Attraction and Retention

Education and labour force pathways of metropolitan and regional school leavers in Victoria
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Summary of findings from the Australian Research Council (ARC) Linkage Project LP120100212 undertaken by: the University of Queensland; Victorian Government; Graduate Careers Australia, and Latrobe University Bendigo

Report prepared by Forward Policy and Research Branch, Department of Environment, Land, Water and Planning (DELWP), Melbourne, Victoria.

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Introduction
Migration flows between Melbourne and regional Victoria result in net population gains and losses. Overall, regional areas experience a net gain of population from Melbourne, however, the patterns is different for different age groups, notably young adults (ages 15-25) who show net losses from regional areas. This is a long-standing trend which reflects the role that Melbourne plays in providing higher education and employment opportunities.

The stages of higher education and early career development are significant in economic terms because they represent a key period of human capital accumulation for individuals. And hence, where those individuals end up in a spatial sense has implications for the economic gains of city and country areas.

Despite the trend of regional youth out-migration being a long-standing one, we know relatively little about the potential role of return migration. The question therefore remains: is the regional net gain in older age groups due to young adults returning ‘home’ from Melbourne or is it due to metropolitan residents deciding to leave the large city for a smaller centre or rural lifestyle?

This research has used a combination of longitudinal and survey-based data sources to gain insights into migration pathways and potential return migration. The findings from this research are important for policy makers who deal with population and attraction strategies – either at local or state government level. These decisions makers form the audience for this report.

Findings

Migration
For many secondary school students in regional Australia, the decision to continue studies beyond Year 12 means making a decision about moving to a new location – either to a regional city or to a capital city. Although there has been a decrease in the number of people leaving regional Victoria, this has not led to a significant decline in the net migration losses of young people because Melbourne has also reduced the numbers of young people it sends to regional Victoria.

Analysis of the Longitudinal Survey of Australian Youth (LSAY) data suggests that, of those who moved to a metropolitan area after leaving school, 29 per cent had made a return move to a regional area by the age of 23.

Pathways
Regional students are much more mobile than Melbourne students in the years covering school, tertiary education and labour force entry. In contrast, young Melbournians showed less mobility and those who did move were more likely to move to another part of Australia rather than regional Victoria. By the age of 23, the small number of Melbournians moving to regional Victoria were more likely to have returned to Melbourne than stayed in a regional area.

After school, young Melbournians are more likely than regional students to go to university. Between 2006 and 2009, the annual percentage of regional school leavers in vocational training and employment was consistently larger than for Melbourne students. Young Melbournians who went from school directly to the workforce were more likely to stay in full-time work and not to undertake
any post-school education. In contrast, regional students were more likely to follow a pathway of school – labour force – education. This is likely to be related to deferment patterns as young regional Victorians are more likely to defer post-school studies than young Melbournians.

Past research has highlighted the importance of parental aspirations in determining the educational pathways of young people. The findings from this study differed in terms of the relative influence of individual rather than family factors. Aspirations of peers, rather than parents, was more closely linked to university attendance.

**Educational and employment outcomes**

In order to analyse educational and employment outcomes, the longitudinal sample was divided into three groups which reflected the locational pattern of their pathways: regional movers; regional stayers and metropolitan stayers.

By the age of 23, regional stayers are more likely than Melbourne stayers and regional movers to have completed a VET qualification, but less likely to have undertaken a university education.

Year 12 completion rates were around 95% for the three categories of: regional movers, regional stayers and metropolitan stayers. While rates had increased for each of the three categories over time, the greatest increase was seen among regional stayers. The most recent cohort of regional stayers showed a Year 12 completion rate of 94% compared to a rate of 73% in the 1995 cohort.

Australia, like other OECD countries, has experienced a steady increase in the share of young people completing post-school qualifications. In Victoria, the proportion of young people with post-school qualifications by the age of 23 has mirrored this trend, increasing from 56 per cent for the 1995 cohort to 73 per cent for the 2003 cohort.

**Labour market outcomes**

The fact that Melbourne school leavers are more likely to undertake university studies is reflected in their higher representation in managerial and professional occupations. Interestingly though, a relatively high proportion of Melbourne students were also employed in clerical, sales and personal services occupations. This may reflect the role of such occupations as a stepping stone to further employment opportunities rather than an occupational destination.

School leavers who migrated from regional Victoria to Melbourne tended to do somewhat better in terms of educational and occupational attainment than those who stayed in regional areas. By relocating to Melbourne, young regional Victorians gain access to educational and career opportunities that are not locally available.

Analysis shows marginal differences in terms of salary and job satisfaction between those starting off in Melbourne and those from regional Victoria. The same is true for both movers and stayers.

**Changes over time and the influence of the GFC**

Changing labour market conditions have made the transition to full-time employment increasingly difficult for young people. The rate of full-time employment for young Victorians at the age of 23 had decreased between the 1995 and 2003 cohorts, irrespective of whether they stayed or moved locations. Higher unemployment, more part-time work and a larger share of individuals remaining outside the labour force was evident in the most recent time period compared to the earlier periods.
Executive Summary

For Melbourne stayers the decline in full-time employment after the GFC was primarily compensated by a rise in part-time employment, but this was not the case for regional Victorians. Regional stayers experienced a rise in unemployment while regional movers experienced a decline in labour force participation. This latter finding was somewhat unusual given that regional movers were expected to benefit from the greater diversity of metropolitan employment opportunities.

While the increase in unemployment rates presents a somewhat discouraging story for young Victorians in their transition into the labour market, an examination of wage outcomes offers a more optimistic outlook. Regional stayers appear to have experienced the largest wage increase. 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. 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.

The share of young individuals satisfied with their opportunities for job promotion was largest for the 1998 cohort. For the 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.

The unfavourable economic conditions associated with the Global Financial Crisis (GFC) after 2007 may also explain the increase in VET rather than university education among regional movers as peoples’ financial capacities may have been limited. As regional students move for university education in a metropolitan area, they need to cover housing expenses and live independently to secure government financial assistance for study. The reduction in employment opportunities for young people recorded during the GFC is likely to have made this transition increasingly difficult.

Retrospective migration analysis

A key limitation of the longitudinal data is that it ends at the age of 23. While a third of those Australian regional students who moved to the city have returned to regional areas by this age, it is not clear whether such return migration continues for people through their twenties or thirties or whether it reflects a pattern of ‘early return or no return’.

The final stage of the project therefore used a retrospective approach to human capital accumulation and migration. This involved a survey of three groups of professional workers in Bendigo with a view to mapping migration histories. This retrospective approach proved to be a way in which the pathways of those who end up living in regional areas can be tracked over a longer period. The significance of capital cities in human capital development for a regional workforce can also be examined.

A total of 734 respondents took part in the surveys: 440 from Bendigo Bank; 119 from Bendigo Health (Hospital) and 175 from the City of Greater Bendigo (Council). Around a third of the total sample had been born in Bendigo, a third in other parts of regional Victoria and 19% in Melbourne. When the three organisations are compared, there is a notable dominance of the Bendigo-born at the Bank with 39 per cent of respondents being in this category compared to 26 per cent at the Council and only 19 per cent at the hospital. The Hospital showed a larger share originating from Melbourne (30%), however, it also has the highest proportion for those born in regional Victoria.

When stratified by role in each organisation, senior roles are well represented by people with regional backgrounds. The assumption that more senior roles require higher levels of education and experience may hold, but the degree to which these skills need to be acquired in metropolitan areas
is challenged by the findings. The Council seems to be the only organisation with metropolitan birthplaces being dominant, particularly for management roles.

Bendigo becomes increasingly represented as the location for employees as they moved through primary, secondary and tertiary schooling while regional Victoria becomes less prominent with higher ages/qualifications. This aligns with our understanding of aggregate migration moves of young people from rural areas to larger regional centres to access educational opportunities. The pattern holds for each of the organisations although the Bank staff maintain a higher level of local representation at each life stage.

Although Melbourne becomes more important as a location during the attainment of higher qualifications, it is not of greater prominence than Bendigo for any of the organisations. This suggests that the local education and training sectors are playing an important role in delivering services to local businesses.

People who had moved to Bendigo from elsewhere generally did so for family reasons (39%) which included: moving closer to family members; choosing a regional location as a good place to raise children; and/or, returning to place of birth. Thirty-one percent of respondents had moved to Bendigo for employment reasons, generally for the specific job they were currently holding.

Moving for amenity reasons only accounted for 10 per cent of responses and housing choice or affordability only 5 per cent. Amenity was a much more important factor for those at the Hospital and Council compared to the Bank sample while education and training was of greater importance to those in the Bank sample.

Although housing choice and affordability appeared to have little significance as drivers of migration, subsequent survey questions showed that they were listed by many as advantages of being in Bendigo. This highlights an important point for regional policy makers – drivers of migration are not the same as a locational advantage or asset. Just because a place has a key advantage (like affordable housing), it may not act as a driver to attract in-migration.

General accessibility, proximity to work and ease of travel was a commonly reported advantage of Bendigo. Many respondents highlighted the quality and availability of services and facilities as key advantages. Reported disadvantages of living in Bendigo included issues of lower pay in regional areas compared to metropolitan and limited local job opportunities in specialist fields. Eleven per cent of responses related to the natural environment of the region. The overwhelming focus of these responses related to water or, more accurately, the lack of it.

Most respondents (85%) had no intention to move away from Bendigo in the near future. The hospital had the highest proportion intending to leave within two years (20%) and Council had the lowest proportion (10%). For those indicating an intention to leave, a third were intending to move to Melbourne and a quarter to elsewhere in regional Victoria. When age is factored in to the analysis the results show that those in younger age groups appear more likely to move from Bendigo in the near future. Given that people in their early adult years are, on average, the most mobile age group in the population, this result is not surprising.
Policy relevance of the findings

A concern held by many policy makers is that areas of net loss of young people (such as regional Victoria) may lead to a net loss of the human capital needed to maintain and expand regional economies.

The research findings presented in this report confirmed some parts of this story. The net loss of young adults does continue from regional Victoria although this appears to be at slightly older ages than in the past, possibly due to the effects of deferral rates as young people in regional areas need to spend time in the workforce to afford the costs of moving away from home for education.

By the age of 23, around a third of those who had left regional areas for education had returned to a regional location. This presents a positive story for regions in terms of human capital accumulation as skills learnt and developed in Melbourne can be transferred to regional areas.

Findings from the Bendigo surveys indicate that human capital accumulation, in the form of professional skills development, can occur effectively within regions rather than being dependent on migration (temporarily or permanently) to a metropolitan area for higher education. The high proportion of senior employees who had come from regional backgrounds showed that, even for globally-connected professions like financial services, a metropolitan education is not essential.

