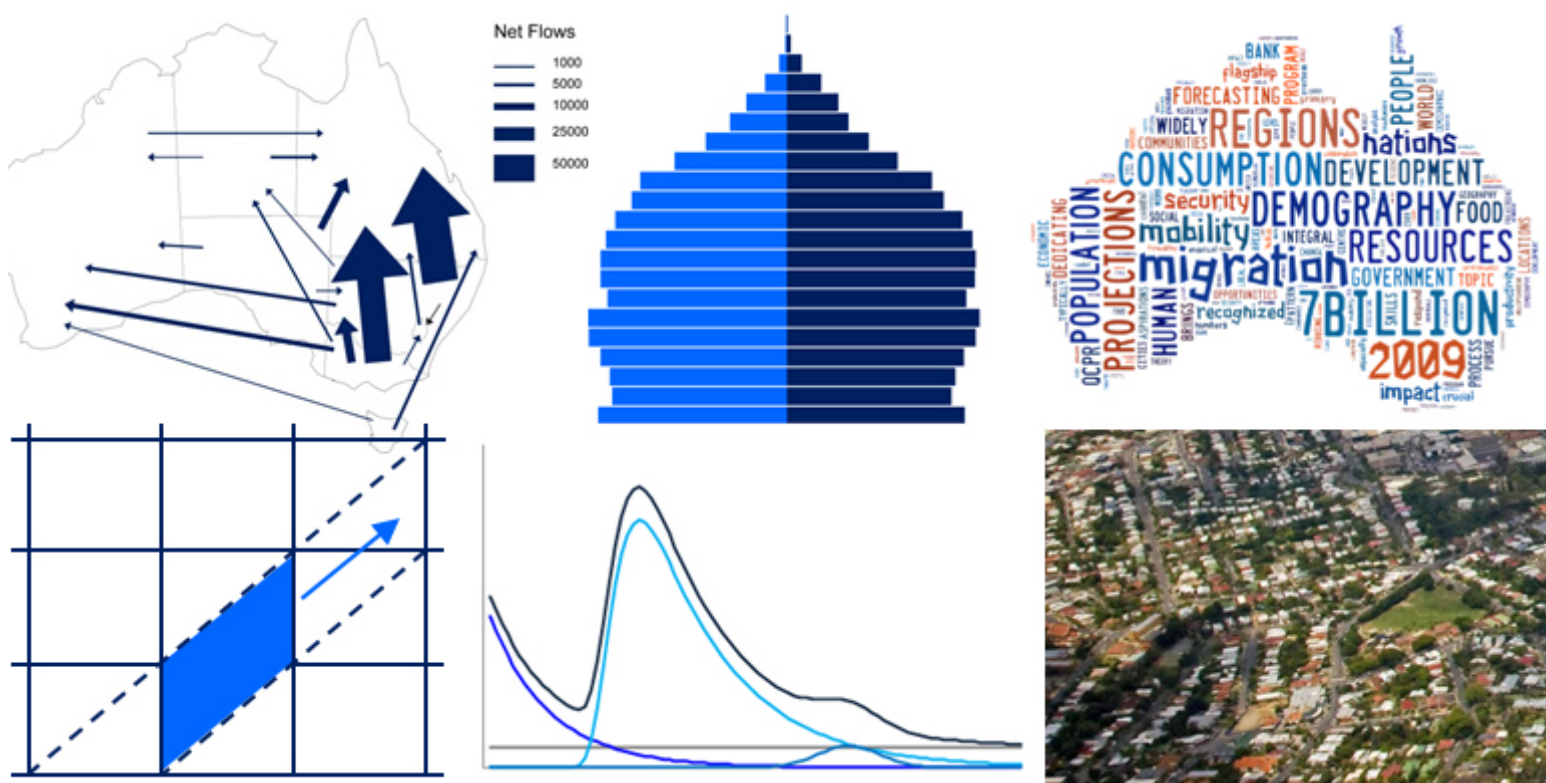
Queensland Centre for Population Research

Changing post-school pathways and outcomes: Melbourne and regional students

Francisco Rowe, Jonathan Corcoran and Martin Bell

April 2015

Technical Report 6 prepared for State Victoria Government



Funded by the Australian Research Council Linkage Project LP120100212 and State Victoria Government (Industry Partner)

School of Geography, Planning and
Environmental Management
www.gpem.uq.edu.au/qcpr



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

Suggested citation for this article:

Rowe, F, Corcoran, J and Bell, M 2014, *Changing post-school pathways and outcomes: Melbourne and regional students*, Report 6 prepared for the Department of Planning and Community Development. Spatial Analysis and Research Branch. State Government Victoria. Queensland Centre for Population Research (QCPR). School of Geography, Planning and Environmental Management. The University of Queensland, Brisbane, Australia.

Contents

1	Research question and aims.....	2
2	Data and methodology.....	2
3	Students' aspirations.....	4
4	Academic achievement.....	6
5	Shifting labour market outcomes.....	8
5	Conclusions.....	13
	References.....	15

1. Research question and aims

Drawing on data from the 1995, 1998 and 2003 cohorts of the Longitudinal Survey of Australian Youth (LSAY), this report addresses the fourth research question of the Australian Research Council (ARC) Linkage project (LP120100212): *How have these pathways, transitions and choices altered over time, and what role is played by shifts in the global, regional and local context?* Specifically, this report examines the changes in pathways, transitions and choices of three cohorts of young Victorians as they move from school to further education and work. It examines changes in the pathways, transitions and choices of young Victorians in regard to educational aspirations and in educational achievement and labour market outcomes, and explores differences between three groups of school leavers:

- (1) *Regional movers*: identified as school leavers starting off in regional Victoria who moved to Melbourne after completing school;
- (2) *Regional stayers*: identified as school leavers were brought up and stayed in regional Victoria following the completion of their schooling.
- (3) *Melbourne stayers*: identified as school leavers who were raised and remained in Melbourne after leaving school.

Underlying the importance of distinguishing these groups, there is substantive evidence within our previous reports that points to significant differences in their educational pathways and early employment outcomes (Rowe, Corcoran et al. 2014c, 2014b, 2014a). Compared to their metropolitan counterparts, young people brought up in regional Victoria tend to be educationally disadvantaged and to be employed in less skilled occupations. They are 1.13 times less likely to complete Year 12, 3.8 times less likely to hold a Bachelor degree and 1.6 times more likely to be employed in a technical and labour occupation at the age of 23. Significant differences were also found between young people who were raised and stayed in regional Victoria and those who moved to Melbourne after leaving school. Compared to those staying in regional Victoria, young people who moved from regional Victoria are 1.3 more likely to complete a university degree and to be employed in a managerial and professional occupation.¹

This report is structured as follows. First it describes the data and methodology used for the analysis before investigating changes in the educational aspirations of the three groups of school leavers – i.e. regional movers, regional stayers and metropolitan stayers across three LSAY cohorts. It then examines key shifts in their educational and labour market outcomes in early working life. Particular attention is placed on how major changes in the global, regional and local context have altered the pathways, transitions and choices of school leavers.

