Chapter 2

Multiple barriers to employment: The facets of joblessness in Australia

Australia has a substantial group of out-of-work individuals that could benefit from targeted labour market activation policy interventions. These persistently unemployed or inactive individuals, as well as workers with very low work intensity, are potentially constrained from (fully) participating in the labour market by one or multiple employment barriers. Many of the individuals with no, or weak, labour-market attachment have low levels of employability because of lack of work experience or because of existing care responsibilities or health limitations, while others might lack motivation because of high levels of non-labour income or replacement benefits. Understanding the combination of employment barriers that individuals are facing is crucial for targeting and tailoring successful activation policies. This chapter identifies policy-relevant groups (or "clusters") of individuals with similar combinations of different types of employment barriers.

Introduction

The literature on activation and social policies commonly emphasises targeting and tailoring of policy interventions to individual circumstances as crucial factors for policy success. Yet, relatively little is known about what these individual circumstances look like or how they may translate into employment barriers that policies aim to address. Policy discussions often refer to broader labour market groups, such as young people, mature age workers or lone parents. An implicit assumption is that these groups are useful for describing different sets of employment barriers that may inform policy design and implementation. This may or may not be true; for instance being young is, in and of itself, not an employment barrier. As a result, policy interventions targeted on the basis of characteristics such as age, benefit receipt or family situation alone may be ill-adapted to the needs of jobless individuals and those with precarious employment patterns. Chapter 1 shows that in Australia, albeit its generally well-performing labour market, some groups have no or only a weak labour market attachment. An in-depth inventory of people's employment barriers can contribute to a better match between individual needs and available support, and make associated policy interventions more effective and less costly.

Countries across the OECD frequently seek to account for individual circumstances and labour market difficulties by means of powerful statistical tools that "profile" individual benefit claimants using administrative data. In this respect, Australia is one of the most advanced countries in the OECD and its profiling tool – the Job Seeker Classification Instrument – is a fundamental element of its contracted out employment services (see Box 3.2). However, profiling tools are usually applied to the population registered with employment services and, hence, cover only a subset of the out-of-work population. As a result, profiling tools cannot be used to provide a broader perspective on the employment barriers facing the entire population. This chapter adopts a "birds-eye" approach by considering the employment barriers of all those Australians with no or weak labour market attachment (i.e. the target population). After defining the target population and describing its size and composition, the chapter zooms in on the possible employment barriers facing the target population. Using cluster analysis techniques, common combinations of barriers among the target population are identified, and profiles for the different groups are developed. These profiles provide insights into the specific circumstances of individuals with no or weak labour market attachment, and allow for the development of better-targeted policy interventions.

The Australian population with labour market difficulties

Individuals with labour market difficulties frequently move between non-employment and different states of "precarious" employment. As a result, limiting attention to "snapshots" of non-employed (or underemployed) individuals at a specific point in time, such as those based on labour force surveys, may not capture the true size of the population with labour market difficulties or the need for policy intervention. To provide a more comprehensive view on labour market challenges, the *target population* considered in this chapter therefore includes working-age individuals with potential labour market difficulties because they are *persistently out of work* (either unemployed or inactive for more than 12 consecutive months) as well as individuals whose labour market attachment is *weak*. The latter can include individuals with *unstable jobs* working only sporadically, those on *restricted working hours*, and those with *very low earnings* (e.g., due to working informally or in very low productivity self-employment). Box 2.1 defines the sub-groups of the target population and explains how they are identified using the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The target population is a sub-set of the *reference population*, i.e. all working-age adults excluding full-time students.

Box 2.1. **Population groups experiencing potential labour market difficulties (*target population for the analysis*)**

Using data from the HILDA survey, the target population is defined as the subset of the reference population that is either persistently out-of-work or weakly attached to the labour market.

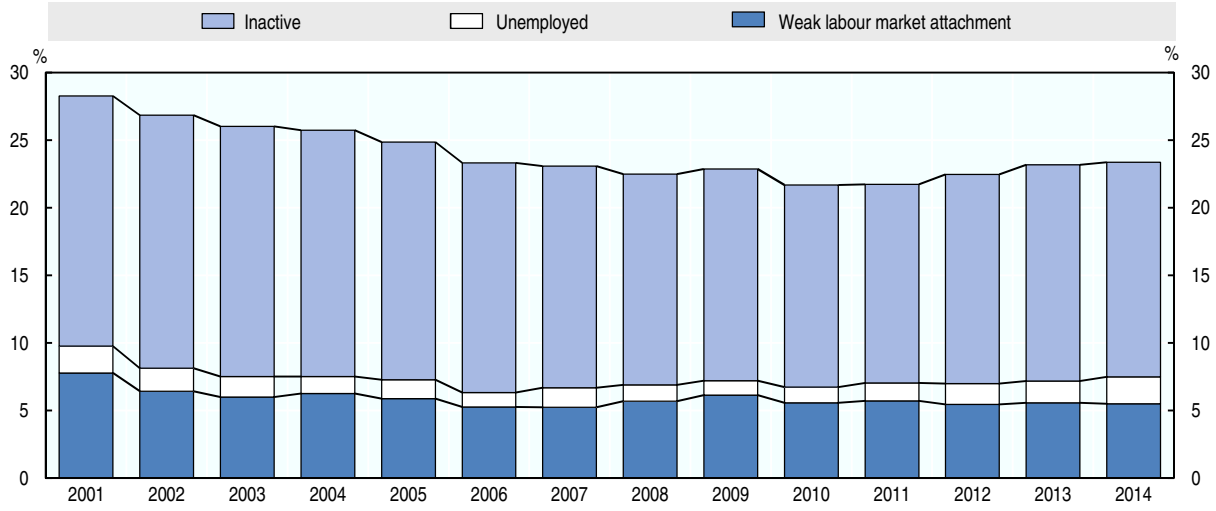
- **Persistently out-of-work** (*long-term unemployed* or *inactive*). Individuals reporting no employment activity throughout the *reference period*. The reference period corresponds to 12 consecutive monthly observations in the *financial year* plus one additional observation at the *moment of the interview*.
- **Weak labour market attachment**. Individuals reporting employment activity during the *reference period* who are observed in any of the following situations:
  - **Unstable jobs**: individuals working only a limited number of months throughout the reference period. This is defined as having worked less than 25% of the potential full-time working time throughout the financial year (i.e. no more than three full-time-equivalent months).
  - **Restricted hours**: workers who spent most or all of the reference period working *ten hours or less* a week.[a] Individuals working ten hours or less due to participating in education or training or who give the establishment of a business as reason for working part-time, are excluded as they are unlikely to have unused work capacity.
  - **Near-zero earnings**: individuals reporting some work activity during the financial year but zero or *near-zero* earnings (first percentile of all non-zero monthly earnings). The employment situation of individuals included in this group could signal labour market difficulties such as underpayment or informal activities.

a) Because of limited information on hours worked during the financial year, restricted hours is defined as working ten hours or less at the moment of the interview and working part-time during at least six months of the financial year.

Figure 2.1 shows the evolution of the target population in Australia between HILDA survey years 2001 and 2014 (referring to financial years 2000/01 to 2013/14). Individuals who are persistently out of work due to unemployment or inactivity account for over three-quarters of the target population. The size of the target population decreased from 28.3% in 2001 to 22.5% in 2008. The Global Financial Crisis (GFC) resulted in a small increase in the target population in 2009, but it declined again in 2010 and 2011. Following the commodity price crisis it increased again and stood at 23.4% in 2014. The decline in the target population was driven by a combination of falling inactivity and unemployment as well as a reduction in the number of weakly-attached labour market participants. The more recent increase in the share of the target population can be fully attributed to a rise in the share of the persistently out-of-work group. This is consistent with the decline in the employment rate and the increase in the unemployment rate following the GFC and the commodity price crisis (see Chapter 1).