It should be noted that, in the case of the Bendigo Bank example, the organisation itself played an important role in the human capital development of their staff. Scholarships, internships and partnerships with local education providers forms an important part of the company’s culture. This benefits the bank, in terms of overcoming skills shortages, but it also benefits employees through sponsorship of their education locally and local service providers through the purchase of education and training services within the regional city.

The Bendigo surveys also highlighted the role of family factors in peoples’ migration decisions, for example, moving to be closer to parents or other relatives or returning to the region of birth after leaving at an earlier age. The significance of these findings for regional policy makers is to highlight that having a connection with a place (through family for example) makes moving there more likely. Given that social networks usually act as an anchor on migration, it is likely to be much more difficult for people who have lived their lives in a major city to consider living in a regional location. For policy makers interested in attracting people to a regional location, targeting people who grew up in such areas may be a more effective promotional strategy.
1. Introduction

1.1 Policy context

The retention and attraction of young adults to regional areas is central to the aspirations of many communities across Australia. The skills, energy and innovation which this human capital can bring to a community lies beyond merely economic benefits. Many regions of Australia seek to attract and retain skilled workers, however, information about the dynamics of skills creation and migration of human capital is often lacking. Human capital is essential for growth and development. This paper presents findings from an ARC Linkage Project1 which examined the spatial dimensions of educational and post-educational pathways. The outcomes provide an evidence base on which effective regional policies can be founded.

Migration flows between Melbourne and regional Victoria result in net population gains and losses. Overall, regional areas experience a net gain of population from Melbourne; in other words more people move from Melbourne to regional Victoria than from regional Victoria to Melbourne. However, the patterns is different for different age groups, notably young adults (ages 15-25) who show net losses from regional areas. This pattern of net loss is a long-standing trend which reflects the role that Melbourne plays in higher education and employment opportunities. The stages of higher education and early career development are significant in economic terms because they represent a key period of human capital accumulation for individuals. And hence, where those individuals end up in a spatial sense has implications for the economic gains of city and country areas.

1.2 The project

The research study had the following objective:

To understand the processes of human capital formation and to contribute to the development of policy that will assist in attraction and retention of skilled people in non-metropolitan parts of Australia.

Despite the trend of regional youth out-migration being a long-standing one, we know relatively little about the potential role of return migration. The question therefore remains: is the regional net gain in older age groups due to young adults returning ‘home’ from Melbourne or is it due to metropolitan residents deciding to leave the large city for a smaller centre or rural lifestyle?

As people move through education and into the workforce they accumulate human capital. Human capital is important in an economic sense as it represents the cumulative training, skills and experience that an individual gains over their life course. If individuals make locational decisions as part of these human capital pathways, there will be spatial outcomes to consider. For example, if people from rural areas move to urban areas for education and employment, this can represent a net loss of human capital from the rural area. However, if the individual returns to a rural area after gaining qualifications and work experience, the rural area may benefit from a gain in human capital. Migration pathways and educational/employment pathways are therefore linked and are of interest to policy makers for a number of reasons:

1 ARC Linkage Project LP120100212 ‘Attraction and Retention: The role of mobility in educational pathways and human capital development’, involving a partnership between the Victorian Government, University of Queensland, Graduate Careers Australia and Latrobe University Bendigo.
• What locations benefit from the pathway choices of individuals?
• Is there a difference in the pathways and locational outcomes of those in metropolitan compared to regional (non-metropolitan) areas?
• To what degree does return-migration bring human capital benefits to regional areas?

The findings from this research are important for policy makers who deal with population and attraction strategies – either at local or state government level. These decisions makers form the audience for this report.

1.3 Methods and data

The research findings presented in this report emerge from analysis of several types of data. First, census data are used to show the context of quantitative patterns of migration in Victoria, specifically the relationship between metropolitan and non-metropolitan areas. The second type of data is longitudinal which allows a more detailed understanding of pathway patterns as young people move through school, higher education and the workforce. Two longitudinal datasets are used: the On Track database of Victorian school leavers and the Longitudinal Survey of Australian Youth (LSAY). These surveys provide complementary perspectives with the On Track data giving insights into the choices of young Victorians overall, and the LSAY dataset providing more geographical data to understand spatial pathways.

A limitation of the longitudinal datasets is that they stop around the age of 23 after tracking individuals for around 10 years. Quantitative data suggest that migration flows from Melbourne to regional areas increase after this age, thus raising the question of whether such flows involve people originally from regional Victoria returning home, or people who have grown up in metropolitan areas moving to regional locations for the first time. In order to overcome this data gap, the research included an additional survey component which located a sample of regional workers in order to retrospectively analyse their migration histories. Analysing their pathways through school, higher education and early career development, and the locations in which each of these stages took place, the research could give insights into the role of regional and metropolitan locations in human capital accumulation.

Overall, this variety of data sources enabled a greater range of insights of relevance to policy aimed at attracting and retaining populations in regional Victoria.

1.4 Structure of the report

This report is structured around four key aspects of the research. First, migration patterns are reviewed for young adults in Victoria (chapter 2). In particular, flows between regional Victoria and Melbourne are analysed and insights into return migration are presented.

Using longitudinal data, the main pathways of young people are analysed in chapter 3. Differences between pathways of school completers and early leavers is reviewed, followed by an examination of the differences between those moving from their original location and those remaining. Factors affecting students’ choices are also presented.

Chapter four looks at educational and workforce outcomes from these pathways. Differences between educational aspirations and outcomes are compared, and analysis of the effects of economic change on outcomes (particularly during the period of the GFC) is presented.
Chapter five provides survey findings on migration histories of a regional workforce group. This enables a longer view of migration pathways and human capital accumulation to be considered.

In conclusion, chapter six draws together key findings for policy development.
2. Mobility

2.1 Migration and economic development

Migration flows between Melbourne and regional Victoria result in net population gains and losses. Overall, regional areas experience a net gain of population from Melbourne; in other words more people move from Melbourne to regional Victoria than from regional Victoria to Melbourne. However, the patterns is different for different age groups, notably young adults (ages 15-25) who show net losses from regional areas. This pattern of net loss is a long-standing trend which reflects the role that Melbourne plays in higher education and employment opportunities. The stages of higher education and early career development are significant in economic terms because they represent a key period of human capital accumulation for individuals. And hence, where those individuals end up in a spatial sense has implications for the economic gains of city and country areas. The movement of young adults is important for economic growth and regional development (Romer 1986; Barro 1992). The movement of this large, highly mobile population group results in a transfer of skills, knowledge and labour. The spatial outcomes of population flows can lead to gains and losses for different regions which, in turn can affect levels of economic and population growth.

Flows between metropolitan and non-metropolitan areas are of interest to policy makers seeking regional development. While flows across all age groups between regional Victoria and Melbourne result in a net gain to regional areas, the migration patterns among young adults are skewed strongly in favour of Melbourne. This pattern is seen in other Australian states as well where capital cities attract young adults for educational and career opportunities.

Net flows from rural and remote communities into metropolitan areas of Australia reinforces concentration of economic activity and a relatively young metropolitan labour force. At the same time, it has led to a gradual ageing of the population structure and an erosion of the local stock of human capital in many rural communities, placing constraints for local development (Hogan and Young 2013). To enhance their social fabric and economic performance, rural communities often seek to develop policies for improving the attraction and retention rates of young and educated population (Corcoran et. al. 2010; Rowe et. al. 2013a). A comprehensive understanding of the complex blend of forces underpinning the migration patterns of young adults and their changes over time is therefore a critical component for regional policy development.

From an individual perspective, particular events over the life cycle are identified to influence the migration patterns of young adults. High levels of mobility at young adult ages are conceived to reflect a sequence of interlinked and concentrated life course transitions, covering the period from the mid-teens to the late twenties (Rogers & Castro 1981). At these ages, high propensities to move are related to particular changes in living arrangements, family configuration, educational formation and career development, representing entrance to higher education, partnership formation, childbearing, entry to the labour force and leaving the parental home (Mulder & Wagner 1993; Odland & Shumway 1993; Haapanen & Tervo 2012).

For many secondary school students in regional Australia, the decision to continue studies beyond Year 12 means making a decision about moving to a new location – either to a regional city or to a capital city. Hence, the decision to go to university is often accompanied by a migration decision (Eversole 2001, p.91). While some regional cities will have university campuses, the range of courses offered there is usually more limited than that offered at the metropolitan campuses (Hillman & Rothman 2007, p.3). This is particularly the case for professional degree courses such as medicine, law or engineering. Even where a suitable course is available locally, many regional students will still take the opportunity to move to Melbourne for social and lifestyle reasons (Eacott & Sonn 2006, p.199; Hillman & Rothman 2007, p.3) or for the ‘prestige’
of a city-based university which may be seen to enhance career prospects. For many it is a ‘rite of passage’
towards an independent adult life (Monash University 2006, p.1).

Recent work adds a more complex layer to the factors in regional migration of university graduates
(Faggian & McCann, 2006). This work shows that in the British context, the importance of London as an
economic hub acts as a major attractor for professionals, including recent graduates. This pattern suggests
that larger cities like London are net attractors of human capital through the migration of highly educated
people. Because Australia is characterised by urban primacy (state capitals have a major share of
population and commercial activity), this pattern may also be evident. The research project aims, in part to
test this assumption about human capital accumulation and patterns of migration.

Metropolitan areas provide a wide diversity of employment and professional development opportunities.
They are the centres of trade, financial, cultural and retailing activities and are the preferred headquarters
location for large domestic and foreign-owned companies and state government activity (Taylor & Thrift
1981; Tonts & Taylor 2010). The diversity of employment and career development opportunities in
metropolitan areas appears to be another major driver of the out-migration of young people from regional
and rural locations where job options are often restricted.

2.2 Migration patterns of young Victorians

Net migration by age
Young adults are the most mobile group of the Victorian and Australian population. People in the 15-24 age
bracket account for almost one quarter of the total number of movers and tend to move as twice much as
other age groups of the population at the national level.

Young adults typically move from regional areas to metropolitan locations (Bell 1992). Accordingly,
Melbourne has experienced continuing net migration gains of young adults, whereas regional Victoria has
recorded net migration losses of young population (figure 2.1). This movement of young adults from rural
regions to metropolitan areas is a long-standing demographic phenomenon in Australia (Bell & Hugo 2000),
and it is also common in other parts of the developed world, such as the United States (Bogue et. al. 2009),
Scotland (Stockdale 2002), Sweden (Nilsson 2003) and Canada (Mayer 2000).