2. Data and methodology

The analysis draws on the 1995, 1998 and 2003 cohorts of LSAY, each of which contains information on one cohort of young people as they transition from school to further education and work. Individuals are surveyed annually over a ten-year period commencing at the age of 15. For the 1995 and 1998 cohorts (referred to hereon as 95Y and 98Y), people entered the study at the age of 14 in school Year 9 and were surveyed annually until 2006 and 2009 respectively by which time individuals were aged 24 years old. For the 2003 cohort (Y03), people entered into the LSAY at the age of 15 in school Year 10 and were tracked up to 2013. There is therefore a difference of one year in the starting year of this latest survey. To ensure that actual differences across cohorts are captured, educational achievements, aspirations and labour market outcomes are measured at the same age for all three cohorts, as detailed below.

¹ Students who started off in Melbourne and moved to Regional Victoria are excluded from the analysis given their small numbers. For instance, data from the 2003 LSAY cohort indicates that only 15 young Melbournians moved to regional Victoria by the age of 23, representing less than three per cent of Melbourne students in the sample.

As is common in longitudinal surveys, the LSAY datasets suffer wave-to-wave attrition. To minimise these effects longitudinal weights were implemented and for one wave, missing data on place of usual residence with a location in the State of Victoria in the first wave of the survey were imputed using individual records. Data imputation procedures for missing data for year t were applied only if the same residential postcode was provided for the preceding $(t - 1)$ and subsequent $(t + 1)$ years (see further details in Rowe, Bell et al. 2014, p. 7). In the datasets used for the analyses, 87 and 118 individual records contain imputed data in the 1998 and 2003 LSAY cohorts respectively. For the 1995 cohort, the question on place of residence was not asked for the second wave of the survey (i.e. in 1996). It was thus assumed that individuals did not change their location of residence so that the residential postcode provided in the first wave of the survey in 1995 was used for 1996. This is not expected to significantly affect the number of people identified since movers as a very small proportion of students move between the two first waves of the survey. For example, less than three percent of all students in the 1998 LSAY cohort moved between the two first waves of the survey, while ninety six percent moved after leaving school (i.e. following wave 4). Table 1 shows the total number of records identified as Melbourne stayers, regional stayers and regional movers for each of the three cohorts in the analysis.

Table 1. Number of records in each LSAY cohort.

Group of young people	LSAY cohort		
	Y95	Y98	Y03
Melbourne stayers	895	728	592
Regional stayers	268	223	136
Regional movers	132	109	82

Source: 1995, 1998 and 2003 LSAY cohorts.

To analyse changes in the educational and employment transitions and choices of young people, we examine differences in educational aspirations, educational achievement and labour market outcomes across the three cohorts. Table 2 describes the metrics used to encapsulate these dimensions. Educational aspirations were captured by two indicators: (1) school aspirations and (2) post-school aspirations. These indicators are measured at the age of 15 when students are in Year 10 and correspond to information collected in calendar years 1996, 1999 and 2003 for the 95Y, 98Y and 03Y cohorts respectively.

Table 2. Metrics and definitions of educational aspirations, educational achievement and labour market outcomes.

Dimensions of the school-to-work transition	Description
Educational aspirations	<i>School aspirations</i> : Percentage of people expecting to complete Year 12 at the age of 15.
	<i>Post-school aspirations</i> : Percentage of people expecting to study a VET or university qualification at the age of 15.
Educational achievement	<i>School achievement</i> : Percentage of people with Year 12 completed by the age of 23
	<i>Post-school achievement</i> : Percentage of people with a VET or university degree by the age of 23.

Labour market outcome	<p><i>Employment:</i> Percentage of people with a full-time or part-time job at the age of 23.</p> <p><i>Unemployment:</i> Percentage of people seeking employment at the age of 23.</p> <p><i>Not in the labour force:</i> Percentage of people not actively seeking for a job at the age of 23.</p> <p><i>Earnings:</i> Median hourly wage rate at the age of 23, corrected for inflation.</p> <p><i>Job satisfaction:</i> Percentage of people satisfied with their opportunities for promotion at the age of 23.</p>
-----------------------	--

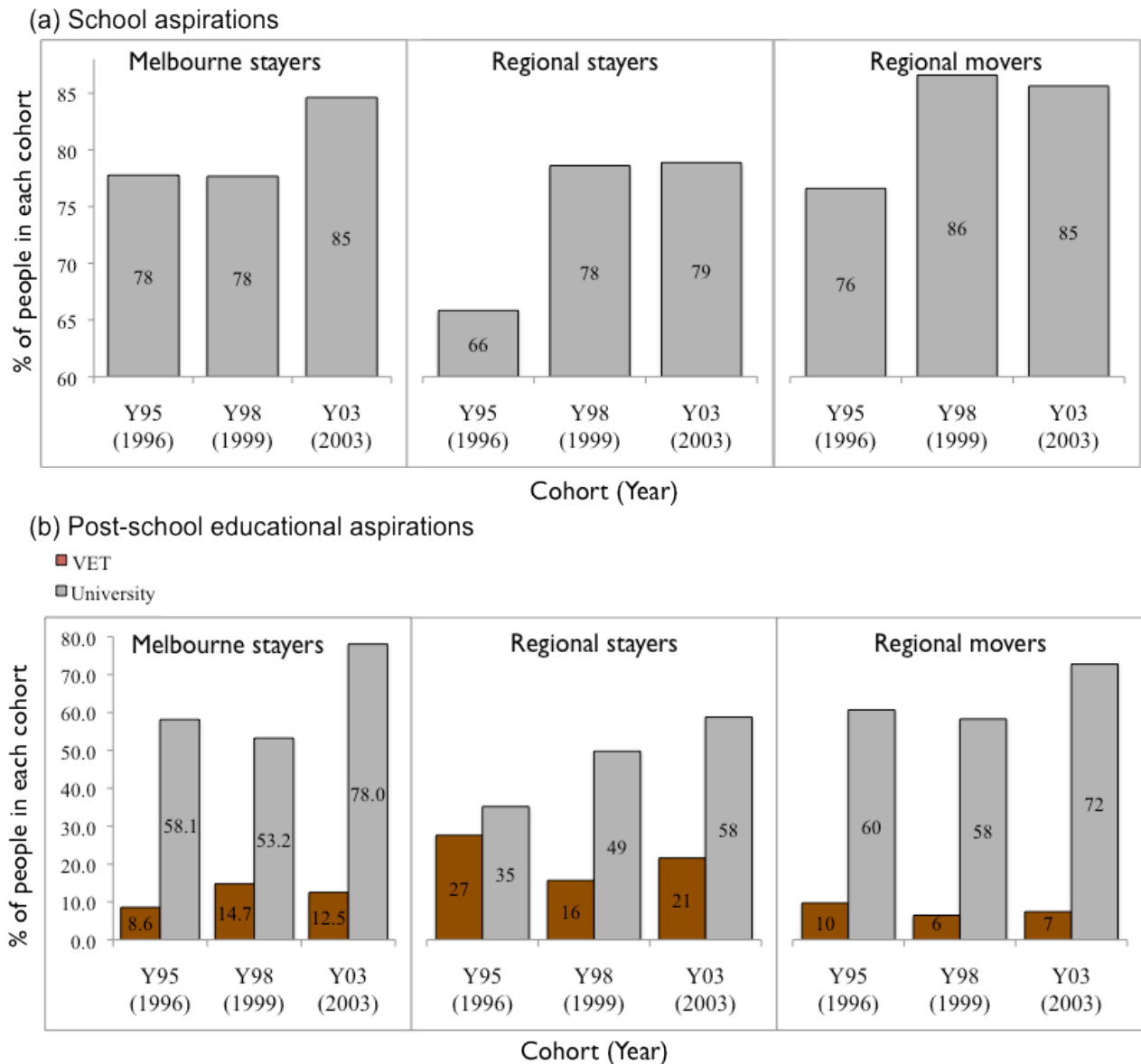
Source: Authors' elaboration based on 1995, 1998 and 2003 LSAY data.