Figure 2.1. **Population groups with potential labour market difficulties in Australia**

As a percent of the reference population (18-64 years old), 2001-14



Note: Because of the top-up sample entering the data in 2012, a small break might be observed between 2011 and 2012.

Source: Author's calculations based on HILDA. See Box 2.1 for the definitions of the three groups.

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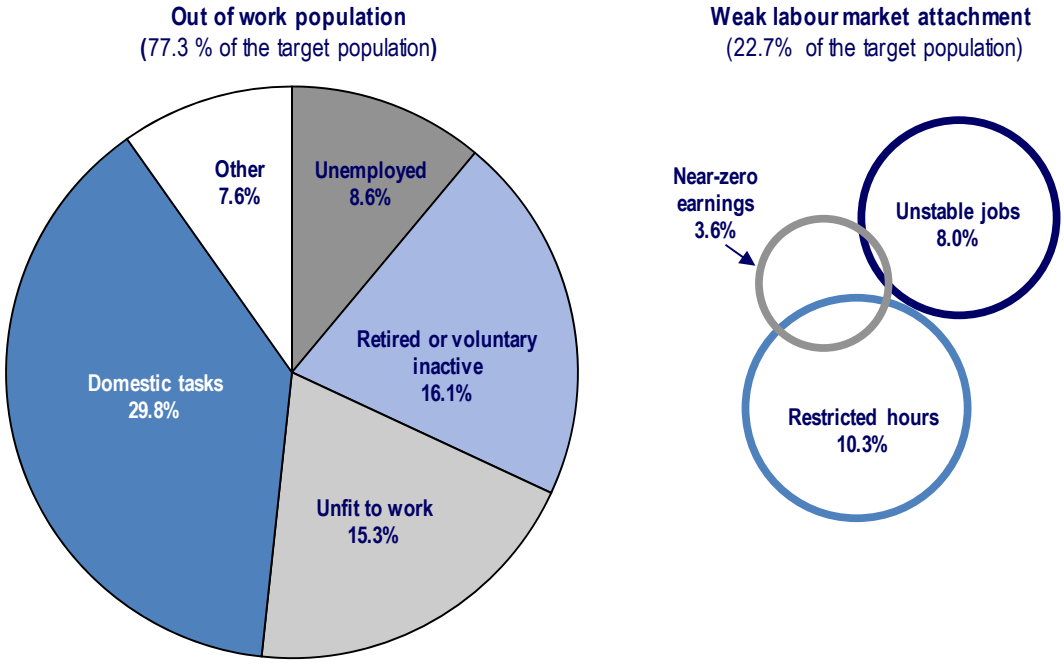
The majority of individuals with "weak labour market attachment" worked part-time throughout the year (11% of the target population), while the rest spent part of the year out of employment (unstable jobs, 9%) or reported working throughout the year but with very little earnings (4.5%). Weak labour market attachment is closely linked to casual employment, with 68% of weakly-attached employees having a casual job (at the moment of the interview). Overall, 13% of all casual workers in the reference population are identified as being part of the target population.

Figure 2.2 provides a more detailed breakdown of the reference population with potential labour market difficulties in 2014. While around 23% had weak labour market attachment, the vast majority was out of work (77%). The most common status among the out-of-work population was inactivity because of domestic tasks (30% of the target population), followed by 16% who reported that they were retired and another 15% who reported that they were unfit to work. Only 8.6% of the target population was unemployed.

Figure 2.2. **Composition of the Australian population with no or weak labour market attachment**

As a percent of the target population, 2014



Source: Calculations based on HILDA 2014. See Box 2.1 for the definitions of the groups.

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Employment barriers in Australia

Working age individuals with no or weak labour-market attachment may face a number of employment barriers that prevent them from fully engaging in employment activities. In order to make labour markets more inclusive and resilient, a thorough understanding of these barriers is a pre-requisite for designing and implementing policy interventions in a way that is well-targeted and suitably adapted to the circumstances of different policy clients. Following the framework presented in OECD (2015),[1] the analysis presented here examines three types of employment barriers (Figure 2.3):

- Lack of *motivation*: Benefits may reduce the financial incentive to look for a job, e.g. because of low potential pay, relatively generous out-of-work benefits (and potentially missing mutual obligations), or access to high levels of income independent of their own work effort.
- *Employability* barriers: Even motivated jobseekers may struggle to find work due to a lack of skills, limited work experience, care responsibilities and health-related limitations.
- Scarce job *opportunities*: Bringing more people into employment requires addressing demand-side barriers like a shortage of vacancies in the relevant labour market segment, frictions in the labour market due to information asymmetries, or discrimination in the workplace.

Figure 2.3. **Employment barriers: Conceptual framework**

Source: OECD (2015), "Activation Policies for More Inclusive Labour Markets", *OECD Employment Outlook 2015*, OECD Publishing, Paris, http://dx.doi.org/10.1787/empl_outlook-2015-7-en.

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Once these different employment barriers – motivation, employability and opportunities – have been identified for the target population, they can be addressed through appropriate social, health and labour market policies and implemented and managed by effective and efficient institutions.

For individuals with potential labour market difficulties the three barriers often closely interact with one another. For example, if there are more job opportunities, it is easier to motivate people to look for jobs or to work on their skills; when jobseekers are motivated, employers will be keener to inform employment services about upcoming vacancies. Thus, motivation promotes opportunities and vice-versa. Identifying these interactions is important for the design of effective and efficient policy interventions, which may often address two or three of the barriers, albeit with varying weights. For example, a direct job creation programme can affect motivation through a "threat" effect, increasing job-finding rates before participation in it has started; it can enhance employability, providing work experience to disadvantaged groups that had limited previous contact with a work environment; and it can offer opportunities, as participants have direct contact with potential employers, and can cite skills acquired on the job when they next apply for a job. Similarly, employment service referrals of jobseekers to vacancies act partly as a motivating factor, intensifying independent job search aimed at finding a job, and partly as an opportunity.

The employment barriers outlined above cannot all be measured directly. To operationalise the concepts, this chapter develops a set of indicators under each of the three categories. Weak motivation is approximated by two indicators for financial work disincentives. The first measures is the income available independently of own work effort, and the second measure is the income gain from own work effort. Employability barriers are conceptualised using measures related to health limitations, care responsibilities, skill levels and lack of experience. Opportunities are measured through the probability of facing a demand-side constraint. Box 2.2 provides more details on the construction of these proxies.

Box 2.2. **Measuring employment barriers: Proxies for employability, motivation and opportunities**

Using data from the Australian HILDA survey, a set of employment barriers can be defined along the OECD (2015) framework of employability, motivation and opportunities.