Figure 2.1: Net migration between regional Victoria and Melbourne, by age, 2006-2011

![Net migration between regional Victoria and Melbourne, by age, 2006-2011](source: Rowe et. al. 2014a using University of Queensland AIM database)
Migration flows of young adults

An analysis of migration flows shows both the predominance of the regional – Melbourne flow and its consistency over time. Figures 2.2 and 2.3 show numbers of moves between Melbourne and regional Victoria since 1976 as well as migration rates, that is, the proportion of people in an age group who moved. This allows changes in the size of age cohorts to be taken into account thus allowing comparability over time.

Figure 2.2: Migration flows and rates* of young adults aged 15 to 19 years, Melbourne and regional Victoria 1976 to 2011

* Migration rates are calculated as proportion of people in age group who moved, thus change in size of cohorts over time is taken into account allowing comparability.

Source: Rowe et. al. 2014a using University of Queensland AIM database

Figure 2.3: Migration flows and rates* of young adults aged 20 to 24 years, Melbourne and regional Victoria 1976 to 2011

* Migration rates are calculated as proportion of people in age group who moved, thus change in size of cohorts over time is taken into account allowing comparability.

Source: Rowe et. al. 2014a using University of Queensland AIM database

The aggregate picture of these patterns indicates that the outflow of young people from regional Victoria to Melbourne has been consistently larger than the inflows in the reverse direction. Thus, regional Victoria has systematically lost young population. Although there has been a decrease in the number of people leaving regional Victoria, it has not led to a significant decline in the net migration losses of young people in regional Victoria. This is because Melbourne has also reduced the numbers of young people it sends to regional Victoria.

Historically, Melbourne has been the main source of young people moving to regional Victoria. However, this role appears to have diminished over time. This is evidenced by a significant reduction in the number of
people aged 20-24 moving from Melbourne to regional Victoria. This number dropped from almost 9,000 in 1976-81 to less than 4,600 in 2006-11. Despite this, Melbourne still appears as the key source of migration flows of young people to regional Victoria.

**Net migration**

The difference in size of flows between Melbourne and regional Victoria accounts for the long-standing pattern of net migration loss from regional areas. While regional Victoria experienced a decline in net migration losses of people in the 15-19 age group between 1976-81 and 2006-11, it recorded a rise in the net migration losses of those in the 20-24 age bracket (figure 2.4).

**Figure 2.4: Net migration gain to Melbourne from regional Victoria, young adults, 1976 to 2011**

<table>
<thead>
<tr>
<th>Year</th>
<th>15 to 19 year olds</th>
<th>20 to 24 year olds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976-81</td>
<td>4,300</td>
<td>6,800</td>
</tr>
<tr>
<td>1981-86</td>
<td>2,000</td>
<td>8,300</td>
</tr>
<tr>
<td>1986-91</td>
<td>1,500</td>
<td>7,800</td>
</tr>
<tr>
<td>1991-96</td>
<td>1,000</td>
<td>7,300</td>
</tr>
<tr>
<td>1996-01</td>
<td>600</td>
<td>6,800</td>
</tr>
<tr>
<td>2001-06</td>
<td>300</td>
<td>6,300</td>
</tr>
<tr>
<td>2006-11</td>
<td>200</td>
<td>6,000</td>
</tr>
</tbody>
</table>

Source: Rowe et al. 2014a using University of Queensland AIM database

For 15 to 19 year olds, the net out-migration balance declined from around 4,300 in 1976-81 to 2,000 in 2006-11, whereas for 20 to 24 year olds it rose from around 6,800 in 1976-81 to over 9,300 in 2006-11. Nevertheless, since 2001 there has been a decline in the size of Melbourne’s net gain. On the one hand, this is likely to reflect the shrinking size of the young population base of regional Victoria. However, there were also some additional factors during the 2000s which may have affected migration flows:

**Drought 1998 to 2010**

Drought often creates financial stress for rural and regional families which can have flow on effects in terms of education pathways (prohibitive costs). This is can lead to deferment rather than abandonment of higher educational pathways. Many regional students face living-away-from-home costs if they attend tertiary education so the pattern of minimal income and increasing debt that rural families were suffering in this decade may be important. While Alston & Kent (2006) have documented this kind of impact at a case study level, comprehensive evidence quantifying the impact of drought on young adults’ decisions about tertiary education is not available.

**Changes in financial support eligibility requirements**

Changes were made to the Federal Government Youth Allowance in 1998 and restrictions on eligibility were subsequently reported as leading to higher deferral rates. The issue became the subject of both national and state government parliamentary inquiries in the mid 2000s (Parliament of Australia 2009; Parliament of Victoria 2006, 2009). Some restrictions have since been eased although some eligibility requirements still apply which lead to students needing to work before being eligible for educational support. Victorian On Track data has been used by Klatt and Polesel (2013) to assess deferment patterns and the reasons behind them. Using survey data from 2012, they found:
• Nearly half (48%) of regional deferrers had to relocate to commence their study, compared with only 13% of metropolitan deferrers;
• Regional deferrers were more likely to be youth allowance recipients;
• Young people from rural areas defer university study at twice the rate of their metro counterparts;
• Deferrers from regional Victoria are more likely than students from the city to take up a university place in their second year out of school, and continue study in their third year, however, the overall proportion of regional students who go to university is still lower than for those from Melbourne.

While financial support policies are likely to have contributed to higher deferral rates among regional students, it does not appear to have had long term impacts on attendance at a tertiary institution – it merely delays the starting time by around 2 years. The combination of drought and youth allowance requirements may have deepened the deferral issue in the mid 2000s, although causal links are difficult to assess with confidence as there is no comprehensive quantitative data.

2.3 Return migration

There is substantial evidence that gradually young people return to non-metropolitan areas after relocating for high school or tertiary education. Some return to their home towns or other non-metropolitan regions. In Canada, one in four young people returns to their original non-metropolitan location, and one in three returns to a different rural community within the same province or state (Dupuy et. al. 2000).

Using LSAY data on the 1995 cohort, Hillman and Rothman (2007) estimated that a similar number of young people (one in three) return to non-metropolitan locations in Australia (table 2a), while two in three make a return move to their region of origin in Sweden (Nilsson 2003). Return moves to non-metropolitan areas of young people are often associated with a desire to provide their children with a childhood similar to the one they experienced (Nilsson 2003; McKenzie 2009).

Table 2a: Graduate retention in regional areas of Australia: findings from selected studies

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Description of study</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillman and Rothman 2007</td>
<td>Longitudinal Survey of Australian Youth analysed</td>
<td>Around 30% of students originating in regional areas and moving to a major city had returned to a regional location within seven years.</td>
</tr>
<tr>
<td>Western Research Institute 2007 for University of Ballarat</td>
<td>3,009 student records covering period 1998-2005 reviewed to analyse the employment location of graduates in the April following completion of their degree.</td>
<td>84% originated from a regional location. 79% subsequently employed in a regional area. 16% originated from a metropolitan location. 24% ultimately employed in a metropolitan area. Hence, a small overall loss of regional students to metropolitan locations following their studies.</td>
</tr>
<tr>
<td>Corcoran et. al. 2010</td>
<td>Australian Graduate Destination Survey data using ARIA classification</td>
<td>Metropolitan areas show high retention of university students after graduation (86%). Inner and outer regional areas of Australia (incl. most of non-metro Victoria) had lower retention rates from their universities. Around 28% of students attending inner regional universities were working within the region 6-18 months after graduation while 62% had moved to a metropolitan area. Outer regional areas showed a retention rate of 35% with 39% moving to major cities.</td>
</tr>
</tbody>
</table>
There is some evidence that those who study at universities outside urban areas are more likely to stay in regional areas after they graduate (Corcoran et. al. 2009). Nevertheless, there is overall net loss of young people to metropolitan areas through the years of university study and graduate employment. Using graduate destination survey data, Corcoran et. al. (2010) found that metropolitan areas showed high retention rates for university students after graduation (86%). Inner and outer regional areas of Australia (most of non-metro Victoria falls within these categories) had lower retention rates from their universities. Around 28% of students attending inner regional universities were working within the region 6-18 months after graduation while 62% had moved to a metropolitan area. Outer regional areas showed a retention rate of 35% with 39% moving to major cities.

Drawing on data from the 2003 LSAY, some insights can be gained in relation to return migration, although the fact that the LSAY stops at age 23 greatly limits the findings which may be drawn. Nevertheless, using the national sample from LSAY Wave 1, the researchers were able to extract a large enough sample (1,037 persons) for some basic analysis of early return migration among those who recorded a regional location at the start of the period. Around half of these (532 persons) moved to metropolitan areas after leaving school. Of those who moved to a metropolitan area, 29% (153 persons) had made a return move to a regional area by age 23 (figure 2.5). Most returning school leavers appear to remain in metropolitan areas for between 1 to 4 years which would presumably represent the length of most university degrees. Nearly half (48%) of those returning did so at ages 22 and 23.

Figure 2.5: Pattern of return migration to regional locations using Australia-wide sample of LSAY

Source: ARC Linkage Project analysis of LSAY data 2015

The major limitation of the LSAY data is that it stops when respondents are 23 years of age. Census data indicate that metro to regional migration is more likely when people are in their mid to late 20s than in earlier adult cohorts (figure 2.1). Importantly, the 1-2 year delay among regional students due to deferral (Klatt & Polesel 2013) may affect the longitudinal analysis as regional students may not have completed (or may have only just completed) their educational studies by the age of 23. Hence analysis of return migration, for example, could under estimate the proportion returning after study and comparison of metropolitan-regional student outcomes could be biased towards Melbourne.

Earlier work by McKenzie (2010) used qualitative work collected by Sweeney Research Ltd to examine the motivations behind moves between regional Victoria and Melbourne for university. The findings of this research are relevant to the question of whether the return migration shown in the LSAY data is likely to continue in subsequent age groups. The qualitative research showed that those who grew up in regional Victoria indicated that, once they reached their thirties, they would settle down in regional Victoria to raise children of their own. However, older students and graduates suggested that such early intentions had been complicated by the pathways that their metropolitan stay had created. These were affected by career...

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2 Regional youth are defined as young people who reported their place of residence in a non-metropolitan Statistical Area Level 4 at the age of 15, i.e. at the first wave of the 2003 LSAY cohort.
opportunities arising in Melbourne and/or relationships developing with people who had grown up in Melbourne. Both factors created an anchor which could increase in strength the longer people stayed.

‘The longer I stay, the harder it is to move.’ (ex-regional student based in Melbourne cited in McKenzie 2010, p.13)

On the whole, students from regional backgrounds who had undertaken a professional degree were more willing to live in the city than vocational students, despite personal preferences to reside regionally. They recognise that the city is where the majority of job and career opportunities are located and they are willing to move to where the jobs are.