To capture educational outcomes, two indicators are used: (1) school achievement and (2) post-school achievement. Five metrics are employed to encapsulate labour market outcomes: (1) percentage of people in employment, (2) percentage of people unemployed, (3) percentage of people not in the labour force, (4) median hourly wage, and (5) job satisfaction, as detailed in Table 2. Educational attainment and labour market outcome indicators were measured at the age of 23 in calendar years 2004, 2007 and 2011 for the respective cohorts: 95Y, 98Y and 03Y. These metrics capture the educational qualification and labour market situation of young people at the start of their working careers. It is important to keep in mind the years in which these outcomes are measured as, of the three LSAY cohorts in analysis, the 03Y cohort is likely to have been severely impacted by the 2007-08 Global Financial Crisis (GFC) and changes in the Australian economy that have entailed a sustained reduction in entry-level job opportunities over the last two decades (ABS 2015). These changes and their effects on the employment pathways of young Victorians are discussed in Section 5.

3. Students' aspirations

Students' aspirations while at school have been shown to have a significant influence on their post-school educational choices and outcomes. Students with post-school aspirations are four times more likely to complete Year 12 and between two to ten times more likely to undertake university education than those who do not (Gemici et al. 2014; Rowe, Corcoran et al. 2014a). Among Victorian students, Figure 1 shows an increasing share of young people aspiring to complete Year 12 and to undertake university education in preference to a Vocational Education and Training (VET) qualification. This trend is consistent across our three groups; Melbourne stayers, regional stayers and regional movers. While a series of individual-level factors, such as students' academic performance, immigration background, attitudes toward school and parental and peer expectations have been shown to determine students' aspirations (Gemici et al. 2014; NCVET 2014b), the increasing desire for school completion and university education among the three groups is a reflection of the global trend for increased education and can also be linked to a devaluation of educational credentials. Mounting evidence across the world, including in Australia, indicates that possessing a university-level qualification has progressively become an entry-level, basic prerequisite in the transition into the labour market (Altbach et al. 2009). Work experience is now a critical entry requirement for a full-time job in Australia (GCA 2014).

Figure 1: School and post-school aspirations at age 15.



Source: Authors' elaboration using LSAY data on the 1995, 1998 and 2003 cohorts.

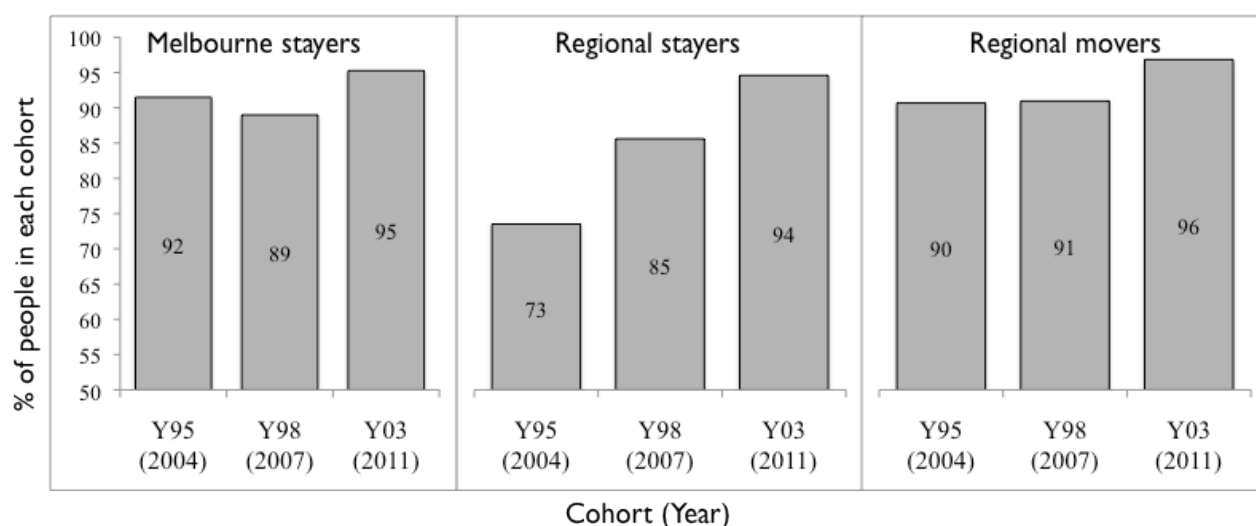
Additionally, Figure 1 reveals marked differences in educational aspirations between Melbourne stayers, regional stayers and regional movers. It shows that the proportion of regional stayers aged 15 who expect to complete Year 12 and to go to university has been smaller than the corresponding shares of Melbourne stayers and regional movers. Regional stayers display greater aspirations to undertake vocational studies, with a larger percentage of people expecting to embark on VET education after school. Limited local accessibility to university education, combined with a lack of support from parents and teachers, have been identified as the main factors underlying the aspirations of regional students to participate in vocational education (Marks et al. 2000; Curtis 2011).

4. Academic achievement

School academic success

Student aspirations have been found to be a strong predictor of participation in post-school education (Curtis 2011). Figure 2 reveals that the trend in school completion rates echoes the increasing percentage of students aspiring to complete Year 12. The percentage of Melbourne stayers, regional stayers and regional movers who finish Year 12 by the age of 23 has increased to over 94 percent, regional stayers experiencing the most significant rise. By the age of 23, the percentage of regional stayers who completed Year 12 had increased by 21 percentage points from 73 percent for the 1995 cohort to 94 percent for the 2003 cohort. This reflects the national trend in school completion for non-metropolitan students. Evidence has identified school quality as a key factor in rising students' academic achievement, particularly among regional students from low socio-economic backgrounds (Lim et al. 2014; NCVET 2014a).