Employability

- Skills: Individuals are considered as having a skills-related employment barrier if they have a lower-secondary degree or less (Grade 11 or below) *or* low professional skills.[a] Individuals who demonstrate high skills by having a tertiary degree are assumed not to face this employment barrier even if their most recent job was low-skilled.
- Work experience: Individuals are facing a work experience barrier when they have low total work experience. Low levels of work experience are defined as having spent less than 60% of the potential time in paid work. Potential experience is defined as the total time an individual could have spent in employment, based on the individual's age and taking into account time spent in education. A distinction can be made between people without any work experience and people with "low" work experience.
- Health limitations: Individuals are considered to be facing a health barrier when they report having long-term health limitations, which limit the amount of work they can do, or if they report impairing mental health conditions.[b, c]
- Care responsibilities: Individuals are assumed to have care responsibilities when they have a (minor or adult) family member who requires care and are either *the only* potential care giver in the household, or the only person in the household who is economically inactive or working part-time *because of care responsibilities.*[d]

Motivation

- Non-labour income: Individuals are assumed to face disincentives from working because of high income from other sources than income from labour when their total household income minus the income that depends on the individual's own employment (earnings, earnings-replacement benefits) is higher than 1.55 times the median value in the reference population.
- Earnings-replacement benefits: Individuals are considered having low incentives to work when their earnings-replacement benefits represent at least 50% of their estimated potential earnings in work.

Opportunities

- Demand-side constraints: Individuals are facing a lack of opportunities when their standardised probability of being long-term unemployed (i.e. available for work and actively looking for a job) is larger than one. The probability of long-term unemployment is calculated based on the individual's age, educational attainment, region of residence, gender and migrant status.

For more details, see Fernandez et al. (2016) and Immervoll et al. (2017).

a) Low professional skills refers to individuals who are currently employed as "Cleaners and Laundry Workers", "Construction and Mining Labourers", "Farm, Forestry and Garden Workers", "Food Preparation Assistants" or "Other Labourers", and the unemployed or inactive individuals whose last job was in one of these occupations.

b) Individuals are assumed to have a health limitation when they report having a long-term physical or mental health condition that restricts the amount of work that they can do, and when the degree of this restriction is at least equal to 5 on a scale from 0 to 10.

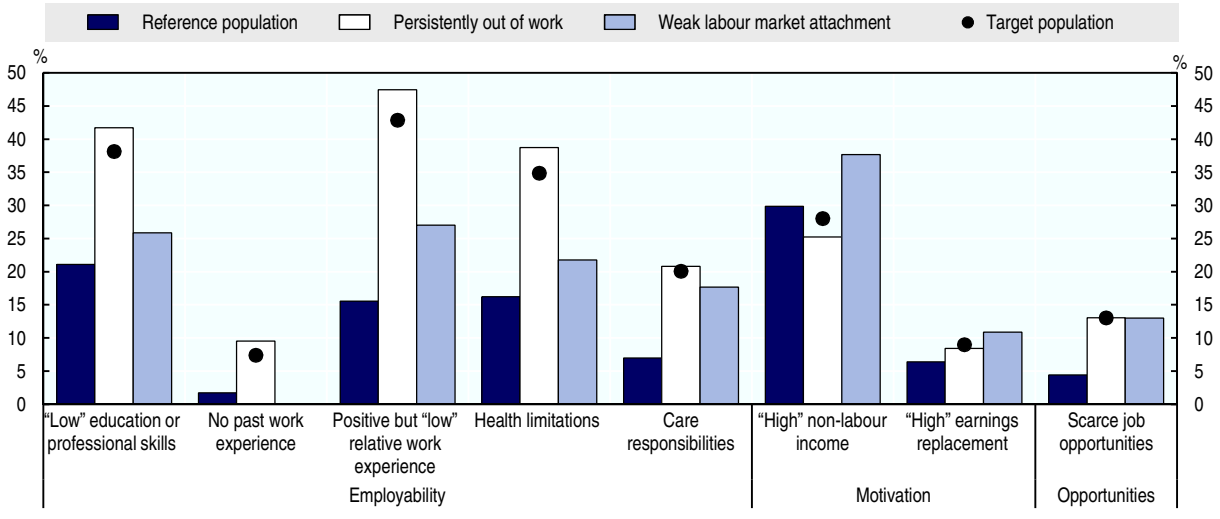
c) Mental health is measured using the SF-36 Health Survey, an internationally recognised tool for assessing functional health status and well-being. It consists of 36 items measuring eight distinct health concepts. The mental health index ranges from 0 (poor) to 10 (good). Impairing mental health conditions are defined as having a score below or equal to 4.8.

d) Family members assumed to require care are children under the age of 12 receiving less than 30 hours of non-parental childcare a week and adults reporting severe limitations in daily activities due to their health and being economically inactive throughout the reference period (and in the case of those of working age, that "permanent disability" is the reason for their inactivity).

Figure 2.4 shows the share of individuals in the target population and the broader reference population facing each of the employment barriers in Australia. As expected, the incidence of each barrier, with the exception of the high non-labour income barrier, is higher in the target population. The most common barriers include "low" relative work experience (43% of the target population), low skills (38%) and health limitations (35%). The other employment barriers, in particular, "care responsibilities" (20%) and "high levels of non-labour income" (28%), are somewhat less prevalent overall, but may still be very important for some sub-groups. Only a relatively small share of the target population faces "scarce job opportunities" (13%), "high earnings replacement benefits" (9%) or "no past work experience" (7%). The employability barriers are more prevalent for those who were out of work throughout the entire reference period than for those with weak labour-market attachment. The barriers related to motivation, however, are bigger among the weakly-attached labour market participants. A reason for the weakly attached group to have higher non-labour income is that they are more likely to live with a person who is in employment and thus their households have sources of income that are not directly related to their work efforts. Both the out of work and the weakly attached groups have the same probability of having scarce job opportunities.

Figure 2.4. **Type of employment barriers of Australians with no or weak labour market attachment**

As a percent of the target and reference population, 2014



Source: Author's calculations based on HILDA. See Box 2.2 for the definitions of the barriers.

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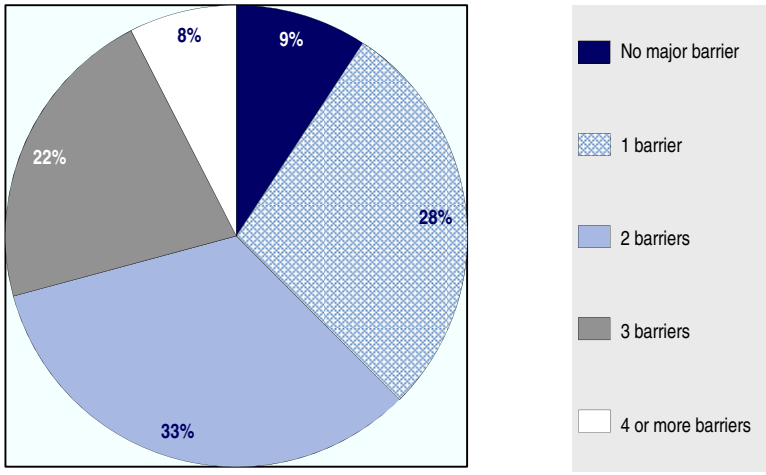
In practice people's individual and family circumstances are complex and often lead to situations where they face multiple barriers to employment. Figure 2.5 shows the number of (simultaneous) barriers faced by individuals in the target population. One third faces two simultaneous barriers, just under a quarter faces three barriers and 8% face four or more barriers. Less than 10% face no major employment barrier. For this group, the employment-barrier indicator may be slightly below the respective thresholds used in this note, or they are not working or are "underemployed" for reasons unrelated to the barriers discussed here – for instance, they may simply have a strong preference for leisure.

Figure 2.5. **Number of simultaneous employment barriers of Australians with no or weak labour market attachment**

As a percent of the target population, 2014



Source: Calculations based on HILDA 2014.