‘Career drives location more than location driving career.’ (ex-regional student based in Melbourne cited in McKenzie 2010, p.11)

While retirement was a very long way off for those in the study, there was agreement among alumni who had grown up in the country that retirement was a life stage to be spent in the country. Almost all pictured an idyllic seaside lifestyle – far enough away from the hustle and bustle yet still within easy reach of the medical facilities of Geelong or Melbourne. Surprisingly, only a handful suggested that they would consider retiring to their regional hometown, suggesting that return migration may still lead to areas of regional depopulation in more remote areas, while the redistribution of population would favour areas near Melbourne and the major regional centres. Analysis of Bendigo survey data presented in this paper supports this pattern of return migration to a regional centre rather than regional place of birth.

Comparing the qualitative and quantitative data presents questions and speculation. Who are the people contributing to the net gain in population in regional Victoria in the age groups 25 to 40? This is the data gap that remains after a great deal of research effort has been expended. We might assume that the intentions voiced in the qualitative work – returning to regional Victoria to raise children – are in fact being played out as the quantitative picture shows net gains in late 20s and early 30s. Alternatively, the net gain may be affected by people from Melbourne moving to regional areas (ie. not regional returners).
3. Pathways

3.1 Measuring pathways

Two datasets were used to analyse longitudinal pathways of students. The first of these, the Victorian On Track dataset, provides evidence on the pathways which young people follow after leaving secondary school. While this dataset can provide insights into the choices of young Victorians overall, there are gaps in the dataset in terms of geographical data. Therefore, to understand spatial pathways, the Longitudinal Survey of Australian Youth (LSAY) is analysed in order to track the spatial patterns of transitions between school, higher education and training, and entry into the labour force.

3.2 Pathways of school completers

From the On Track data, it can be seen that those who complete year 12 follow a total of 16 separate pathways in the 4 years following school (figure 3.1). From those school completers transitioning into higher education or training, the largest share (55%) undertook university studies, while 30% were in a VET/TAFE institution, and a minority (16%) engaged in some form of apprenticeship or traineeship.

Figure 3.1: Education and employment pathways of school completers, 2007 to 2011

Source: Rowe et al. 2013b using Victorian Government On Track Data

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3 It is important to note that 60% of school completers who undertook some form of post-secondary education or training also participated actively in the labour market, taking up part-time jobs.
From the 16 paths in figure 3.1, three emerge as the main educational and employment pathways of school completers. These pathways comprise 62% of all school completers and are labelled as HHHH, HHHL and LHHH. The first two pathways constitute more than half of school completers (52%), and represent students who transitioned from high school into university education, completing programs of three- or four-year duration before entering the labour force.

The third pathway comprises 10% of school completers, and represents individuals who may have deferred post-secondary education studies for one year to gain working experience, or due to financial constraints. The large percentage of school completers and sequence of continuing years of schooling captured by these pathways suggest that human capital accumulation through formal education plays an important role in making a successful transition into the labour market.

3.3 Pathways of early school leavers

Compared to school completers, a greater share of early school leavers transitioned from high school into the labour force immediately after dropping out from high school (figure 3.2). Only one third of early school leavers transitioned into full-time jobs and a similar proportion engaged in part-time occupations, while a larger share (40%) was unemployed or inactive. Consistent with previous work, these findings indicate that early school leavers experience more difficult transitions in the labour market than school completers (Ryan 2011; DEECD 2012a, 2012b).

Figure 3.2: Education and employment pathways of early school leavers, 2007 to 2011

Source: Rowe et. al. 2013b using Victorian Government On Track Data
3.4 Spatial pathways

While the On Track data are useful for initial analysis of educational and occupational pathways, the dataset has limitations for more complex analysis of spatial patterns. While a metropolitan/non-metropolitan split can be made for particular years, there is a problem in analysing longitudinal patterns due to inconsistent recording of place of residence. The dataset did not capture migration information during two critical transitions of the life course: entry into higher education; and entry into the labour market. In order to overcome this data limitation, the research team moved to another dataset – the Longitudinal Survey of Australian Youth (LSAY) – to undertake spatial pathway analysis.

A cohort of 847 Victorians was available for analysis from the LSAY. Of this sample, 629 individuals had a starting residential address in Melbourne, and 218 in regional Victoria. Mobility sequences were followed people in the sample aged from 15 to 24. The spatial outcomes of these sequences is shown in figure 3.3.

**Figure 3.3: Spatial patterns of longitudinal migration pathways, 2003-2011**

It can be seen that the regional students are much more mobile than Melbourne students in the years covering school, tertiary education and labour force entry. There is an ongoing flow from regional Victoria to Melbourne for ages covering both education and entry into the workplace. This backs up earlier findings indicating that many regional students who undertake tertiary studies in the regions will still move to Melbourne for employment afterwards (McKenzie 2010, p.12). The lack of movement from Melbourne to regions is notable.

Compared to the modest drop in the number of students starting off and staying in Melbourne over the survey period, there is a significant reduction in the number of students starting off and remaining in regional Victoria. By the end of the period, 155 of the initial 218 remained in regional Victoria. Prominent declines were observed at the ages of 18, 19 and 23, but the largest drop occurs at the age of 21. The majority of young people who left regional Victoria moved to Melbourne. At the age of 23, the number of regional students in the state capital was 39, while 24 were in other states.

From the range of mobility pathways followed by young Victorians starting off in Melbourne, mobility sequences containing a move to regional Victoria (n=15) are less common than those containing a move to elsewhere in the country (n=22). Of the small number of students moving to regional Victoria, return moves to Melbourne were more common than stays in regional Victoria. Nine students moved back to Melbourne, while only six remained in regional Victoria. The annual
duration of stay in regional Victoria appears to be very spread. Five students returned to Melbourne after one year in regional Victoria, four returned after two years, the same number of students went back after three and only two students returned after four years in regional Victoria.

3.5 Pathways of human capital accumulation

The pattern of human capital accumulation among those in the sample is shown in figure 3.4. At each year in the series, the total proportion of the sample undertaking education, training, and employment is shown as well as those who were unemployed or inactive. At the aggregate level the proportions completing secondary school and undertaking university or vocational training represents the most common pathway leading to employment.

Figure 3.4: Pathways of human capital accumulation for those starting in Melbourne and regional Victoria

Source: Rowe et. al. 2014b using LSAY data sample

After school, young Melbournians are more likely than regional students to go to university. Between 2005 and 2006, 44% of Melbourne school leavers undertook university studies. This percentage was nearly double the percentage of regional school leavers moving into university education (i.e. 25%). On the other hand, young Melbournians were less likely than young regional Victorians to engage in vocational training or to transition into employment in the first year after school. Between 2005 and 2006, the percentage of Melbourne school leavers moving into these activities was only 20%, while that of regional students was almost 40%. This difference was consistent in subsequent years. Between 2006 and 2009, the annual percentage of regional school leavers in vocational training and employment was consistently larger than for Melbourne students.

Differences were found in the pathways of regional and metropolitan students who had spent the first year after completing school in full-time work. For young Melbournians in this group, the most common pattern was to continue in full-time work and not to undertake any post-school education while, for their regional counterparts, the most common pathway was to engage in some form of post-school education in subsequent years. One factor which may explain the propensity for regional school leavers to have a path of full time employment followed by further education is the role and nature of deferment in their pathways. Compared to young Melbournians, young regional Victorians are more likely to defer post-school studies. In their 2013 study, Klatt and Polesel found that young people from regional Victoria deferred university study at twice the rate of their Melbourne
counterparts but that these regional deferrers were more likely to take up a place at university in their second year out of school, and continue their study in their third year, than were students from the city.

Regional Victorians who move, tend to adopt pathways that are more similar to those transitioned by young Melbournians. When young people move from regional Victoria, they are more likely to undertake university studies, pointing to the importance of education as a main reason for migrating.

By 2011, the majority of young people (49%) who started off in regional Victoria were in full-time employment. 17 per cent were still at university and 17 per cent were employed in part-time work. A small share of regional Victorians were in a vocational program (9%) or were unemployed/inactive (8%).

### 3.6 Factors affecting pathway decisions

A range of individual, family, school and residential context factors have the potential to influence educational choices of young Victorians (RPAC 2013). However, the differences in educational attainment between students who stay in regional Victoria and those who move to Melbourne after completing school has not been fully explored.

This section identifies factors that influence post-school choices to work, enter university, or undertake vocational studies. The degree to which these factors vary between regional stayers, regional movers and metropolitan stayers is also analysed.

Pacione (1997) identifies four dimensions of factors affecting educational attainment: individual, family, school and residential area (figure 3.5).

#### Figure 3.5: Factors affecting educational attainment

![Figure 3.5: Factors affecting educational attainment](image)

Source: adapted from Pacione 1997 by Rowe et. al. 2014d

**Individual factors**

In terms of individual factors, evidence suggests that more intelligent, engaged and motivated students tend to achieve higher levels of educational attainment (OECD 2013; RPAC 2013). Peer influence has been identified as a factor with the power to influence a student’s educational attainment. Undertaking a different pathway than a peer group may involve the loss of social and emotional ties which, in turn, can reduce an individual’s friendship network resulting in adverse effects on the emotional health and wellbeing of students and subsequently, their educational...
success (WRI 2007). Government financial support to students is often seen as a major resource, assisting human capital development of young people. However, assessing the actual impacts of financial government programs on individual outcomes is complex because disentangling their effects is difficult, and because there is a time lag in assessing impacts (Intriligator et. al. 2002).

Family factors
There is a large body of evidence that links socio-economic status to the educational attainment of students. This evidence shows that the educational level of the parent(s) is strongly correlated to that of their children (Baxter 2002; Le & Miller 2002). In Australia, particular focus has been placed on the strong association between a mother’s and children’s educational levels (Baxter 2002; RPAC 2013). This is because students with mothers who possess a degree qualification have been found to be more likely to complete Year 12 and to undertake higher post-school educational qualifications (Frigo et. al. 2007; Homel et. al. 2012). As well as students’ home educational resources, the number of siblings has also been shown to represent a key factor influencing educational attainment, as a large number of siblings may limit the amount of resources available to pursue university studies (Booth & Kee 2009).

School factors
School teaching quality and class size can affect student performance. Schools with high-quality teaching and small class sizes are often associated with better school student performance which leads to higher educational attainment later on in life (Frigo et. al. 2007). Lamb and colleagues (2004) have indicated a consistent relationship between school sector and post-school choices with students from government schools having a lower tendency to study at university and VET institutions, but have been found to be more likely to undertake apprenticeships than students from Catholic and independent schools (Lamb et. al. 2004). This association has in turn been traced to the differences in socio-economic background characteristics of the student population in government and non-government schools. Government schools tend to account for a larger share of students from low socio-economic backgrounds than Catholic and independent schools and these students tend to achieve lower academic scores (Lamb et. al. 2004).