Figure 2. Rates of Year 12 completion by age 23.



Source: Authors' elaboration using LSAY data of the Y95, Y98 and Y03 cohorts.

The significant rise in school completion among regional stayers has translated into a narrower gap in school achievement compared with Melbourne stayers and regional movers, with the 2003 LSAY cohort displaying similar rates of Year 12 school completion. Regional stayers have, however, historically displayed lower rates of school completion than Melbourne stayers. This pattern in school completion rates can be linked to the population profile in regional Australia. Low rates of school completion in regional areas have been associated with higher proportions of indigenous people and lower levels of parental educational attainment compared with metropolitan locations (Marks et al. 2000).

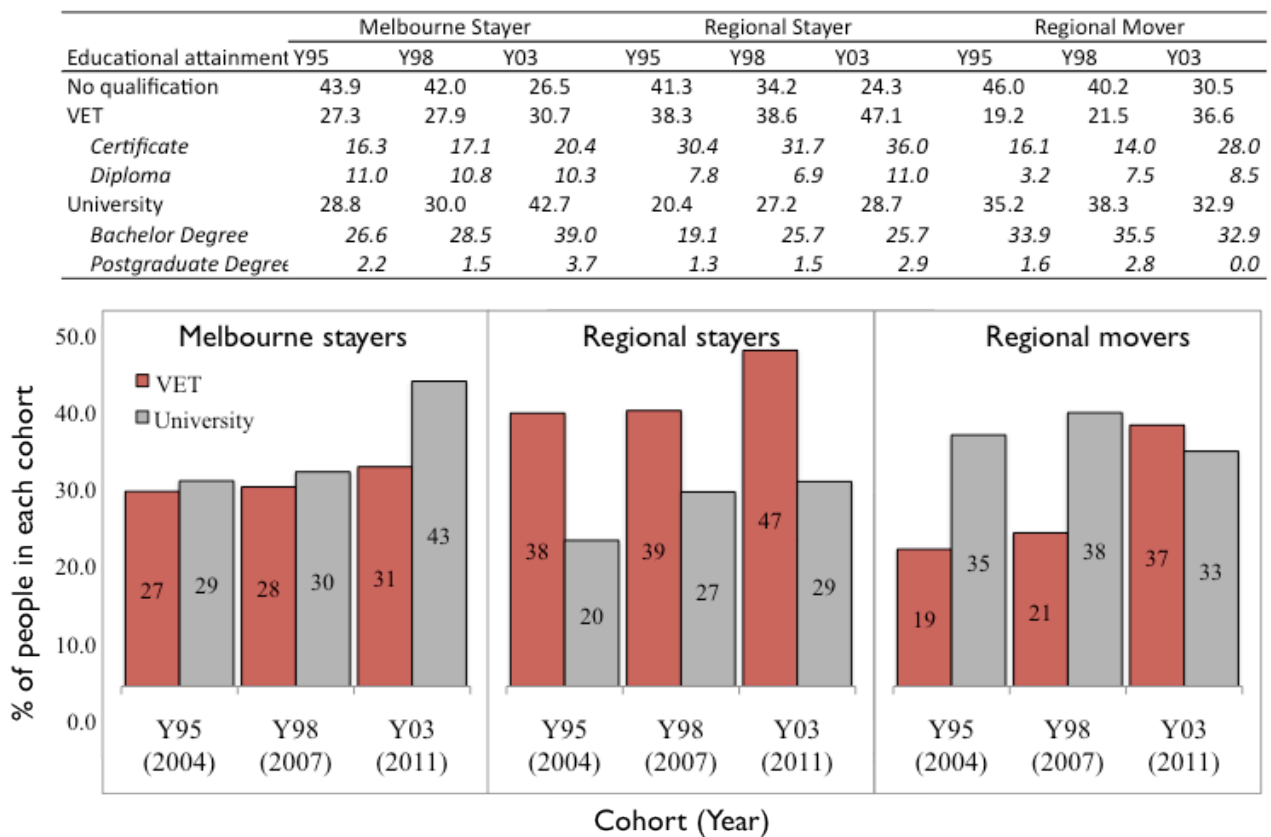
Post-school education achievement

Coupled with a rise in the rate of school completion, Australia, like other OECD countries, has experienced a steady increase in the share of young people undertaking and completing a post-school qualification over the last two decades, partly due to greater requirements for skills and increased accessibility to tertiary education across the country (Marks et al. 2000). For Victoria, LSAY data indicate that the percentage of young people with post-school qualifications by the age of 23 has mirrored this national trend, increasing from 56 percent for the 1995 cohort to 73 percent

for the 2003 cohort of young Victorians. This expansion in the rate of post-school educational participation has been primarily driven by a 12 percent rise in the share of young people undertaking university education, rather than taking on vocational studies.

Consistent with previous results, as captured in Report 4 (Rowe, Corcoran et al. 2014b), Figure 3 shows that by the age of 23 regional stayers are systematically more likely than Melbourne stayers and regional movers to complete a VET qualification but less likely to embark on university education. This reflects the national pattern of lower participation rates in higher education among regional and rural young Australians, but greater participation in VET programs, compared to school leavers from metropolitan locations (Curtis 2011). Rather than socio-economic status and paternal educational attainment, Rothman et al. (2009) identified the spatial distribution of tertiary education opportunities as the key factor underpinning this pattern.

Figure 3. Highest qualification attained by age 23.



Source: Authors' elaboration using LSAY data of the Y95, Y98 and Y03 cohorts.

Examining the pathways of school leavers from the 1995 LSAY cohort, Curtis (2008) pointed out that non-metropolitan youth displayed greater participation in lower-level VET qualifications, including entry-level certificates (certificate I and II), apprenticeships and traineeships, rather than higher certificates (III and IV), diplomas or advanced diploma qualifications. Consistent with this evidence, Figure 3 shows a systematically larger percentage of regional stayers with low-level VET certificates than young individuals with diplomas, compared to Melbourne stayers and regional movers. Additionally, Figure 3 shows a consistently larger share of regional movers with a university qualification than that of regional stayers, reaffirming our previous findings that migration represents an important strategy for regional school leavers to access education opportunities in Melbourne that are not locally available. However, it is notable that the gap is closing.

Figure 3 also reveals that while Melbourne stayers and regional stayers display increasing shares of people with university degrees and VET qualifications respectively, regional movers report a decline in the share of people with a university qualification. This drop was compensated by a significant increase in the proportion of regional movers completing a VET degree, rising from 19 percent for the 1995 cohort to 33 percent for the 2003 cohort. This, allied to the percentages of post-school aspirations in Figure 2, indicates that despite intentions to complete a university degree, an increasing proportion of regional school leavers from the 2003 LSAY cohort moving to Melbourne ended up embarking on VET education.