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Faces of joblessness in Australia

Using latent class analysis, a statistical method for segmenting, the target population can be divided into groups of individuals facing a similar combination of employment barriers. The goal of the segmenting exercise is to create clusters of individuals that are as similar as possible in terms of their barriers, with the differences between clusters being as large as possible. These clusters will be meaningful for the design, tailoring and targeting of activation and employment support policies, as the success of these policies crucially depends on their ability to address real-world combinations of different labour market obstacles. For more details on the statistical segmentation method, see Fernandez et al. (2016).

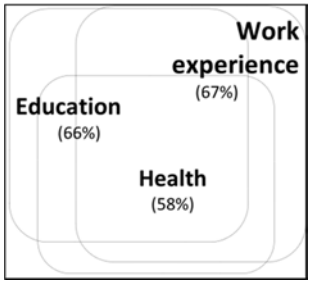
Seven different combinations of employment barriers

Using 2014 HILDA data, the segmentation process leads to the identification of *seven clusters* of individuals with no or weak labour market attachment.[2] In the following, each cluster is described in detail (with the clusters sorted by size, starting with the largest): through a Venn diagram to show the extent and degree of overlap of the main barriers characterising the cluster, and a list of selected individual and household characteristics with a "high" probability of occurrence within the cluster. This information can help attach suitable labels ("*faces*") to cluster members. It is important to highlight that the labels are necessarily arbitrary to some extent and cannot substitute for careful examination of the comprehensive list of employment barriers and socio-economic characteristics reported for each cluster in Tables 2.1 and 2.2.

"Low educated women with limited work experience and health limitations"

Cluster 1 represents 25% of the target population and consists largely of prime-age women (68% of members are female, average age 49 years) who are labour-market inactive (94%). The majority have low *education or skills* (66%) and limited work experience compared to their potential (67%). About 58% suffer from some long-standing physical or mental *health limitations*, with 29% reporting poor mental health and 20% a severe physical or mental impediment for work. Forty-four per cent receive sickness and disability benefits and 10% receive unemployment benefits. Individuals in this cluster face an average of 2.2 employment barriers, the third-highest level of all clusters (Figure 2.6). The average equivalised household income is relatively low (AUD 37 040 on average in comparison to an average of AUD 60 664 in the reference population), with more than half of this cluster living in households in the bottom quintile of the income distribution, and the risk of poverty is the second highest (55%) of all clusters.

Cluster 1. **"Low educated women with limited work experience and health limitations"**

Main employment barriers[a]	Selected characteristics[b]	Percentage of the target population
	– 49-year-olds (average) – Majority women (68%) – Labour-market inactive (94%) – 15 years in paid work (average) – 11.5 years of schooling (average) – Average equivalised disposable household income: AUD 37 040 per year – 2.2 simultaneous employment obstacles (average)	

a) Surface areas of shapes in the diagram are proportional to the number of members facing the related barrier ("Proportional Venn Diagrams"). The outer square represents the cluster size (100%). The diagram shows the most prevalent barriers in the cluster and is based on the indicators discussed in Box 2.2.

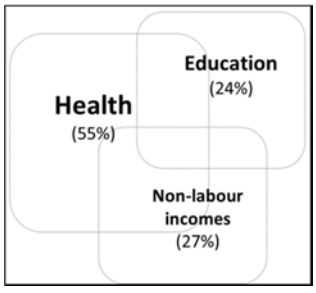
b) Characteristics that distinguish this group from other groups, i.e. categories that have a high probability of occurring in the cluster. Table 2.2 reports individual and household characteristics in more detail.

Source: Calculations based on HILDA 2014, see Tables 2.1 and 2.2 for full results.

"Experienced early retirees with health limitations"

The second cluster accounts for 20% of the target population, and generally consists of older men (the average age is 56, 75% are aged 55-64 years) with considerable paid work experience (31 years on average, the highest of the seven clusters). More than half suffer from a long-standing physical or mental *health limitation*, and 27% receive sickness and disability benefits and 10% receive unemployment benefits. The majority are labour market inactive (83% during the reference period) with 39% reporting their activity status as "retired" and 21% as "unable to work" because of sickness or disability at the time of the interview. More than one fourth live in households with high levels of income that are not related to their own work effort (e.g. unearned income or the income of a partner), thus weakening their financial *work incentives*. 24% have low *education or professional skills*. Compared to other clusters, individuals in this cluster are less likely to face multiple simultaneous employment barriers (see Figure 2.6).

Cluster 2. **"Experienced early retirees with health limitations"**

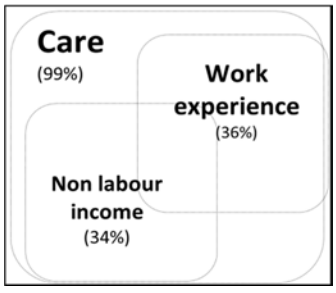
Main employment barriers	Selected characteristics	Percentage of the target population
	– 56 years old (average) – Majority men (67%) – Labour-market inactive (83%) – 31 years of paid work (average) – 12.8 years of schooling (average) – Average equivalised disposable household income: AUD 46 618 per year – 1.1 simultaneous employment obstacles (average)	

Source: Calculations based on HILDA 2014, see Tables 2.1 and 2.2 for full results.

"Mothers with care responsibilities and few other employment obstacles"

The third cluster, which accounts for 13% of the target population, almost entirely consists of prime age (the average age is 34, 95% are aged 25-54) women (96%) with young children who have a partner. These families have on average two children and the average age of the youngest child is two. In the vast majority of cases the partner works (86%), meaning that *care responsibilities* fall on members of this cluster as they receive only little non-parental childcare (the average is 12 hours per week, the lowest of all clusters with children). 84% of individuals in this cluster were labour market inactive throughout the reference period and 75% were still inactive at the moment of the HILDA interview (while 10% were unemployed). Long periods of inactivity also help to explain why over a third (36%) of individuals in this cluster has low overall *work experience* relative to their potential. This happens despite the high education level characterising this cluster, with an average of 14.5 years of schooling (the highest of all clusters) and 68% of members having completed an advanced diploma or a graduate degree. The other common employment barrier characterising this cluster is weak *work incentives* resulting from high levels of household income that are not related to their own work effort (34% of members).

Cluster 3. "**Mothers with care responsibilities and few other employment obstacles**"

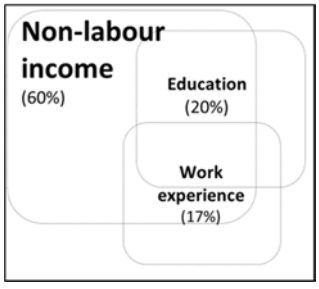
Main employment barriers	Selected characteristics	Percentage of the target population
	– 34 years old (average) – Women with young children living with their partner – Average age of the youngest child: two – Labour-market inactive – 10 years of paid work (average) – 14.5 years of schooling (average) – Average equivalised disposable household income: AUD 40 906 per year – 2.0 simultaneous employment obstacles (average)	

Source: Calculations based on HILDA 2014, see Tables 2.1 and 2.2 for full results.

"Underemployed workers with weak work incentives"

Cluster 4 represents 12% of the target population and it is the only cluster, where the majority of individuals are "underemployment" (83%), as opposed to inactive or unemployed (17%). Individuals in this cluster are also mostly prime age (average age 40) women (66%). About half of the members worked throughout the reference period for ten hours per week or less and another 23% worked for no more than three months during the same period. Another 20% reported work activity throughout the reference period but declared zero or *near zero* earnings; of this 35% were self-employed who mainly declared *zero* earnings throughout the year, while 64% were part-time employees who reported some positive, but low earnings. Only 20% of the part-time employees in this cluster reported being "involuntary part time". Of the others, 53% wanted to work part time (27% because they prefer working part-time, 11% because they like their job, and 15% due to education) while 17% had care responsibilities and 7% a long-standing illness or disability. Many individuals in this cluster face weak financial *incentives to work*: 74% live in households where at least one other person has employment earnings (the second-highest percentage of all clusters) and for 60% of members the level of household income that is not related to own work effort is particularly high (i.e. more than AUD 45 586 per year; Table 2.1).