Residential area
Regional areas have a strong tradition of early workforce participation and on-the-job training, rather than formal academic education (WRI 2007; RPAC 2013). In part, this tradition has been attributed to lack of universities and employment options in regional areas, which limit opportunities to pursue educational qualifications that are geared towards the needs of local communities (McKenzie 2009).

Results from LSAY analysis
In order to better understand factors influencing students’ choices the LSAY national dataset was used rather than just the Victorian data sample. This allowed an adequate sample size to be attained for the purposes of regression analysis. A sample size of 6,276 was obtained, comprising 2,719 regional movers, 892 regional stayers and 2,665 metropolitan stayers.

Three choices (measured one year after leaving school) were defined:

1. enter university;
2. participate in the workforce; and,
3. undertake vocational studies.
Using the model shown in figure 3.5, individual, school and residential factors were analysed against the three choices listed above. Family factors were included with individual factors because of the structure of the data which did not allow separate analysis (for details, see technical report Rowe et. al. 2014d, p.6).

Variance analysis showed that individual and family factors account for 75% of the difference in students’ post-school choices. Around 18% is due to differences in school factors and only 5% is due to differences in the residential factors. These results suggest that differences between students and their families, such as aspirations, intelligence, family size and socio-economic status are the main source of variability in the post-school choices of young people.

While this pattern reflects the main pattern for the whole sample, differences were evident when the sample was segmented into regional movers, regional stayers and metropolitan stayers. Table 3a shows that individual and family factors explain more of the variability for regional movers than for either regional or metropolitan stayers. On the other hand, residential-area factors explain a larger proportion of the variance in post-school choices of metropolitan students than regional students.

Table 3a: Factors accounting for variation in post-school choices of young people

<table>
<thead>
<tr>
<th></th>
<th>Regional movers n=2719</th>
<th>Regional stayers n=892</th>
<th>Melbourne stayers n=2665</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual-family factors</td>
<td>78</td>
<td>73</td>
<td>78</td>
</tr>
<tr>
<td>School factors</td>
<td>18</td>
<td>22.5</td>
<td>14</td>
</tr>
<tr>
<td>Residential area factors</td>
<td>4</td>
<td>4.5</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: LSAY national sample analysed by Rowe et. al. 2014d, p. 11

Detailed analysis of factors was also undertaken (table 3b) Results showed that school performance, post-school aspirations and year 12 completion were aligned with attending university rather than undertaking vocational studies or entering the workforce. Government financial support for course fees was consistently aligned with university attendance across all categories of movers and stayers, highlighting the important role which this plays in allowing students to attend higher education. Interestingly, it was individual rather than family-based factors which appeared to be important. Aspirations of peers rather than parents was more closely linked to university attendance.
Table 3b: Detailed factors associated with students’ post-school choices

<table>
<thead>
<tr>
<th>Individual factors</th>
<th>Family-level factors</th>
<th>School-level factors</th>
<th>Residential area-level factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Mother’s education level</td>
<td>Teaching quality (students’ perceptions of)</td>
<td>Employment accessibility (No. jobs in SA4 of residence)</td>
</tr>
<tr>
<td>ATSI background</td>
<td>Father’s education level</td>
<td>Class size (in maths classes)</td>
<td>University accessibility (Av. distance from the SA4 of residence to university campuses within 100km)</td>
</tr>
<tr>
<td>Performance (PISA test score quartile)</td>
<td>Parental post-school aspiration</td>
<td>School sector</td>
<td></td>
</tr>
<tr>
<td>Year 12 completion</td>
<td>Number of siblings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational engagement (average hours per week spent on study)</td>
<td>Home educational resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student post-school aspiration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awareness of career opportunities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government course fee support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government living allowance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-school aspirations of friends</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Rowe et. al. 2014d, pp. 7-8
Chapter 4: Outcomes

4.1 Educational aspirations and outcomes

LSAY data allow analysis of educational aspiration and attainment (table 4a). The LSAY data provided samples of 82 regional movers, 136 regional stayers and 592 Melbourne stayers. The number of individuals moving from Melbourne to regional Victoria (15) proved too small for analysis.

Table 4a: Key measures of educational aspiration and attainment

<table>
<thead>
<tr>
<th>THEME</th>
<th>Age when measured</th>
<th>Indicator</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational aspiration</td>
<td>15</td>
<td>School aspiration</td>
<td>% expecting to finish year 12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post-school aspiration</td>
<td>% expecting to finish a VET or uni degree</td>
</tr>
<tr>
<td>Educational achievement</td>
<td>23</td>
<td>School achievement</td>
<td>% who completed year 12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post-school achievement</td>
<td>% who completed a VET or uni degree</td>
</tr>
</tbody>
</table>

Source: Rowe et. al. 2014e, p. 3. Educational aspirations

An increasing share of young Victorians aspire to complete Year 12 and to undertake university education in preference to a vocational qualification (figure 4.1). 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; NCVER 2014b), the increasing desire for school completion and university education among the three groups is also a reflection of the global trend for increased education. Possessing a university-level qualification has progressively become an entry-level, basic prerequisite in the transition into the labour market (Altbach et. al. 2009) and work experience is now a critical entry requirement for a full-time job in Australia (GCA 2014).

Figure 4.1: School and post-school aspirations at age 15 across three longitudinal cohorts

Source: Rowe et. al. 2014e using LSAY data
Figure 4.1 also highlights differences in educational aspirations between Melbourne stayers, regional stayers and regional movers. 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 among Melbourne stayers and regional movers. Instead, 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).

**Educational attainment**

Curtis (2008) has shown that non-metropolitan youth display 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, table 4b shows that, by the age of 23, regional stayers are more likely than Melbourne stayers and regional movers to have completed a VET qualification, but less likely to have undertaken a university education. This reflects the national pattern of lower participation rates in university education among regional youth, 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 geographical distribution of university opportunities as the key factor underpinning this pattern.

**Table 4b: Highest qualification at age 23 for movers and stayers**

<table>
<thead>
<tr>
<th>Highest qualification</th>
<th>Regional movers</th>
<th>Regional stayers</th>
<th>Melbourne stayers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Certificate</td>
<td>23</td>
<td>28</td>
<td>49</td>
</tr>
<tr>
<td>Diploma</td>
<td>7</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>27</td>
<td>33</td>
<td>35</td>
</tr>
<tr>
<td>Postgraduate degree</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>No qualification</td>
<td>25</td>
<td>30</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td>100</td>
<td>136</td>
</tr>
</tbody>
</table>

Source Rowe et. al. 2014c using LSAY data

**School completion**

Year 12 completion rates were around 95% for regional movers, regional stayers and metropolitan stayers in the 2003-13 LSAY cohort (figure 4.2). While rates had increased for each of the three categories, the greatest increase was seen among regional stayers. The 2003-2013 cohort of regional stayers showed a Year 12 completion rate of 94% compared to a rate of 73% in the 1995-2006 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; NCVER 2014a).
University qualifications
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 proportion of young people with post-school qualifications by the age of 23 has mirrored this national trend, increasing from 56 per cent for the 1995 cohort to 73 per cent for the 2003 cohort of young Victorians. This expansion in the rate of post-school educational participation has been primarily driven by a 12 per cent rise in the share of young people undertaking university education, rather than taking on vocational studies.

A consistently larger share of regional movers attained a university qualification compared to regional stayers. However, it is notable that the gap is closing. Melbourne and regional stayers show increasing proportions of people with university and VET qualifications over time, whereas regional movers show a decline in university qualifications across the time period. This drop was compensated by a significant increase in the proportion of regional movers completing a VET degree, rising from 19 per cent for the 1995 cohort to 33 per cent for the 2003 cohort.

Aspiration versus attainment
When compared to post-school aspirations, there appears to be a gap between the intention to complete a university degree and the attainment of one (figure 4.3). Regional movers are not the only group of students who failed to realise their university aspirations. Many metro and regional stayers also appeared to be unsuccessful in gaining a university degree by age 23. This finding is consistent across the three cohorts, indicating that generally young people have high educational aspirations before leaving school, but not all will 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.
The unfavourable economic conditions associated with the Global Financial Crisis (GFC) after 2007 may explain the increase in VET rather than university education among regional movers as peoples’ financial capacities may have been limited. 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. The reduction in employment opportunities for young people recorded during the GFC is likely to have made this transition increasingly difficult (ABS 2015).

4.2 Labour market outcomes

Measuring labour market outcomes

Migration literature suggests that migrants are normally expected to do better than those who stay behind in the home community (Greenwood 1997; Cushing & Poot 2004). Migrants are expected to enjoy higher levels of wellbeing, have higher income, access to better education and employment opportunities, reflecting the individual aspirations underlying the decision to migrate (UN 2009). However, it is less clear if migrants do better than people in the host community (Herzog & Schlottmann 1984; Newbold 2012). Migrants may struggle more as they endeavour to build a social network and to adapt to their new place of residence, but they may also be more motivated and determined to enhance their human capital and labour market outcomes (Herzog & Schlottmann 1984). To contribute to this debate, the LSAY data were investigated to explore differences in early labour market outcomes between students originating in regional Victoria compared to those from Melbourne.

Having full-time work with high pay, being highly satisfied and working in a high status occupation are considered as more successful labour market outcomes than being unemployed, working in a part-time or casual position, low paying job and unskilled occupation (McMillan & Marks 2003; Marks 2006; Karmel & Liu 2011). Hence five indicators have been used to measure labour market outcomes for individuals as shown in table 4c. These indicators are measured using data from the final year of the 2003 LSAY survey, when the median age of students is 23 years.
Table 4c: Key measures of labour market outcomes

<table>
<thead>
<tr>
<th>THEME</th>
<th>Age when measured</th>
<th>Indicator</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour market outcome</td>
<td>23</td>
<td>Employment</td>
<td>% with a full-time or part-time job</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unemployment</td>
<td>% seeking employment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not in the labour force</td>
<td>% not actively seeking work</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Job satisfaction</td>
<td>% satisfied with their opportunities for promotion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Earnings</td>
<td>median hourly wage (corrected for inflation)</td>
</tr>
</tbody>
</table>

Source: Rowe et. al. 2014e, p. 3.

Employment outcomes

Employment outcomes at age 23 are similar for Victorians, irrespective of whether they originated from regional or metropolitan locations (table 4d). While regional Victorians show a slightly higher rate of full time employment than their metropolitan counterparts, there is no difference in unemployment rates. By analysing the outcomes for stayers and movers, there was found to be a slight difference in unemployment rates (table 4e), but within a small range from 4 per cent (regional stayers) to 6 per cent (regional movers). For regional movers, the higher likelihood of being out of work seems to be explained by a large share of young people outside the labour force.