The unstable economic conditions created by the 2007-08 GFC may have underpinned this rise in the incidence of regional movers entering VET education by limiting their financial capacity to afford the costs of relocation and university education in Melbourne. As argued by Curtis (2011), as regional students move from their parental home for university education in a metropolitan area, they need to cover housing expenses and become financially independent on a part-time job. However, the reduction in employment opportunities for young people recorded during the GFC is likely to have made this transition increasingly difficult (ABS 2015).

Regional movers are, however, not the only group of students who fail to realise their post-school aspirations to complete a university degree. Many Melbourne stayers and regional stayers also appear to be unsuccessful in entering university education. This is revealed by a systematically smaller percentage of students with aspirations to undertake university education at the age of 15 in Figure 1(a) than that of students with a completed university degree at the age of 23 in Figure 3. This finding is consistent across the three cohorts, indicating that generally young people have high educational aspirations before leaving school, and that only a limited share manages to realise them. This is in line with the findings of Gemici et al. (2014) who argue that young people's aspirations tend to be unrealistic, showing that the distribution of students' aspirations is heavily skewed towards high-status jobs. Together with students' school achievements and post-school aspirations of friends, Gemici et al. (2014) shows that parental expectations represent one of the most significant factors influencing the formation of these post-school aspirations.

5. Shifting labour market outcomes

In addition to influencing students' aspirations, the changing nature of the Australian economy has represented a major challenge for young people in their transition to the labour market (NCVER 2014a). Since the GFC, labour market conditions for young people have worsened, with those aged between 15 and 24 years old experiencing higher levels of unemployment and underemployment than any other age group (ABS 2015). Certain non-metropolitan areas (including, Goulburn Valley, Wodonga and Wangaratta) report some of the highest unemployment rates in the country (Brotherhood of St Laurence 2014). The national unemployment rate for those aged 15 to 24 years old has remained twice the national average for those aged 15 to 64 (ABS 2015), while youth underemployment in Australia is higher than in OECD countries: 11.8 percent for men and 15.9 percent for women in Australia versus an average of 3.9 percent for men and 6.1 percent for women across all OECD countries (Healy 2015). Paralleling these changes, Australia has also seen a decline in the rate of full-time employment of young people, coupled with a rise in part-time work. The full-time employment to population ratio for people aged 15 to 24 has declined from 63 percent in 2005 to 58 percent in 2014, while the part-time employment to total employment ratio increased from 44 percent in 2005 to 51 percent in 2014 (ABS 2015).

Underlying these challenging employment circumstances for young people, there have been systematic shifts across the Australian labour market. Over the last twenty years there has been a reduction in the range and availability of full-time entry-level employment opportunities, making the transition to the labour market increasingly difficult for young people (The Smith Family 2014).

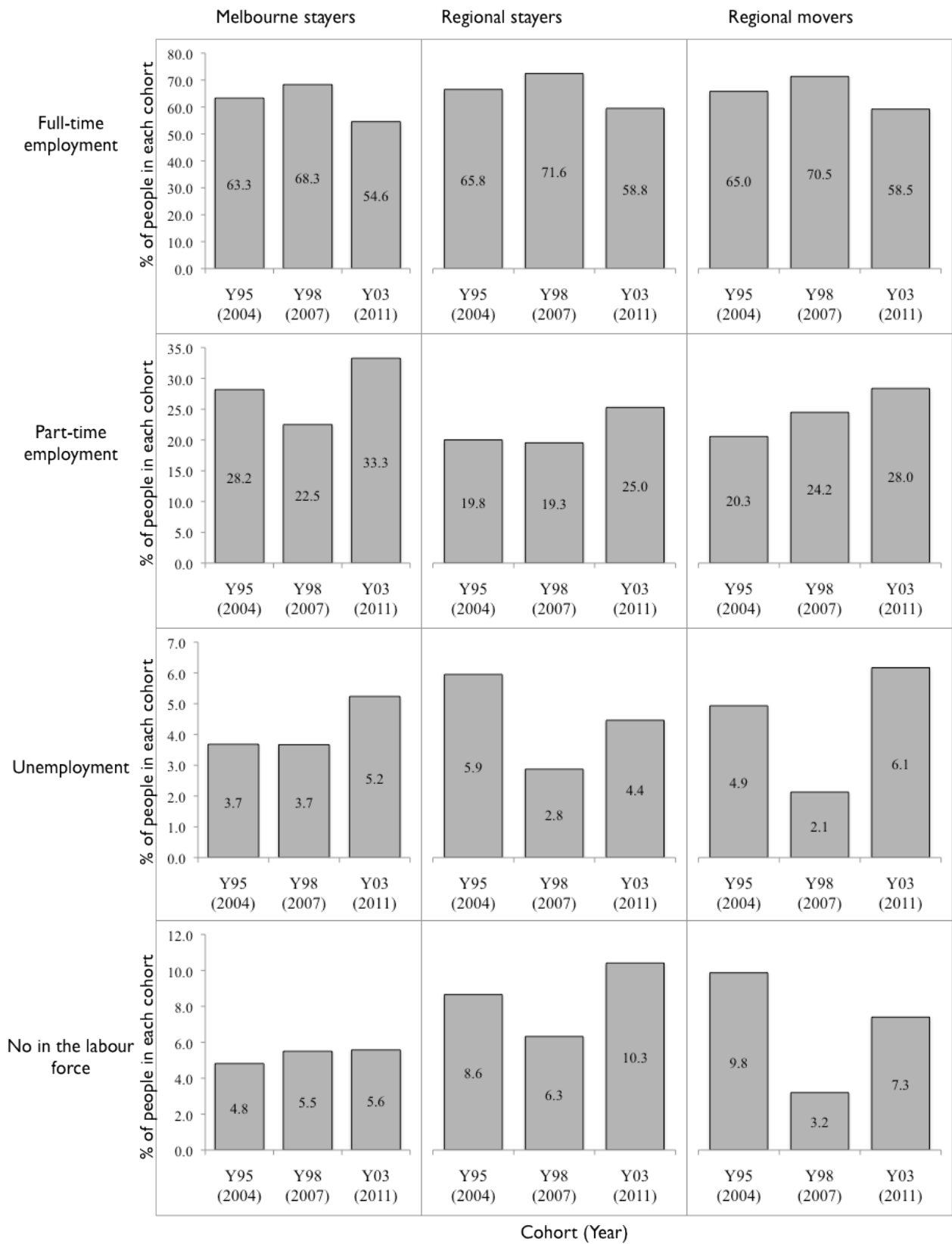
The Smith Family 2014 report identified four shifts in the employment pattern across Australia over the last twenty years that have impacted the transition of young people into the local labour market (The Smith Family 2014). First, employment growth has occurred in knowledge sectors, such as business and consultancy services. These sectors typically require high skill levels and extensive labour market experience, and tend not to have well-developed long-term career pathways from entry-level to higher-level roles. Secondly, employment growth has occurred in the service sector, such as hospitality, cleaning and retailing where working conditions are relatively insecure in nature. Jobs in these sectors are usually seasonal, casual and tend to lack career development opportunities. Thirdly, mainly due to the volatility of the Australian dollar and commodity prices, there has been a decline in entry-level positions in export-oriented industries particularly in the last two years (i.e. between 2013 and 2015), with employers expressing their reluctance to recruit and train employees unless they can offer ongoing work (GTA 2014). Fourthly, since 2008 there has been a decline in entry-point recruitment and appointment for young people as employers now consider entry point channels into full-time employment less productive for their companies (GCA 2014).