Cluster 4. **"Underemployed workers with weak work incentives"**

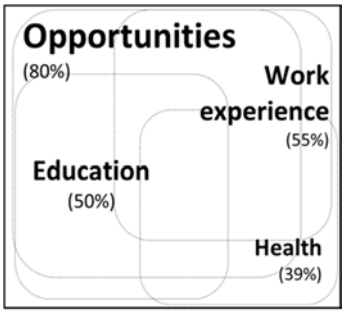
Main employment barriers	Selected characteristics	Percentage of the target population
	– 40 years old (average) – Mostly women – Some work activity during the reference period – 20 years of paid work (average) – 13.4 years of schooling (average) – Average equivalised disposable household income: AUD 54 729 per year – 1.1 simultaneous employment obstacles (average)	

Source: Calculations based on HILDA 2014, see Tables 2.1 and 2.2 for full results.

"Long term unemployed with limited work experience and low education"

Representing 12% of the target population, Cluster 5 consists largely of younger individuals (average age 31) facing scarce job opportunities (80%): many have been actively seeking employment for more than a year, with an average unemployment spell of 16 months. The majority (57%) were unemployed at the moment of the interview while 40% were labour market inactive. 46% received unemployment benefits during the income reference period. As a result of this long period out of work, the majority (55%) have limited work experience relative to their potential. Half also have low *education or skills* whereas a significant number (39%) reported a long-standing physical or mental *health limitation* (the average mental health score is the second-lowest of all clusters, with 26% having a score which is lower than 6). Compared to other clusters, individuals in this cluster are more likely to face multiple simultaneous employment barriers (Figure 2.6). The average equivalised household income is the second lowest of the seven clusters and the risk of poverty is high (53%).

Cluster 5. **"Long term unemployed with limited work experience and low education"**

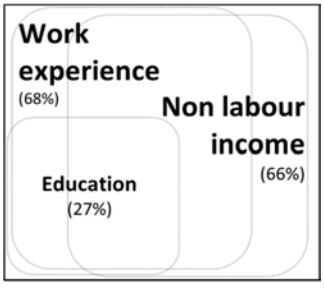
Main employment barriers	Selected characteristics	Percentage of the target population
	– 31 years old (average) – Mostly men (63%) who are unemployed (57%) – 10% belong to an indigenous population group – 16 months of unemployment (average) – 9 years of paid work experience (average) – 12.7 years of schooling (average) – Average equivalised disposable household income: AUD 34 547 per year – High risk of poverty (53%) – 2.7 simultaneous employment barriers (average)	

Source: Calculations based on HILDA 2014, see Tables 2.1 and 2.2 for full results.

"Women with limited work experience living in higher-income households"

The sixth cluster accounts for 11% of the target population, mainly consisting of older women (average age 50) who are largely labour market inactive (87%). Although all members have worked in the past with an average of 16 years of paid work experience, for 68% this is low relative to their potential experience. 72% of individuals in this cluster live with someone who is in paid work (their partner in most cases) and many of them (66%) have weak *work incentives* resulting from high levels of household income that are not related to their own work effort (this cluster has the highest equivalised household incomes of all seven groups, AUD 66 680 per year on average). 46% report their activity status as "house work", 21% as "retired" and 16% as inactive due to "other" reasons. About one third has low education or skills. Individuals in this cluster face an average of 1.8 employment barriers (Figure 2.6).

Cluster 6. **"Women with limited work experience living in higher-income households"**

Main employment barriers	Selected characteristics	Percentage of the target population
	– 50 years old (average) – Women – Labour market inactive – 16 years of paid work experience (average) – 13.2 years of schooling (average) – Average equivalised disposable household income: AUD 66 680 per year – 1.8 simultaneous employment obstacles (average)	

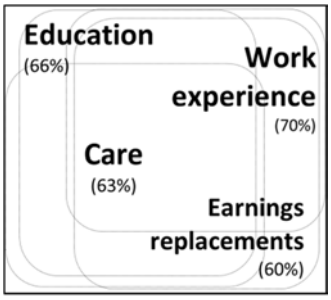
Source: Calculations based on HILDA 2014, see Tables 2.1 and 2.2 for full results.

"Mothers with multiple employment obstacles"

Cluster 7 represents 7% of the target population and consists of younger (33 years on average) women (97%) with children (98%, two children on average). 17% of individuals in this cluster belong to an Indigenous population group. The majority were labour market inactive throughout the reference period (89%), with 71% reporting "house work" as their main activity. 44% live with a partner whereas one third are lone parents. 63% of these women face *care responsibilities* because their children are often of pre-school age (their youngest child is aged 3 on average) and live in households without other *potential* care givers. Although almost all members receive income support in the form of family benefits (95%), 56% are at risk of poverty, the highest proportion of all seven clusters. These benefits are means tested and often weaken the incentives to look for employment and take up work: for 60% of individuals in this cluster the earnings-replacement benefits are high relative to potential earnings in work (Table 2.1). This cluster also has the lowest average number of years of schooling (11.9 years) with 66% having low *education or skills*. One in three suffer from long-standing physical or mental health conditions and for more than one fourth the mental health score is particularly low (less than 6 out of 10). On average, individuals in this cluster are likely to face three or more simultaneous employment barriers (Figure 2.6).

Cluster 7. **"Mothers with multiple employment obstacles"**

Main employment barriers



Selected characteristics

- 33 years old (average)
- Women with young children
- 17% belong to an Indigenous population group
- Labour market inactive
- 11.9 years of schooling (average)
- 6 years of paid work experience (average)
- Average equivalised disposable household income: AUD 29 920 per year
- At risk of poverty
- 3.4 simultaneous employment obstacles (average)

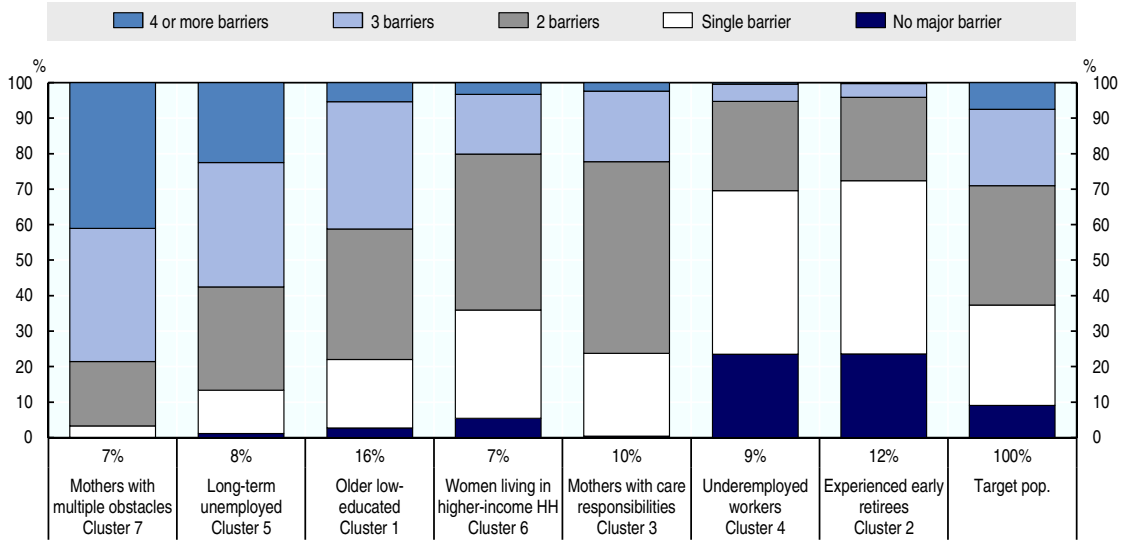
Percentage of the target population

Source: Calculations based on HILDA 2014, see Tables 2.1 and 2.2 for full results.