Table 4d: Employment outcomes at age 23 for regional and Melbourne students

<table>
<thead>
<tr>
<th>Number of students</th>
<th>Student Origin</th>
<th>Melbourne</th>
<th>Regional Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time employment (%)</td>
<td>Melbourne</td>
<td>629</td>
<td>218</td>
</tr>
<tr>
<td>Unemployment (%)</td>
<td>Regional Victoria</td>
<td>55</td>
<td>59</td>
</tr>
</tbody>
</table>

Source: Rowe et. al. 2014b using 2003 LSAY data

Table 4e: Employment outcomes at age 23 for movers and stayers

<table>
<thead>
<tr>
<th>Migration category</th>
<th>Regional movers</th>
<th>Regional stayers</th>
<th>Melbourne stayers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students</td>
<td>82</td>
<td>136</td>
<td>592</td>
</tr>
<tr>
<td>Full time employment (%)</td>
<td>58.5</td>
<td>59</td>
<td>55</td>
</tr>
<tr>
<td>Unemployment (%)</td>
<td>6</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Rowe et. al. 2014b using 2003 LSAY data

Occupational outcomes

Compared to Melbourne school leavers, young regional Victorians are more likely to be employed in technical occupations (figure 4.4). This accords with the higher rates of vocational training among regional students. Likewise, the fact that Melbourne school leavers are more likely to undertake university studies, and to complete a Bachelor degree by age 23 is reflected in their higher representation in managerial and professional occupations. Interestingly though, a higher proportion of Melbourne students were employed in clerical, sales and personal services occupations. In 2011, 55 per cent of Melbourne school leavers in these occupations were employed.
on a part-time basis, suggesting that such employment may be a stepping stone to further employment opportunities rather than an occupational destination.

Figure 4.4: Occupational outcomes at age 23 for regional and Melbourne students

Compared to regional movers, regional stayers are more likely to be employed in technical occupations (figure 4.5). This appears to be because regional stayers are more likely to undertake apprenticeship/traineeship programmes that lead to achievement of technical educational qualifications and hence to occupations of a similar nature.

Figure 4.5: Occupational outcomes at age 23 for movers and stayers

Source: Rowe et al. 2014b using 2003 LSAY data
Regional movers display a higher propensity to be employed in clerical/sales/personal services positions than regional stayers. While this could be interpreted as a stepping-stone to gain working experience after graduation, inspection of the data indicates that people working in these occupations tend to follow erratic educational and employment pathways. They tend to experience periods of employment, unemployment and varied passages through the educational system. For those moving from regional Victoria, this profile of employment in clerical/sales/personal services positions may well be associated with financial constraints, and the need to cover the costs associated with an educational qualification, rather than being a final outcome of the move to the city.

Taken together, these results suggest that school leavers who migrate from regional Victoria to Melbourne tend to do somewhat better than those who stay put. By relocating to Melbourne, young regional Victorians gain access to educational opportunities that are not locally available and thus are more likely to end up in university education than those who remain behind, but they are also more likely to intersperse this with periods of employment in low status clerical/sales/personal services occupations, possibly to pay for their studies because they are likely to be living outside the parental home.

Earnings and job satisfaction
LSAY analysis shows marginal differences in terms of salary and job satisfaction between those starting off in Melbourne and those from regional Victoria (table 4f). The same is true for movers and stayers, although stayers report slightly higher rates of pay than movers and job satisfaction is higher for regional stayers (table 4g). It is important to emphasise that these differences represent differences in labour market outcomes at the age of 23. Labour market outcomes at later ages are likely to differ as individuals accumulate working experience, undertake further educational qualifications and escalate to higher occupations with higher salaries.

Table 4f: Earnings and job satisfaction outcomes at age 23 for regional and Melbourne students

<table>
<thead>
<tr>
<th>Student Origin</th>
<th>Melbourne</th>
<th>Regional Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students</td>
<td>629</td>
<td>218</td>
</tr>
<tr>
<td>Median hourly pay ($)</td>
<td>22.5</td>
<td>22.5</td>
</tr>
<tr>
<td>Mean job satisfaction (/100)</td>
<td>76</td>
<td>77</td>
</tr>
</tbody>
</table>

Source: Rowe et. al. 2014b using 2003 LSAY data

Table 4g: Earnings and job satisfaction outcomes at age 23 for movers and stayers

<table>
<thead>
<tr>
<th>Migration category</th>
<th>Regional movers</th>
<th>Regional stayers</th>
<th>Melbourne stayers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students</td>
<td>82</td>
<td>136</td>
<td>692</td>
</tr>
<tr>
<td>Median hourly pay ($)</td>
<td>21</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>Mean job satisfaction (/100)</td>
<td>76</td>
<td>78</td>
<td>76</td>
</tr>
</tbody>
</table>

Source: Rowe et. al. 2014b using 2003 LSAY data
4.3 Changes over time and the influence of the GFC

Drawing on data from the 1995, 1998 and 2003 cohorts of the LSAY, changes in patterns over time can be assessed. This is of particular interest for the period covering the 2003-2011 period which includes the millennium drought and the global financial crisis. It may be assumed that young people moving through educational and occupational pathways may have been affected by such events compared to earlier LSAY cohorts. The three groups used in previous chapters, namely regional movers, regional stayers and metro stayers, has been used in the analysis of pathways, aspirations, transitions, choices, educational achievement and market outcomes of young Victorians.

The analysis draws on the 1995, 1998 and 2003 cohorts of LSAY. Table 4h 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 4h: Number of records in each LSAY cohort

<table>
<thead>
<tr>
<th></th>
<th>Number of records</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regional movers</td>
</tr>
<tr>
<td>LSAY95 cohort (1995-2006)</td>
<td>132</td>
</tr>
<tr>
<td>LSAY98 cohort (1998-2009)</td>
<td>109</td>
</tr>
<tr>
<td>LSAY03 cohort (2003-2013)</td>
<td>82</td>
</tr>
</tbody>
</table>


Labour market outcomes

In addition to influencing students’ aspirations, the changing nature of the Australian economy has presented challenges for young people in their transition to the labour market (NCVER 2014a). Since the GFC, those aged between 15 and 24 years old have experienced higher levels of unemployment and underemployment than any other age group (ABS 2015). Certain regional areas in Victoria (for example, Goulburn Valley, Wodonga and Wangaratta) report some of the highest unemployment rates in the country (Brotherhood of St Laurence 2014).

A report by The Smith Family (2014) identified four shifts in Australian employment patterns over the last twenty years that have affected the transition of young people into the labour market:

- 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.
- 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.
- 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, with
employers expressing their reluctance to recruit and train employees unless they can offer ongoing work (GCA 2014).

• 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 4.6 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. Regional stayers and regional movers were the most affected by these trends. For Melbourne stayers the decline in full-time employment was primarily compensated by a rise in part-time employment. The percentage of unemployed regional stayers increased from 6 per cent for the 1998 cohort to 10 per cent for the 2003 cohort, while the share of regional movers remaining outside the workforce rose from 3 per cent for the 1998 cohort to 7 per cent 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. As suggested previously, regional movers tend to experience greater difficulties than Melbourne stayers in their transition into the labour market.

Figure 4.6: Employment outcomes measured at age 23

Source: Rowe et al. 2014e, p 10 using LSAY data
Earnings

While the increase in unemployment rates presents a somewhat discouraging story for young Victorians in their transition into the labour market, an examination of wage outcomes offers a more optimistic outlook. Figure 4.7 shows the median hourly wage rate for young people at the age of 23. Using ABS data, these figures are corrected for inflation to capture real differences in wages across the three cohorts. Hourly wages for young Victorians have increased consistently across cohorts, with the 2003 cohort of students reporting the highest wage rates.

![Figure 4.7: Median hourly wage* at age 23](image)

* adjusted by Consumer Price Index (CPI) with base year 2011

Source: Rowe et. al. 2014e, p 11 using LSAY data

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 4 per cent and 8.5 per cent 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.

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, the proportion of young people who were satisfied or very satisfied with their opportunities for job promotion were analysed (figure 4.8). The share of young individuals satisfied with their opportunities for job promotion was largest for the 1998 cohort. For the 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 4.8: Job satisfaction* at age 23**

Proportion of sample (%)

* proportion satisfied with their opportunities for promotion

Source: Rowe et. al. 2014e, p 12 using LSAY data
Chapter 5: Retrospective migration analysis

5.1 The ‘data gap’ problem

The statistical analysis presented in previous chapters gives insights into early stages of human capital accumulation and migration. However, the findings also point to a key limitation of the data, namely the fact that it ends at the age of 23. While a third of those Australian regional students who moved to the city have returned to regional areas by this age, it is not clear whether such return migration continues for people through their twenties or thirties or whether it reflects a pattern of ‘early return or no return’. Qualitative research analysed by McKenzie (2010) suggested that for some young adults, the longer they stayed in the city the more likely they were to remain there.

To provide a different perspective, the final stage of the project involved a retrospective approach to human capital accumulation and migration. This involved a pilot survey of a regional workforce with a view to mapping migration histories. This retrospective approach proved to be a way in which the pathways of those who end up living in regional areas can be tracked over a longer period. The significance of capital cities in human capital development for a regional workforce can then be examined.

5.2 The Bendigo survey

Research Method

A sample of professional workers in a regional location was sought for this survey. As Latrobe University Bendigo was represented on the ARC Linkage Research team, the Bendigo Bank, Bendigo hospital (Bendigo Health) and the City of Greater Bendigo were identified as potential sources for such samples.

The survey aimed to collect information about the spatial histories of people currently working in a regional location to see whether there were typical patterns of migration for education and employment between regional and metropolitan locations. The web-based survey was conducted at Bendigo Bank over two weeks in February 2015 and concurrently at the hospital and council in November 2015. Key questions included:

- Did workers originate from the local area?
- Did they train in the local area or did they train elsewhere and return?
- What have been the motivations for various migration decisions?

General characteristics of the sample

A total of 734 respondents took part in the combined surveys: 440 from Bendigo Bank; 119 from Bendigo Health (Hospital) and 175 from the City of Greater Bendigo (Council). In all three samples, female respondents outnumbered male. The overall sample comprised 62 per cent females. The age profile of the three samples is shown in Figure 5.1. Compared to the wider working age population of Bendigo, the sample has fewer workers aged 55 plus and fewer younger than 25. The Bank sample has a younger in profile than that for the Hospital or Council.
5.3 Findings

Locational backgrounds of the respondents

When the survey sample is considered as a whole, around a third of respondents were born in Bendigo (32.5%), a third in other parts of regional Victoria (32%) and 19% in Melbourne. Other capital cities and interstate regional areas each accounted for less than 5 per cent of the sample while overseas born made up 8 per cent. All regional categories (Bendigo, regional Victoria and Interstate regional) amounted to 69 per cent of the combined sample.