Taken together, these changing labour market conditions have made the transition to full-time employment increasingly difficult for young people. Figure 4 shows the employment situation of Melbourne stayers, regional stayers and regional movers at the age of 23 for the three LSAY cohorts. It reveals that the rate of full-time employment for all three groups at the age of 23 had decreased, being supplanted by higher unemployment, more part-time work and a larger share of individuals remaining outside the labour force.

The extent of these changes has, however, varied across Melbourne stayers, regional stayers and regional movers. Regional stayers and regional movers were the most affected. While for Melbourne stayers the decline in full-time employment was primarily compensated by a rise in part-time employment, for regional stayers and regional movers it led mainly to a rise in unemployment and in the share of people outside the labour force. The percentage of unemployed regional stayers increased from 6.3 percent for the 1998 cohort to 10.3 percent for the 2003 cohort, while the share of regional movers remaining outside the workforce rose from 3.2 percent for the 1998 cohort to 7.3 percent for the 2003 cohort.

For regional stayers the rise in the share of unemployed individuals can be considered an outcome of the high unemployment rates reported in regional areas of Victoria (Brotherhood of St Laurence 2014). For regional movers, the decline in labour force participation was, however, less expected as they were anticipated to benefit from the diversity and range of employment opportunities in Melbourne and display unemployment and labour force participation rates similar in magnitude to those experienced by Melbourne stayers. As documented in Report 4 (Rowe, Corcoran et al. 2014b), however, regional movers tend to experience greater difficulties than Melbourne stayers in their transition into the labour market. They are less likely to undertake university education and more likely to engage in less secure forms of employment, and can hence be expected to have a higher incidence of unemployment and periods outside the workforce than is the case for young people raised and educated in Melbourne.

Figure 4. Labour market status at age 23.

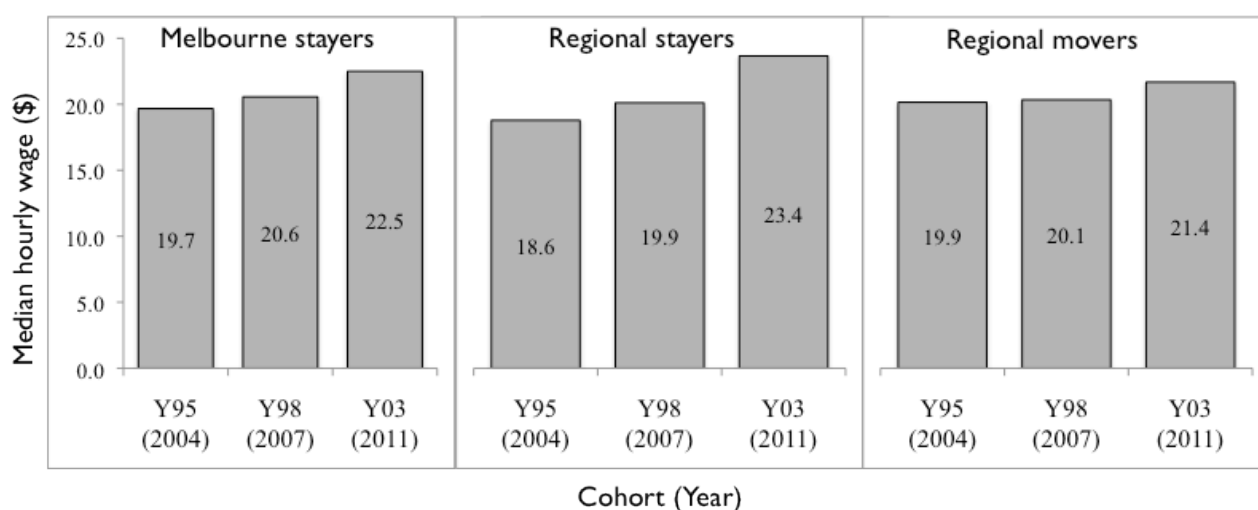


Source: Authors' elaboration using LSAY data on the 1995, 1998 and 2003 cohorts.

Earnings

Together these discouraging employment outcomes represent a gloomy prospect for young Victorians in their transition into the labour market, however, an examination of wage outcomes offers a more optimistic outlook. Figure 5 shows the median hourly wage rate for young people at the age of 23. Using ABS data², these figures are corrected for inflation to capture real differences in wages across the three cohorts. Figure 5 indicates that hourly wages for young Victorians have increased consistently across cohorts, with the 2003 cohort of students reporting the highest wage rates.

Figure 5. Median hourly wage by cohort at age 23, adjusted by CPI, 2011base year.



Source: Authors' elaboration using LSAY data on the Y95, Y98 and Y03 cohorts.

Regional stayers appear to have experienced the largest wage increase. Compared to the 2003 cohort of Melbourne stayers and regional movers, these individuals report the highest hourly wage rate (\$23.4). In annual terms, this represents a difference of over \$1,700 compared to Melbourne stayers, and of over \$3,900 compared to regional movers. This would translate into a 3.8 percent and 8.5 percent wage advantage for regional stayers relative to Melbourne stayers and regional movers respectively.