The cluster analysis clearly shows that individuals often face more than one barrier to employment, see Figure 2.6. Only in the "Low educated women with limited work experience and health limitations" and "Underemployed workers with weak work incentives" clusters the majority of individuals face only one barrier. The cluster of "Mothers with multiple employment obstacles" has the highest number of simultaneous barriers, with over three quarters of individuals facing three or more barriers. Details on the prevalence of each barrier per cluster are shown in Table 2.1. Further details for each cluster, such as individual and household characteristics and labour market status, are provided in Table 2.2.

Figure 2.6. **Share of individuals facing multiple employment barriers in each group of individuals with no or weak labour market attachment**

In descending order of shares facing four barriers or more, 2014



Note: Cluster sizes are reported on the horizontal axis.

Source: Calculations based on HILDA 2014.

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Table 2.1. **Core characteristics of groups of individuals with no or weak labour market attachment**

Percentage of individuals with selected characteristics, by cluster (latent class estimates), 2014

	Abbreviated cluster name	Older low-educated	Experienced early retirees	Mothers with care responsibilities	Under- employed workers	Long-term unemployed	Women living in higher-income HH	Mothers with multiple obstacles	Target population	Working age population[a]
	Cluster number	*1*	*2*	*3*	*4*	*5*	*6*	*7*		
	Cluster Size (% of target population)	**25**	**20**	**13**	**12**	**12**	**11**	**7**	**100**	
Core indicators	"Low" education or skills	66	24	9	20	50	27	66	38	21
	No past work experience	6	0	8	17	15	0	18	7	2
	Positive but "low" relative work experience	67	8	36	8	55	68	70	43	16
	Health limitations	58	55	5	10	39	9	34	35	16
	Care responsabilities	8	0	99	0	3	3	63	20	7
	"High" non-labour income	9	27	34	60	12	66	5	28	30
	"High" earnings replacements benefits	6	2	9	2	13	0	60	9	6
	Scarce job opportunities	0	8	2	2	80	0	22	13	4

Note: Box 2.2 describes the indicators and applicable thresholds. Cluster sizes refer to the target population as defined in Box 2.1. Colour shadings identify categories with high (dark blue) and medium (lighter blues) frequencies. Complementary categories (e.g. "high" education) are omitted. Additional information on model selection and model specification is provided in Immervoll et al. (2017).

a) Persons aged 18-64 excluding full-time students.

Source: Authors' calculations based on HILDA, 2014.

StatLink http://dx.doi.org/10.1787/888933447546

Table 2.2. **Detailed characteristics of groups of individuals with no or weak labour market attachment**

Percentage of individuals with selected characteristics (†, †† denote averages), by cluster, 2014

	Abbreviated cluster name	Older low-educated	Experienced early retirees	Mothers with care responsibilities	Under- employed workers	Long-term unemployed	Women living in higher-income HH	Mothers with multiple obstacles	Target population	Working age population[a]
	Cluster number	*1*	*2*	*3*	*4*	*5*	*6*	*7*		
Cluster Size (% of target population)		**25**	**20**	**13**	**12**	**12**	**11**	**7**	**100**	
Number of individuals (frequency, in thousands)		**697**	**556**	**380**	**336**	**328**	**316**	**192**	**2 805**	13 339
Number of simultaneous barriers††		2.2	1.1	2.0	1.1	2.7	1.8	3.4	1.9	1.0
Women*		68	33	96	66	37	100	97	66	50
Age groups*	Youth (18-24)	0	0	4	24	42	2	24	10	10
	Prime age (25-54)	60	25	95	54	56	56	74	57	70
	Old-age (55-64)	40	75	1	22	2	42	2	33	20
Age††		49	56	34	40	31	50	33	44	42
Education	Lower secondary or less	63	23	8	16	45	25	61	36	20
	Upper secondary	12	12	24	31	26	18	16	18	16
	Cert III / Cert IV / Adv diploma	18	43	33	26	23	32	18	28	34
	Bachelor / Grad diploma / Postgrad / Master	7	21	35	26	6	25	5	18	30
	Years of education (average)	11.5	12.8	14.5	13.4	12.7	13.2	11.9	12.8	13.6
Health	Limitations in work activities (score: 10=max, 0=min)††	4	3	0	1	2	1	1	2	1
	Have "severe" health limitations in work activities	20	15	0	4	7	4	6	11	3
	Good mental health (score: 10=max, 0=min)††	6.1	7.0	7.6	7.4	6.3	7.4	6.4	6.8	7.3
	Have "poor" mental health	29	17	6	10	26	9	27	18	11
Migrant		29	32	43	27	23	39	21	31	31
Indigenous		6	2	3	2	10	2	17	5	3
Household type (members with 15+ years are considered "adults")	Single	27	23	0	14	28	10	0	18	16
	Couple without children	45	55	0	50	36	45	0	38	39
	Couple with children	9	7	83	25	15	31	44	26	29
	Lone parents	2	1	6	2	4	1	33	4	3
	2+ adults with/without children	8	8	3	6	7	6	4	6	6
	Multifamily households	8	7	7	4	11	7	18	8	6
Have children* (less than 15 years)		18	13	100	27	28	38	98	38	37
Number of children† (less than 15 years)		1.8	..	2.1	2	2	2	2.1	2.0	2
Age of the youngest child†		7	..	2	8	6	8	3	4	5
Hours of non-parental childcare†		22	..	12	38	31	32	22	19	32
Household with other working household members		43	44	86	74	53	72	48	57	67
Had any work activity	During the reference period	6	13	27	83	25	15	7	23	82
	During the last two years	22	36	42	87	56	33	25	41	86
	During the last three years	34	51	55	89	69	44	38	52	89
Type of labour market attachment during the reference period	Unstable jobs (≤ 3 months)	..	..	14	23	..	..	..	9	2
	Restricted working hours (≤ 10 hours a week)	..	..	13	48	..	..	..	11	3
	Employees with zero or near-zero earnings	..	..	2	20	..	..	..	4	1
Main reason for restricted working hours	Illness or disability	..	..	..	7	..	..	..	8	5
	Care or family responsabilities	..	..	..	17	..	..	..	30	30
	Education	..	..	..	15	..	..	..	10	8
	involuntary (cannot find FT work)	..	..	..	20	..	..	..	16	14
	Prefer working part time	..	..	..	27	..	..	..	23	25
	Prefer current job	..	..	..	11	..	..	..	10	17
	Other reasons	..	..	..	2	..	..	..	3	2
Main activity during the reference period	Working	3	9	12	61	2	10	2	13	67
	Unemployed	3	8	4	7	47	3	9	10	8
	Inactive	94	83	84	32	51	87	89	77	25
Main activity at the time of the HILDA interview	FT worker	0	2	0	13	0	0	0	2	55
	PT worker	3	8	15	55	3	10	3	13	21
	Unemployed	2	9	10	6	57	2	9	12	4
	Retired	22	39	0	1	2	21	1	16	4
	Unfit to work/disable	32	21	1	4	13	6	4	15	4
	House work	31	12	60	9	6	45	71	30	7
	Other inactive	9	9	15	12	18	16	12	12	5