Table 5a: Birthplace of respondents, Bank, Hospital and Council samples

<table>
<thead>
<tr>
<th>Where were you born?</th>
<th>BANK</th>
<th>HOSPITAL</th>
<th>COUNCIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bendigo</td>
<td>171 39</td>
<td>22 19</td>
<td>45 26</td>
</tr>
<tr>
<td>Melbourne</td>
<td>70 16</td>
<td>35 30</td>
<td>34 19</td>
</tr>
<tr>
<td>Capital City – Interstate</td>
<td>11 2</td>
<td>5 4</td>
<td>14 8</td>
</tr>
<tr>
<td>Regional Victoria (excl. Bendigo)</td>
<td>134 31</td>
<td>45 38</td>
<td>54 31</td>
</tr>
<tr>
<td>Regional – Interstate</td>
<td>21 5</td>
<td>4 3</td>
<td>10 6</td>
</tr>
<tr>
<td>Overseas</td>
<td>32 7</td>
<td>7 6</td>
<td>18 10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>439 100</td>
<td>118 100</td>
<td>175 100</td>
</tr>
</tbody>
</table>

Sources: Bendigo Bank, Hospital and Council Surveys 2015
When the three organisations are compared, there is a notable dominance of the Bendigo-born at the Bank with 39 per cent of respondents being in this category compared to 26 per cent at the Council and only 19 per cent at the hospital (table 5a). The Hospital shows a larger share originating from Melbourne (30%), however, it also has the highest proportion for those born in regional Victoria (38% compared to 31% at both the Bank and the Council).

Locational histories of respondents
The survey gathered information on migration histories, not just birthplace. The key stages of life for which locational information was asked included:

- up until the age of 15;
- period of secondary schooling; and,
- period of post-school education and training.

A summary of findings is shown in Figure 5.2. The chart shows the location of respondents at time of birth and at the three stages listed above. Bendigo becomes increasingly represented as the location for employees as they moved through primary, secondary and tertiary schooling while regional Victoria becomes less prominent with higher ages/qualifications. This aligns with our understanding of aggregate migration moves of young people from rural areas to larger regional centres to access educational opportunities. The pattern holds for each of the organisations although the Bank, as stated previously, starts with a higher base of Bendigo-born respondents and maintains a higher proportion of Bendigo location at each of the subsequent life stages. While overseas is a birthplace of some, there appears to be relatively little influence of overseas experience or training in any of the three organisations.

Although Melbourne becomes more important as a location during the attainment of higher qualifications, it is not of greater prominence than Bendigo for any of the organisations. This
suggests that the local education and training sectors are playing an important role in delivering services to local businesses.

Where respondents answered all of the 4 locational questions, longitudinal locational patterns were able to be analysed. Sixty-five combinations were identified from a simplified location categorisation: Bendigo (B); other regional (R); metropolitan (M) and overseas (O). For example, a pattern of 'MRBB' would indicate a respondent who had been born in Melbourne, spent their childhood mostly in a regional location but secondary school and gaining post-school qualifications in Bendigo. A pattern of MMMM would be someone who had spent all of these points of time in Melbourne and was now in Bendigo as part of the organisation being surveyed. The most common migration history patterns are shown in figure 5.3. These nine patterns represent 71 per cent of the total sample of 639 useable responses.

![Figure 5.3: Simplified migration histories, Bank, Hospital and Council samples](image)

The dominance of the 'Bendigo only' pattern can be seen with 144 of the 639 usable responses being in this category. The Bank showed the highest proportion with this pattern (29.4%). A number of categories accounted for 10-14% of respondents in the three organisations. RRRB was relatively common in all organisations and accounted for 10.6% of the combined sample. This suggests that Bendigo is drawing from rural areas and other regional centres, mostly within Victoria. The appearance of MMMM (10% of total sample) and RRRR (8.3% of total sample) is of interest because, like the BBBB pattern, it suggests that non-migration is a common pattern. The anchors of family and friends is likely to be a reason for this population ‘inertia’.
Evidence of returnee migration can be seen in regional-metro-regional type patterns, for example the patterns of BBBM and RRRM. The latter pattern shows a return to the regional centre of Bendigo rather than a return to regional area of origin, a pattern noted earlier from previous qualitative research. There is an important caveat to the data on these returnees. The survey questions asked respondents to state where they had attained their highest level of qualification.

The 24 respondents showing the BBBM pattern had attained their highest qualification in Melbourne, however cross tabulation of their response with an earlier question ‘After the age of 15, have you lived outside the City of Greater Bendigo?’ reveals 8 respondents who had not lived outside Bendigo after age 15 but had a post-school qualification from Melbourne, presumably through distance education or commuting.

**Workplace role and locational background**

Melbourne, like other metropolitan centres, provides an array of educational and employment opportunities, especially for specialist and professional training and senior management roles. For this reason it might be expected that regional centres would need to source highly skilled staff from larger cities. However, the survey data do not support this assumption.

In the combined sample, 44 per cent of those with management roles had gained their highest qualification in Bendigo. A further 19 per cent had gained their highest qualifications while in other regional locations and 35 per cent while in Melbourne or other capital cities. Thus, 63 per cent of those in management roles had gained their highest qualification while living in a non-metropolitan location.

There is some variation between the three workforce samples with the Bank having a higher proportion of managers who had trained in Bendigo (50%) and other regional areas (19%) compared to the other two organisations (figure 5.2). The council sample had the highest proportion of managers who had been in metropolitan locations while gaining qualifications (52%) while the hospital had a relatively even representation between Bendigo (42%) and metropolitan (38%). The assumption that more senior roles require higher levels of education and experience may hold, but the degree to which these skills need to be acquired and utilised only in metropolitan areas is challenged by the findings.

Figure 5.4: Location while obtaining highest educational qualification for those holding a management role, Bank, Hospital and Council samples.
Reasons for moving to Bendigo

The respondents who had moved to Bendigo at some point in their lives were asked about their reasons for making the move – up to 3 reasons could be selected from a list of 8 options. A number of these options related to family and employment and have therefore been combined in table 5b below. The table reveals the dominance of family and employment reasons which account for 39 and 31 per cent of responses respectively in the combined sample. There is a large gap to education and training (12%) and amenity reasons (10%). Housing choice and affordability forms only 5 per cent of all responses.

Table 5b: Reasons for moving to Bendigo – Bank, Hospital, Council and combined samples

<table>
<thead>
<tr>
<th>Reason for moving</th>
<th>BANK</th>
<th></th>
<th>HOSPITAL</th>
<th></th>
<th>COUNCIL</th>
<th></th>
<th>TOTAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Family related*</td>
<td>103</td>
<td>44</td>
<td>42</td>
<td>34</td>
<td>60</td>
<td>35</td>
<td>205</td>
<td>39</td>
</tr>
<tr>
<td>Employment related**</td>
<td>74</td>
<td>32</td>
<td>37</td>
<td>30</td>
<td>52</td>
<td>30</td>
<td>163</td>
<td>31</td>
</tr>
<tr>
<td>Education / training</td>
<td>37</td>
<td>16</td>
<td>10</td>
<td>8</td>
<td>14</td>
<td>8</td>
<td>61</td>
<td>12</td>
</tr>
<tr>
<td>Amenity / lifestyle reasons</td>
<td>9</td>
<td>4</td>
<td>20</td>
<td>16</td>
<td>22</td>
<td>13</td>
<td>51</td>
<td>10</td>
</tr>
<tr>
<td>Housing choice / affordability</td>
<td>1</td>
<td>&lt;1</td>
<td>10</td>
<td>8</td>
<td>15</td>
<td>9</td>
<td>26</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>8</td>
<td>5</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>233</td>
<td>100</td>
<td>123</td>
<td>100</td>
<td>171</td>
<td>100</td>
<td>527</td>
<td>100</td>
</tr>
</tbody>
</table>

* includes: Family reasons: Follow spouse or partner, Return to region of birth
** includes: Join current organisation, Employment (other than current).

Sources: Bendigo Bank, Hospital and Council Surveys 2015

Amenity was a much more important factor for those at the Hospital and Council compared to the Bank sample while education and training was of greater importance to those in the Bank sample. Housing choice and affordability accounted for less than 10% of responses in each location although it was noticeably higher for the Hospital and Council sample than for the Bank.

An examination of responses based on the location prior to moving to Bendigo reveals the degree to which metropolitan and regional in-movers reported different reasons for moving. Figure 5.5 presents these data with the Metropolitan category comprising Melbourne and other capital cities and the Regional category including both regional Victoria and other regional Australia. Respondents who moved from overseas have been excluded due to small numbers.
Figure 5.5: Reasons for moving to Bendigo by prior location, combined sample.

Sources: Bendigo Bank, Hospital and Council Surveys 2015

Family is a major reason for moving, irrespective of whether respondents came from regional or metropolitan backgrounds. Moving for the specific job was more significant for those moving from metropolitan areas, than regional areas. Many of those moving from regional areas had come to Bendigo seeking broader employment opportunities rather than their current job specifically. This makes sense in terms of a regional centre like Bendigo offering a range of employment opportunities to people from smaller regional centres or rural areas. It also highlights the importance of specific job opportunities for metropolitan migrants. Those moving from metropolitan areas were also more likely to select ‘return to region of birth’, ‘amenity/lifestyle’ or ‘housing choice and affordability’ as reasons for moving than those from regional backgrounds.

Reported advantages of living in Bendigo

The survey offered open-ended questions about the advantages and disadvantages of living in Bendigo. Up to three items could be recorded and these were then grouped into broad categories for ease of analysis. Table 5c shows results for the combined sample in terms of reported advantages.

The broad descriptor ‘lifestyle’ ranked highly in the frequency of responses (14%). This category included elements such as: work-life balance; less stress; slower pace; city lifestyle in a regional setting. Related to some of these themes was the second ranked-category, city-size, which accounted for 11% of responses. This included comments about the balance between being large enough to have city services, but small enough to avoid the negative aspects of large cities such as congestion, pollution and crime. Melbourne was often mentioned as having such problems. In contrast, Bendigo was regarded as “big enough to have its own identity but small enough to be welcoming” (survey respondent). General accessibility, proximity to work and ease of travel was a commonly reported advantage of Bendigo.

Affordability (in terms of both housing costs and general cost of living) and the accessibility and quality of services also ranked highly in respondents’ lists of advantages. There was general
consistency of responses across the three organisations with most categories showing little variation.