This is an unexpected outcome as there is substantial evidence that it is young people in urban areas who enjoy a wage advantage, rather than youth in regional locations (e.g. Glaeser and Maré 2001; Wheeler 2006; Yankow 2006). Young individuals living in metropolitan regions or moving from regional areas into metropolitan locations consistently report higher wages than those who live and stay in non-metropolitan areas (Borjas et al. 1992a, 1992b). One explanation for this contrasting evidence may lie in the point in young people's careers at which wages are measured. Prior studies have tended to measure wages at ages older than 23. For instance, (Yankow 2003) used data for a sample of young people with a mean age of 27, and (Peri 2002) considered young individuals with up to 20 years of labour market experience. As suggested by Glaeser (1999), it is likely that young people living in urban areas experience faster career development than individual living in non-metropolitan locations due to faster human capital accumulation as a consequence of knowledge spillover and more intensive professional interactions. Thus, we could expect that as Melbourne stayers and regional movers accumulate working experience and achieve higher-level positions,

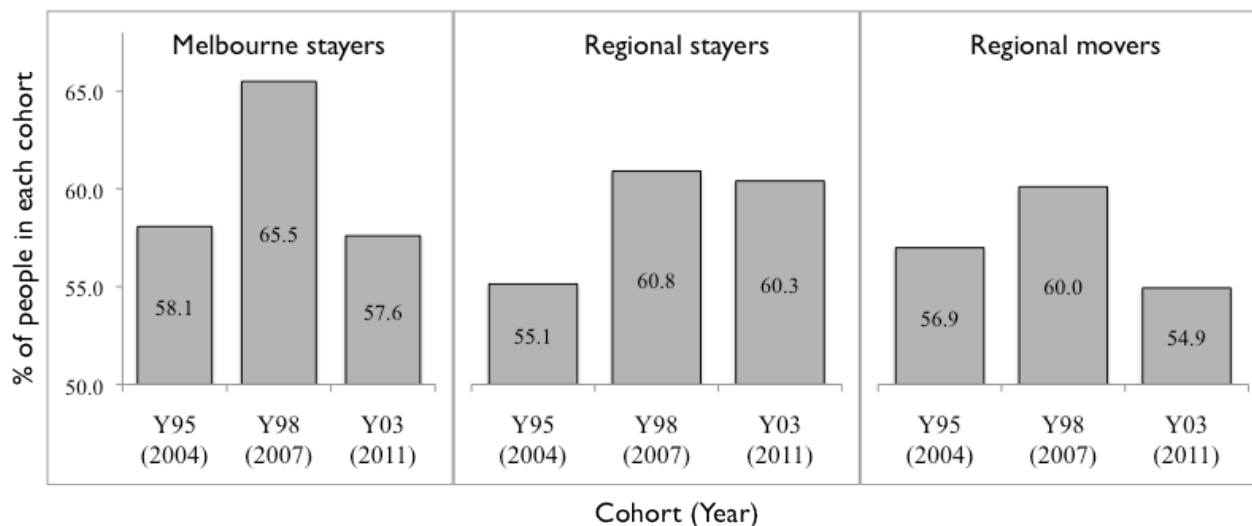
² We used annual Consumer Price Indices to adjust wage data from the ABS website: <http://www.abs.gov.au/websitedbs/d3310114.nsf/home/consumer+price+index+inflation+calculator> (last accessed, February 12th, 2015)

their wages will grow and exceed those of regional stayers and we would find similar wage differential to those documented in previous studies. The advantage apparent from Figure 5 may therefore be fleeting. Unfortunately, investigation of this long-term trajectory in wages is beyond the current capacity of the LSAY.

Job satisfaction

Along with traditional measures of labour market outcomes, subjective measures are considered an important dimension of individuals' career development (Fleurbaey and Blanche 2013). Using data from LSAY, we estimated the proportion of young people who were satisfied or very satisfied with their opportunities for job promotion at age 23. Figure 6 shows these estimates, and indicates that the share of young individuals satisfied with their opportunities for job promotion was largest for the 1998 cohort. Lower levels of satisfaction with promotion opportunities for the 1995 and 2003 cohorts may reflect young people's perception of the limited chances for career development in their current employment. For 2003 LSAY cohort, the smaller share of people satisfied with their career development opportunities may echo the continuing decline in entry-level recruitment with job pathways spanning from entry-level to high-level positions, or may also be a further effect of the GFC.

Figure 6. Percentage of people satisfied with their job proportion opportunities at age 23.



Source: Authors' elaboration using LSAY data on the Y95, Y98 and Y03 cohorts.

5. Conclusion

Over the last twenty years, the global demand for skills and knowledge has intensified. A tertiary qualification has become a basic requirement for a successful transition into the labour market. At the same time, the range and availability of entry-level employment opportunities in Australia have declined, increasing the incidence of youth unemployment and part-time work, and reducing the labour force participation rate of young people. These changes have all impacted on the educational and employment pathways, transitions and choices of young people. This report has examined changes in the aspirations, academic achievements and labour market outcomes of three cohorts of young Victorians, and building on previous reports, it identified differences between Melbourne stayers, regional stayers and regional movers both in academic achievement and labour market outcomes.

Reflecting global and national educational trends, the results showed increasing rates of school completion and post-school qualifications among young Victorians. These trends have been underpinned by rising aspirations to complete Year 12 and to embark on tertiary education after leaving school, particularly university education. Significant differences in educational outcomes were, however, found across Melbourne stayers, regional stayers and regional movers. While Melbourne stayers and regional movers have consistently displayed school completion rates over 89 percent, regional stayers experienced a significant rise in the share of people completing Year 12, with successive cohorts of school completion rates rising to match those of Melbourne stayers and regional movers at between 94 and 96 percent. Increased accessibility to school education across the country, coupled with enhanced teaching quality, has been identified as a key factor underlying the rising trend in school completion rates in regional Australia (Marks et al. 2000; Marks 2010).

Despite a steady rise in the share of people completing a university degree, regional stayers continue to display a higher propensity to embark on and earn a VET qualification, particularly low-level degrees, such as certificates I and II, apprenticeships and traineeships. The share of regional stayers with a VET qualification increased to 47 percent for the 2003 cohort, with that completing low-level qualifications rising from 30 to 36 percent, while the percentage of individuals with a university degree rose to only 29 percent. Compared to regional stayers, Melbourne stayers have historically displayed a higher propensity to complete a Bachelor degree or a postgraduate qualification, rather than a VET qualification. Consistent with prior studies (e.g. Curtis 2008, 2011), these findings suggest that the higher participation rates of regional stayers in VET education compared to Melbourne stayers reflects the limited access to higher education opportunities available in regional areas.

Extending this evidence, our results showed that young people leaving regional Victoria are consistently more likely to complete a university degree than those staying behind. The percentage of regional movers completing a university qualification has however declined. While this percentage has remained larger than that of regional stayers with a university degree, the 2003 cohort of regional movers appeared more likely to embark on and complete a VET qualification than a university degree. The unstable economic conditions created by the GFC are argued to have limited the financial capacity of this cohort of regional movers to afford the costs of relocation, housing and university education in Melbourne by reducing the local employment opportunities for young people.

Our results also showed that, consistent with the continuing decline in entry-level jobs documented across Australia, there has been a general decline in full-time employment opportunities for young Victorians. Intensified by the GFC, this decline particularly impacted the labour market outcomes of the 2003 cohort of school leavers. While this employment decline was accompanied by rises in the rate of median hourly wages, it was also associated with a decrease in the share of young people satisfied with their job promotion opportunities, reflecting uncertainty about their professional careers.