Table 2.2. **Detailed characteristics of groups of individuals with no or weak labour market attachment** *(cont.)*

Percentage of individuals with selected characteristics (†, †† denote averages), by cluster

	Abbreviated cluster name	Older low-educated	Experienced early retirees	Mothers with care responsibilities	Under- employed workers	Long-term unemployed	Women living in higher-income HH	Mothers with multiple obstacles	Target population	Working age population[a]
	Cluster number	*1*	*2*	*3*	*4*	*5*	*6*	*7*		
Cluster Size (% of target population)		**25**	**20**	**13**	**12**	**12**	**11**	**7**	**100**	
Type of employment	Employee	..	..	..	64	..	..	..	64	85
	Self-employed	..	..	..	35	..	..	..	33	14
	Family business	..	..	..	2	..	..	..	3	0
Share of emloyees with "casual" job		..	..	..	68	..	..	..	68	17
Length of unemployment spell (months)†		..	..	..	..	16	..	..	16	12
Years of paid work experience† (average)		15	31	10	20	9	16	6	17	19
Equivalised disposable household income (AUD/year - average)		37 040	46 618	40 946	54 729	34 547	66 680	29 920	44 182	60 664
Position in the income distribution	Bottom quintile	55	29	41	25	53	15	56	40	15
	Second quintile	31	22	33	20	26	20	32	26	19
	Third quintile	5	26	15	18	16	19	9	15	21
	Fourth quintile	5	12	7	17	2	26	3	10	22
	Top quintile	4	10	4	20	3	20	1	9	22
AROPE (eurostat methodology)		55	29	40	25	53	16	56	40	15
Material deprivation (eurostat methodology)		8	2	0	1	8	1	7	4	1
Benefits, recipiens and average amounts (AUD/year)	Sickness and disability recipients (%),	44	27	2	10	18	10	11	12	6
	they receive, on average†	17 521	16 885	..	..	..	..	..	9 170	16 030
	Unemployment benefits recipients (%),	10	10	2	10	46	4	9	15	6
	they receive, on average†	..	..	..	..	10 588	..	..	4 854	7 833
	Social Assistance recipients (%),	5	3	1	3	1	4	1	1	1
	they receive, on average†	..	..	..	..	..	..	..	..	11 502
	Family-related benefits recipients (%),	29	21	83	25	18	30	95	33	26
	they receive, on average†	13 868	10 319	10 856	..	..	9 330	22 128	1 364	8 697
Live in rural area*		13	13	10	11	10	10	10	11	10
Area of residence	Major cities	65	67	74	73	70	75	61	69	74
	Inner regional AUS	22	22	15	17	19	17	23	20	17
	Outer regional AUS	12	10	10	9	10	6	14	10	8
	Remote AUS	1	1	1	1	1	2	1	1	1

.. Unavailable because of limited number of observations.

† Average across observations with strictly positive values.

†† Average across all observations.

* The variable enters as an additional indicator in the latent class model. See Immervoll et al. (2017) for details.

Note: Colour shadings identify categories with high (darker) and medium (lighter blues) frequencies. The average number of simultaneous barriers per individual is computed for the core indicators in Table 2.1. Income quintiles refer to the entire population. The ***at-risk-of-poverty rate*** is the share of people with an equivalised disposable income (after social transfer) below 60 % of the national median. ***Material deprivation*** is defined as not being able to afford at least three of the following items: washing machine, telephone, TV, decent and secure home, substantial meal at least once a day, a week's holiday away from home each year, motor vehicle, AUD 500 in savings for an emergency, when it's cold keep at least one room warm. ***Sickness and disability benefits*** include Sickness Allowance or Special Benefits, Disability Support Pension, Disability Pension, and Mobility Allowance. ***Unemployment benefits*** include NewStart Allowance, Youth Allowance, and CDEP. ***Social assistance benefits*** include Service Pension, Wife Pension or Widow Allowance, Partner Allowance, War widow's pension, Abstudy/Austudy, Seniors Supplement, and Bereavement Allowance. ***Family-related benefits*** include Carer payment, Parenting payment, Carer allowance, paid parental leave, Double Orphan pension, Maternity Payment, School Kids Bonus, and Family Tax Benefit.

a) Persons aged 18-64 excluding full-time students.

Source: Authors' calculations based on HILDA 2014.

StatLink http://dx.doi.org/10.1787/888933447555

An initial interpretation of the results

The statistical method used to segment the target population is set to create clusters of individuals that are as similar as possible in terms of their employment barriers. At the same time the differences between the clusters should be as large as possible. Nevertheless, a cluster may still combine different types of individuals that require different types of policy interventions to activate them and at the same time one policy intervention may impact on individuals in different clusters.

Within the Australian target population two clusters of mothers with dependent children were identified (Clusters 3 and 7). Women in the two clusters, however, differ substantially in terms of individual and household characteristics, and as a result also face different barriers. Women in the cluster "*Mothers with care responsibilities and few other employment obstacles (Cluster 3)"* are older, higher educated and more likely to live in a major city than the women in the cluster "*Mothers with multiple employment obstacles (Cluster 7)*" group. Women in the former group are less likely to be lone mothers, more often live in households with other working members, and 34% have access to high non-labour income. As a result, these households have a lower risk of poverty and are on average higher up in the wage distribution. Nevertheless, this does not apply to all women in this cluster. A substantial share of "*Mothers with care responsibilities and few other employment obstacles"* has low work experience as a barrier, without having high non-labour income. Contrary to this group, almost none of the "*Mothers with multiple employment obstacles"* have high non-labour income, but they are much more likely to receive a substantial amount of earnings-replacement benefits. Aside from the care responsibilities and high replacement benefits, they are also hindered from participating in the labour market by low skill levels and low levels of work experience, which is linked to a low educational attainment, as well as their age (around a quarter are at most 24 years old). While childcare related policy interventions are important for both groups, "*Mothers with multiple employment obstacles"* will require additional support measures (e.g. addressing skills and health barriers) to help them overcome their barrier to employment. Chapter 3 discusses both childcare policies for women with young children and special needs of lone parent families.

The cluster analysis also identifies two groups of older women facing substantial barriers to labour market participation (Clusters 1 and 6). Both groups have low work experience, but they differ significantly in terms of other barriers. With almost two-thirds of the individuals in the group of "*Low educated women with limited work experience and health limitations (Cluster 1)"* having no upper-secondary degree, this group is much lower skilled than the group of "*Older women with limited work experience living in higher-income households (Cluster 6)*". Aside from low skills and low work experience, women in the former group also have a high probability of having a physical or mental health limitation. The "*Older women with limited work experience living in higher-income households*", on the other hand, have a very low incidence of physical or mental health conditions. But two-thirds of women in this cluster are restricted from labour market participation by high levels of non-labour income, while this is only the case for 10% of "*Low educated women with limited work experience and health limitations*". This difference in non-labour income is also reflected in the share of households with other working members and the substantially higher risk of poverty for individuals in Cluster 1. Many women in Cluster 1 receive sickness and disability benefits (44%). This signals the need for additional policy measures, which better harness the work capacity of people with a disability as discussed in Chapter 3. In contrast, it is less obvious which policy measures could support the activation of individuals

in Cluster 6. An interesting fact is that the older women in Clusters 1 and 6 have some similar employment barriers as the younger women in Clusters 7, respectively 3, apart for the care barrier (Table 2.1). A relatively minor care barrier for the older women is not surprising, as their children are generally older. The care barrier at younger age, however, may well drive the outcomes observed around 15 years later.