Table 5c: Advantages of living in Bendigo, as reported by respondents

<table>
<thead>
<tr>
<th>Theme</th>
<th>Examples</th>
<th>No. of responses</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifestyle</td>
<td>Relaxed atmosphere; slower lifestyle.</td>
<td>229</td>
<td>14.1</td>
</tr>
<tr>
<td>Less congestion/Good size</td>
<td>Size of city makes it easy to commute; lack of traffic congestion compared to capital cities.</td>
<td>174</td>
<td>10.7</td>
</tr>
<tr>
<td>Quality services/facilities</td>
<td>High quality facilities - health care, education; sporting venues; arts; shops.</td>
<td>153</td>
<td>9.5</td>
</tr>
<tr>
<td>Accessibility/Ease of travel</td>
<td>Short drive to almost anything; ease of getting around; short distance between home and work.</td>
<td>151</td>
<td>9.3</td>
</tr>
<tr>
<td>Affordability</td>
<td>Cheaper housing costs; affordable acreage; cheaper cost of living.</td>
<td>139</td>
<td>8.6</td>
</tr>
<tr>
<td>Close to family/friends</td>
<td>Family here; close to my family/extended family.</td>
<td>126</td>
<td>7.8</td>
</tr>
<tr>
<td>Access to Melbourne</td>
<td>Accessible to Melbourne.</td>
<td>116</td>
<td>7.2</td>
</tr>
<tr>
<td>Friendly community</td>
<td>Community focus; community spirit.</td>
<td>103</td>
<td>6.4</td>
</tr>
<tr>
<td>Employment</td>
<td>Big enough city to provide good employment opportunities; Bank provides career opportunities.</td>
<td>95</td>
<td>5.9</td>
</tr>
<tr>
<td>Access to services/activities</td>
<td>Access to medical, sporting, education facilities.</td>
<td>85</td>
<td>5.3</td>
</tr>
<tr>
<td>Location (not further defined)</td>
<td>Central location in Victoria; central to Melbourne or the Murray River; central to most things.</td>
<td>69</td>
<td>4.3</td>
</tr>
<tr>
<td>Natural amenity</td>
<td>Pleasant place to live; bush; climate; landscape</td>
<td>63</td>
<td>3.9</td>
</tr>
<tr>
<td>Good place to raise family</td>
<td>Comfortable safe place to live and raise a family.</td>
<td>60</td>
<td>3.7</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>35</td>
<td>2.2</td>
</tr>
<tr>
<td>Built form</td>
<td>Heritage buildings; parks and gardens.</td>
<td>21</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>1,619</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

* Up to 3 responses were allowed hence the number of responses is higher than the number of participants.

Sources: Bendigo Bank, Hospital and Council Surveys 2015

**Differences between migration drivers and local advantages**

It is interesting to note that the most important drivers of migration and the most often reported advantages of living in Bendigo were not the same. Whereas key drivers were found to be family and employment, these appear less often in the list of advantages, highlighting the differences between why people move and why people like a particular location. For example, housing choice and affordability appears to have relatively little significance as a *driver* of migration, but was listed by many as an advantage of living in Bendigo. This highlights an important point for regional policy makers – just because a place has a key advantage (like affordable housing), it may not act as a driver to attract in-migration. In fact, affordable house prices are a very poor indicator of migration potential as some of the most expensive cities still attract in-migration.
**Reported disadvantages of living in Bendigo**

The most commonly listed disadvantage of living in Bendigo was ‘infrastructure’ (18%). This was particularly the case among Bank employees, 23% of whose responses included issues in this category, compared to only 10% in the Council sample. The main infrastructure issues were related to parking and public transport. The category of jobs/income was mentioned in 16% of the responses and included issues such as limited career pathways outside the current organisation, and discrepancies between regional and metropolitan incomes.

Environmental factors were mentioned in 136 (11%) of all responses. The vast majority of these related to water in some way, for example, the dryness and heat of the climate, the lack of recreational water, and water supply issues. Fifty-five responses in this category referred specifically to the lack of a beach, an issue that would appear not to be amenable to policy intervention. Likewise, the reality of hotness (20 responses) and dryness (10 responses) of the climate is unlikely to change in the near future, at least not in terms of becoming cooler or wetter.

There is a greater level of variation regarding disadvantages between organisations compared to advantages. Issues relating to local ‘culture’ appeared more often in the Hospital and Council samples. This may reflect the timing of those surveys (November 2015) compared to the Bank (June 2015). A greater number of comments relating to multiculturalism in Bendigo (the ‘lack of’, or in a few cases, ‘problems with’) along with comments about intolerance and community conflict is likely to reflect the high level of media profile given to protests over a proposed mosque development in the latter part of 2015. The mosque issue itself was not mentioned, but comments such as: ‘negative discriminatory attitudes’ and ‘recent political climate means there is a lot of unrest’ is suggestive of the public controversy over this issue.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Examples</th>
<th>No of responses</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>Lack of car parking; public transport.</td>
<td>212</td>
<td>17.7</td>
</tr>
<tr>
<td>Jobs/Income</td>
<td>Can be difficult to find work; limited employment opportunities for young adults; lower salaries; lack of senior professional roles.</td>
<td>194</td>
<td>16.2</td>
</tr>
<tr>
<td>Environment</td>
<td>No beach; no river/lake; too hot/dry.</td>
<td>136</td>
<td>11.3</td>
</tr>
<tr>
<td>Services</td>
<td>Limited choice of schools; lack of medical specialists; childcare expensive and hard to find.</td>
<td>121</td>
<td>10.1</td>
</tr>
<tr>
<td>Location/Distance</td>
<td>Distance to Melbourne.</td>
<td>120</td>
<td>10.0</td>
</tr>
<tr>
<td>Culture</td>
<td>Old boys clubs; small town mentality; anti multicultural attitude.</td>
<td>101</td>
<td>8.4</td>
</tr>
<tr>
<td>Lack of activity</td>
<td>Lack of shopping; don’t get big events; boredom.</td>
<td>98</td>
<td>8.2</td>
</tr>
<tr>
<td>Council</td>
<td>Hard to obtaining approvals; rates too high; lack of funding for sport.</td>
<td>62</td>
<td>5.2</td>
</tr>
<tr>
<td>Social issues</td>
<td>Growing drug culture; crime.</td>
<td>43</td>
<td>3.6</td>
</tr>
<tr>
<td>Cost of living</td>
<td>Cost of living too high / rising.</td>
<td>36</td>
<td>3.0</td>
</tr>
<tr>
<td>Congestion</td>
<td>Traffic.</td>
<td>32</td>
<td>2.7</td>
</tr>
<tr>
<td>None</td>
<td>No disadvantages</td>
<td>27</td>
<td>2.2</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>18</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**TOTAL**\* 1,200 100.0

\* Up to 3 responses were allowed hence the number of responses is higher than the number of participants.

Sources: Bendigo Bank, Hospital and Council Surveys 2015
Future migration intentions

Most respondents (85%) had no intention to move away from Bendigo in the near future. The hospital had the highest proportion intending to leave within two years (20%) and Council had the lowest proportion (10%) (figure 5.6).

Figure 5.6: Intention to leave Bendigo in next two years, respondents as a proportion of total Bank, Hospital and Council samples

<table>
<thead>
<tr>
<th></th>
<th>Intending to leave</th>
<th>Not intending to leave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank</td>
<td>14</td>
<td>86</td>
</tr>
<tr>
<td>Hospital</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>Council</td>
<td>10</td>
<td>90</td>
</tr>
</tbody>
</table>

Sources: Bendigo Bank, Hospital and Council Surveys 2015

For those indicating an intention to leave, Melbourne was the most popular destination (33%) followed by regional Victoria (26%). Interstate locations accounted for 9 per cent (capital city) and 7 per cent (regional) while overseas accounted for 9% of respondents’ intended destinations. Seventeen per cent remained unsure about their potential destination.

When age is factored in to the analysis the results show that those in younger age groups appear more likely to move from Bendigo in the near future (figure 5.7). Given that people in their early adult years are, on average, the most mobile age group in the population, this result is not surprising.

Figure 5.7: Intention to leave Bendigo in next two years by age group, combined sample

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Intending to leave</th>
<th>Not intending to leave</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>29</td>
<td>71</td>
</tr>
<tr>
<td>25-34</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>35-44</td>
<td>11</td>
<td>89</td>
</tr>
<tr>
<td>45-54</td>
<td>11</td>
<td>89</td>
</tr>
<tr>
<td>56+</td>
<td>9</td>
<td>91</td>
</tr>
</tbody>
</table>

Sources: Bendigo Bank, Hospital and Council Surveys 2015
Chapter 6: Policy implications

Young adults gain skills and experience through school and post-school education and through entry into the workforce. The locational choices made by people as they accumulate human capital can ultimately favour different locations. With a long standing pattern of net loss of young adults from regional areas, the concern held by many policy makers is that areas of net loss of young people (such as regional Victoria) may lead to a net loss of the human capital needed to maintain and expand regional economies.

The research findings presented in this report confirmed some parts of this story. The net loss of young adults does continue from regional Victoria although this appears to be at slightly older ages than in the past, possibly because young people in regional areas need to spend time in the workforce to afford the costs of moving away from home for education.

By the age of 23, around a third of those who had left regional areas for education return to a regional location. This presents a positive story for regions in terms of human capital accumulation as skills learnt and developed in Melbourne can be transferred to regional areas. There is also likely to be additional return migration after the age of 23 although existing longitudinal data does not provide comprehensive evidence of these pathway patterns.

In terms of human capital accumulation, another piece of positive evidence for regional areas comes from the Bendigo Bank survey results. Findings indicate that the development of professional skills can occur effectively within regions rather than being dependent on individuals moving (temporarily or permanently) to a metropolitan area for higher education. The high proportion of senior bank employees who had come from regional backgrounds showed that, even for globally-connected professions like financial services, a metropolitan education is not essential. It should be noted that, in the case of Bendigo Bank, the organisation itself played an important role in the human capital development of their staff. Scholarships, internships and partnerships with local education providers forms an important part of the company’s culture. This benefits the bank, in terms of overcoming skills shortages, but it also benefits employees through sponsorship of their education locally and local service providers through the purchase of education and training services within the regional city.

The Bendigo survey also highlighted the role of family factors in peoples’ migration decisions. Among the various components of this category are people moving to be closer to parents or other relatives and those who are returning to the region of their birth after leaving Bendigo at an earlier age. The significance of this for regional policy makers is that having a connection with a place (through family for example) makes moving there more likely. Given that social networks usually act as an anchor on migration, it is likely to be much more difficult for people who have lived their lives in a major city to consider living in a regional location. For policy makers interested in attracting people to a regional location, targeting people who grew up in such areas may be a more effective promotional strategy.
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