The decline in entry-level job opportunities has had differentiated impacts on the early labour market outcomes of Melbourne stayers, regional stayers and regional movers. Regional stayers and regional movers were the most severely affected, with increasing percentages of people in unemployment and staying outside the labour force. For Melbourne stayers, the rise in unemployment and the share of people remaining out of the workforce were small. The declining share in full-time employment was primarily compensated by a rise in the proportion of people working in part-time jobs. These differentials in labour market outcomes suggest that young people leaving regional areas are experiencing an increasingly difficult transition in the Melbourne labour market in the context of declining entry-level job positions. They also reflect the fragility of Australian regional economies which were severely affected by the GFC. The main economic activities of regional Australia, including mining, agriculture and tourism were all negatively impacted by the GFC, accelerating the rate of job losses (ABS 2015) and probably suppressing the labour force participation of young people staying in regional areas for work.

At the same time, evidence presented here indicates that regional stayers do not suffer a disadvantage in terms of full-time employment outcomes, at least during the early years of post-educational employment. Moreover, the data suggest that successive cohorts of regional stayers have enjoyed a steady increase in the proportions both attending VET and university education, although for the latter this share has not yet converged on those born in or moving to Melbourne.

References

- ABS See Australian Bureau of Statistics 2015, *Labour force, Australia. Table 17. Labour force status by Sex - Persons aged 15 to 24 years - Trend, Seasonally Adjusted and Original*, 6202.0, ABS, Canberra, Australia.
- Altbach, P, Reisberg, L and Rumbley, L 2009, *Trends in Global Higher Education: Tracking an academic revolution*, A report prepared for the UNESCO 2009 World Conference on Higher Education, UNESCO Publishing.
- Borjas, G, Bronas, S and Trejo, S 1992a, 'Assimilation and the earnings of young internal migrants', *The Review of Economics and Statistics*, vol. 74, no. 1, pp. 170-5.
- 1992b, 'Self-selection and internal migration in the United States', *Journal of Urban Economics*, vol. 32, no. 2, pp. 159-85.
- Brotherhood of St Laurence 2014, *Australian Youth Unemployment 2014: Snapshot*, Melbourne, Australia.
- Curtis, D 2008, *VET Pathways taken by School Leavers*, Research Report No 52. Longitudinal Surveys of Australian Youth (LSAY) Research Reports. Australian Research Council for Education Research, Melbourne, Australia.
- 2011, 'Tertiary education provision in rural Australia: Is VET a substitute for, or a pathway into, higher education?', *Education in Rural Australia*, vol. 21, no. 2, pp. 19-35.
- Fleurbay, M and Blanche, D 2013, *Beyond GDP: Measuring Welfare and Assessing Sustainability*, Oxford University Press, Oxford.
- GCA See: Graduate Careers Australia 2014, *Graduate Outlook 2013 The Report of the Graduate Outlook Survey: Employers' Perspectives on Graduate Recruitment*, GCA, Melbourne, Victoria.
- Gemici, S, Bednarz, A, Karmel, T and Lim, P 2014, *The factors affecting the educational and occupational aspirations of young Australians*, National Council for Vocational Education Research (NCVER), Adelaide.
- Glaeser, E 1999, 'Learning in cities', *Journal of Urban Economics*, vol. 46, no. 2, pp. 254-77.
- Glaeser, E and Maré, D 2001, 'Cities and skills', *Journal of Labour Economics*, vol. 19, no. 2, pp. 316-42.
- GTA See: Group Training Australia 2014, *Good practice principles: Work exposure and work placement programs in schools involving Group Training Organisations*, GTA, Sydney.
- Healy, J 2015, 'The Australian labour market in 2014: Still ill?', *Journal of Industrial Relations*, pp. 1-18.
- Lim, P, Gemici, S and Karmel, T 2014, 'The Impact of School Academic Quality on Low Socioeconomic Status Students', *The Australian Economic Review*, vol. 47, no. 1, pp. 100-6.
- Marks, G 2010, 'School sector and socioeconomic inequalities in university entrance in Australia: the role of the stratified curriculum', *Educational Research and Evaluation*, vol. 16, no. 1, pp. 23-37.
- Marks, G, Fleming, N, Long, M and McMillan, J 2000, 'Patterns of participation in Year 12 and higher education in Australia: Trends and issues', *Longitudinal Surveys of Australian Youth. Australian Council for Educational Research*, pp. 2-69.
- NCVER See: National Centre for Vocational Education Research 2014a, *Longitudinal Surveys of Australian Youth annual report 2013*, NCVER, Australian Government. Department of Education, Adelaide.
- 2014b, *Youth transitions in Australia: a moving picture*, NCVER.
- Peri, G 2002, 'Young workers, learning and agglomerations', *Journal of Urban Economics*, vol. 52, no. 3, pp. 582-607.
- Rothman, S, Hillman, K, McKenzie, P and Marks, G 2009, *The On Track survey 2009. The destinations of school leavers in Victoria Melbourne*, Department of Education and Early Childhood Development, Melbourne, Australia.

- Rowe, F, Bell, M and Corcoran, J 2014, *Patterns and sequences of mobility*, Technical report 2 prepared for the Department of Planning and Community Development. Spatial Analysis and Research Branch. State Government Victoria. Queensland Centre for Population Research (QCPR). School of Geography, Planning and Environmental Management. The University of Queensland, Brisbane, Australia.
- Rowe, F, Corcoran, J and Bell, M 2014a, *Determinants of post-school choices of young people: The workforce, university or vocational studies?*, Technical report 5 prepared for the Department of Planning and Community Development. Spatial Analysis and Research Branch. State Government Victoria. Queensland Centre for Population Research (QCPR). School of Geography, Planning and Environmental Management. The University of Queensland, Brisbane, Australia.
- 2014b, *Labour market outcomes and educational and occupational pathways of young movers starting off in regional Victoria*, Technical report 4 prepared for the Department of Planning and Community Development. Spatial Analysis and Research Branch. State Government Victoria. Queensland Centre for Population Research (QCPR). School of Geography, Planning and Environmental Management. The University of Queensland, Brisbane, Australia.
- 2014c, *Labour market outcomes and main educational and occupational pathways of young Victorians*, Technical report 3 prepared for the Department of Planning and Community Development. Spatial Analysis and Research Branch. State Government Victoria. Queensland Centre for Population Research (QCPR). School of Geography, Planning and Environmental Management. The University of Queensland, Brisbane, Australia.
- The Smith Family 2014, *Young people's successful transition to work: What are the pre-conditions?*, The Smith Family Research Report.
- Wheeler, C 2006, 'Cities and the growth of wages among young workers: Evidence from the NLSY', *Journal of Urban Economics*, vol. 60, no. 2, pp. 162-84.
- Yankow, J 2003, 'Migration, Job Change, and Wage Growth: A New Perspective on the Pecuniary Return to Geographic Mobility', *Journal of Regional Science*, vol. 43, no. 3, pp. 483-516.
- 2006, 'Why do cities pay more? An empirical examination of some competing theories of the urban wage premium', *Journal of Urban Economics*, vol. 60, no. 2, pp. 139-61.