The cluster analysis identifies a fifth group of individuals, which is mainly composed of women (66%). In contrast to the four previous groups of women, individuals in the "*Underemployed workers with weak work incentives (Cluster 4)*" group are generally not inactive, but had some work activity during the reference period. Like the "*Older women with limited work experience living in higher-income households*", the group of underemployed individuals are often discouraged from (full) labour market participation by high levels of non-labour earnings. The fact that almost 40% of the part-time workers in the underemployed group report preferences as the main reason for not working full-time is likely to be linked to the high levels of outside earnings. Almost three quarters of the individuals in the group of underemployed live in households with other working persons. The age structure of this group is diverse, with one quarter being less than 25 years old and an additional 22% being 55 or older. About two thirds of employees in the "*Underemployed workers with weak work incentives*" are in casual employment.

Two of the identified groups with labour market difficulties do not consist predominantly of women. The first, "*Experienced early retirees with health limitations (Cluster 2)*", groups older inactive individuals, whose main barrier to labour market participation is health limitations and who are predominantly male (67%). The majority of inactive members report being retired or unfit for work as the reason for their inactivity. A substantial share of group members is receiving sickness and disability benefits. These benefits are, however, not high enough relative to potential earnings to generate a barrier to labour market participation, as for only 2% of individuals in this group high earning-replacement benefits are a barrier (i.e. their earnings-replacement benefits represent at least 50% of their estimated potential earnings in work.). Individuals in this group without a health barrier generally have low skills and/or high non-labour income. The large majority of the group members have high levels of work experience, indicating that their current inactivity status is linked to early exit from the labour market, mainly as a result of health limitations linked to age. Hence, activation policies targeted at mature age workers and individuals with health problems are particularly important for this group.

The second male-dominated group are the "*Long term unemployed with limited work experience and low education (Cluster 5)*", 57% of whom were unemployed at the time of the interview. The main barrier for this group is scarce job opportunities, and many group members also have low skills or low work experience. With over 40% of individuals in this group being younger than 25 years old, this group is relatively young. The individuals from this group are overrepresented at the bottom of the income distribution, and as a result have a high risk of poverty. The unemployed individuals in this group are generally long-term unemployed, with on average an unemployment duration of 16 months. Given the young age profile and low skills or low work experience of this cluster, policies aiming to improve labour market and educational outcomes for disadvantaged youth are especially important (see Chapter 3).

While this chapter is mainly of an analytical nature, it provided some cautious initial thoughts about which polices might be relevant for which cluster. This process should be continued to identify existing policies for all clusters and the potential need for further policies to inform the policy dialogue in Australia. While looking at individuals in a cluster as a whole can be insightful, it is also possible to consider different subgroups within the clusters or consider how different population groups spread across the clusters. One group of special interest in Australia is the Indigenous population and Box 2.3 provides an overview on Indigenous Australians in the target population identified in this chapter.

Box 2.3. **Indigenous Australians are likely to face simultaneous employment barriers**

On average, labour market outcomes of Indigenous Australians are lagging behind those of the Non-Indigenous population (see Chapter 1). This also results in Indigenous Australians being overrepresented among the target population that is either "persistently" out of work or has a "weak" labour-market attachment. While representing 3% of the reference population (i.e. working-age adults excluding full-time students), Indigenous Australians represent 5% of the target population. About 40% of Indigenous Australians of working age are part of the target population. Three quarters of them spread over three of the identified clusters: 30% are in Cluster 1 "Low educated women with limited work experience and health limitations", 23% in Cluster 5 "Long term unemployed with limited work experience and low education" and 22% in Cluster 7 "Mothers with multiple employment obstacles". Individuals in these three clusters are the most likely to have a high number of simultaneous employment barriers (Figure 2.6).

Three common employment barriers are characteristic for these three clusters: i) low education and skills; ii) positive, but low relative work experience; and iii) medium to high prevalence of health limitations. Individuals in Cluster 7 also face substantial care responsibilities – a third of them are lone parent families – and have high relative earnings-replacement benefits (i.e. the benefits represent at least 50% of their estimated potential earnings in work), while four-fifth of individuals in Cluster 5 face scarce job opportunities. While not highlighted separately in the cluster analysis, Indigenous Australians are also more concentrated in remote areas, where labour market opportunities tend to be fewer. Overall the results highlight a need for activation, health and social policies that aim at addressing multiple barriers. However, it is important to highlight that these outcomes are by no means unique to Indigenous Australians and, hence, do not call for measures specifically targeted at Indigenous Australians. Designing effective policies for the clusters more generally should also benefit Indigenous Australians. For Clusters 5 and 7, policies for disadvantaged youth and lone parents, discussed in Chapter 3, are particularly important. An additional challenge may be the effective delivery of social and employment services in areas of low population density. In this respect, the Targeted Initiative for Older Workers in Canada is an interesting example for Australia, as it provides employment support for mature age workers in small, vulnerable communities (see Box 3.5).

Key findings

Activation and social policies are often targeted at broad groups of individuals with potential labour market problems, such as youth, mature age workers or lone mothers. The analysis presented in this chapter shows these groups might be too broad to be meaningful for policy making. Broad groups will generally include individuals who do not face employment barriers, and people within these broad groups might face very different problems. This chapter identifies the Australian working-age population with potential labour market difficulties, be it that they are "persistently" out of work or have "weak" labour market attachment due to unstable jobs, restricted working hours, or very low earnings. Together they are referred to as the potential "target population" for activation policies and in Australia they represent 23% of working-age adults (excluding full-time students). A wide range of labour supply factors (i.e. personal and household

characteristics) and labour demand factors (i.e. scarcity of labour market opportunities) may act as employment barriers for this population. Individuals in the target population typically face one or a number of such employment barriers that prevent them from fully engaging in employment activities.

The innovative contribution of this chapter is the application of a statistical segmentation method, which divides the target population into groups of individuals or clusters facing a similar combination of employment barriers. For Australia, this segmentation process leads to the identification of seven distinct clusters of individuals with no or weak labour market attachment: 1) "Low educated women with limited work experience and health limitations"; 2) "Experienced early retirees with health limitations"; 3) "Mothers with care responsibilities and few other employment obstacles"; 4) "Underemployed workers with weak work incentives"; 5) "Long-term unemployed with limited work experience and low education"; 6) "Women with limited work experience living in higher-income household"; and 7) "Mothers with multiple employment obstacles". The results in this chapter can be used to inform the policy dialogue in Australia and to identify, for all or selected clusters, the potential need for additional activation policies.

Notes

1. The framework builds on an earlier framework first presented in Immervoll and Scarpetta (2012) and adds institutions as the foundation to this framework.
2. Immervoll et al. (2017) outlines the segmentation method and the process that lead to the identification of the seven groups. Fernandez et al. (2016) describes in detail the econometric model and the related methodological framework.

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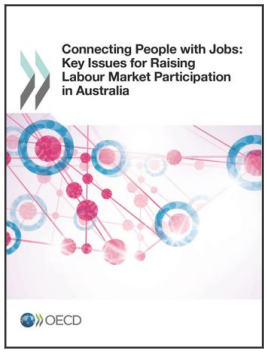

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