

Understanding and improving labour mobility: a scoping paper

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WORKPLACE RESEARCH CENTRE
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BUSINESS SCHOOL

NATIONAL VOCATIONAL EDUCATION
AND TRAINING RESEARCH AND
EVALUATION PROGRAM
OCCASIONAL PAPER



Australian Government
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About the research

Understanding and improving labour mobility: a scoping paper

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The dynamics of labour mobility is a tricky subject, one that is afflicted by limitations in the information available and one which can also pose dilemmas for social policy-makers who are concerned to ensure both a well-functioning labour market and people's welfare.

This paper is one of three commissioned by the National Centre for Vocational Education Research (NCVER), at the request of the Department of Education, Employment and Workplace Relations, to tease out some of the issues connected to mobility in the Australian workforce. The related papers are:

- *The mobile worker: concepts, issues, implications* by Richard Sweet
- *Does changing your job leave you better off? A study of labour mobility in Australia, 2002 to 2008* by Ian Watson.

Amongst some employers, especially those in the Australian mining industry, there is concern that mobility in the labour market is a problem. It is commonly asserted by leaders in this sector that their demand for labour is often unmatched by a suitable number of applicants. They argue that this is a market failure that requires government intervention. The unstated assumption is: improve the flow of labour, and orderly, sustainable growth will follow.

In this paper, researchers from the Workplace Research Centre, University of Sydney Business School, paint a more complex picture. They argue that the structure of industries, their occupational profiles, wages and other conditions contribute to greater or lesser mobility. This paper provides a preliminary assessment of the key issues relating to labour mobility and identifies ways to best generate new knowledge to inform the development of more effective public policy in this area.

Tom Karmel
Managing Director, NCVER

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Executive summary

How is mobility changing and what can be done to improve it? This paper identifies the key issues that must be considered in designing an effective research project to answer this question – especially as it concerns the character of flows of workers between jobs.

In recent years overseas demand for Australian raw materials has triggered a ‘resources boom’. While the mining industry still only employs fewer than 200 000 people – or less than 2% of employment – its demand for labour has triggered something of a ‘moral panic’ amongst policy-makers. This industry regularly claims its capacity to prosper is constrained because too many Australians are not prepared to move to where the jobs are. This country, it seems, has a ‘labour mobility problem’.

One of the key challenges policy-makers face is the lack of systemic analysis of this issue. This paper does not provide the answers; instead, it outlines how a better understanding of the nature of Australia’s ‘labour mobility problem’ can be generated. It does this by:

- providing a brief overview of the insights generated by previous researchers who have analysed the structure of labour flows in modern market economies
- distilling the significance of recent qualitative analysis of labour flows in three contrasting sectors: red meat-processing, early childhood services and mining
- deepening insights from this source by locating them in an analysis of labour flows available from a large-scale longitudinal study of the evolution of labour flows and the labour contract (that is, the Australia at work study)
- identifying how best to undertake further policy-relevant research on this topic.

Useful literature on the topic of mobility dates from the 1950s and 1960s. The ‘neoclassical realists’ of that era explored and documented the nature of job-to-job mobility with great empirical sensitivity. In the 1970s and 1980s important research on this topic was undertaken by Goldthorpe and other industrial sociologists in their work on social mobility. In the 1980s and 1990s Marsden and other researchers in the ‘societal effects’ tradition of labour economics/industrial sociology generated new insights. These showed the importance of understanding labour flows in the context of employment systems defined primarily as different types of internal and occupational labour markets.

To help identify the key issues requiring closer analysis in contemporary Australia, synoptic case studies of three contrasting sectors were undertaken. The sectors were: mining, red meat-processing and early childhood services. Cross-case analysis reveals:

- There is not one, common labour mobility problem.
- The changing role of women in the workforce affects the labour supply strategies of increasing numbers of households and consequently labour market flows.
- The roots of many mobility problems are as much related to the structure of jobs as they are to any alleged immobility of labour.
- The nature of mobility dynamics has changed dramatically in recent decades. The clearest case is that of mining, where labour flows were previously built around mining towns but now rely considerably on fly-in, fly-out arrangements.

Material from the first three waves of the *Australia at work* study of 8300 workers between 2006 and 2011 was examined to see how labour flows have changed over the latest phase of the business cycle, including during the Global Financial Crisis, especially in the three contrasting case study sectors. This reveals:

- As with previous business cycles, labour mobility rose during the up-swing and fell during the downturn.
- There were qualitative as well as quantitative changes in these labour flows. In particular, people changing jobs were less likely to move to jobs with paid leave.
- Those who changed jobs were more likely to experience a drop in earnings and hours of work.

Data from this source also indicate that:

- Patterns of labour mobility differ between sectors over the cycle. While mining conformed to aggregate trends, early childhood services experienced greater flows in and out during the downturn.
- Preliminary scrutiny of particular work histories reported in the data indicate that workers probably move in distinct ‘streams’; for example, high-skill manual, elementary manual and undervalued care/low-paid business services.

To contribute further to our understanding of labour mobility, this project identified the following topics for research:

- Clarify what needs to change, that is, have better mapping of labour flows.
- Identify the pre-conditions for successful interventions by comparative analyses of labour mobility policy and practice in Sweden, Norway and select sectors and regions in the United States.
- Learn from local failures as well as nascent successes. This material can provide important leads for better labour market policy and the nurturing of inter-industry workforce development and deployment agreements.

This paper should be read in conjunction with two others commissioned by NCVET. One explores the current nature of labour mobility in Australia using the ABS’s Labour Mobility Survey (Sweet 2011). The other is based on the Department of Families, Community Services and Indigenous Affairs and the Melbourne Institute’s Household, Income and Labour Dynamics of Australia (HILDA) dataset (Watson 2011).

Findings

Insights from the literature

Labour mobility has been a topic of ongoing interest to social and economic researchers since the emergence of market societies (McNulty 1980). Indeed, the mobility of labour has been regarded as one of the defining features of such societies. As with all other areas of social and economic analysis, there are a number of cross currents in this literature. Much orthodox analysis has assumed that labour can be treated as a homogenous entity amenable to analysis with the conventional tools of neoclassical economic theory. There is, however, an equally long tradition which has grappled with the key reality: labour is not homogenous and distinctive categories appropriate for understanding it are needed for robust analysis. This analytical starting point is common in industrial sociology, industrial relations, the ‘new institutionalism’ in economics and labour process and labour market segmentation theory (Fine 1998; Marsden 1999). The central notion here is that there is not one ‘labour market’ but rather a series of them. Cairnes (1874), for example, noted that the labour market was best understood as being comprised of a series of ‘non-competing groups’. A later generation, known as the neoclassical realists, explored the evolution and interaction of internal and external labour markets. In more recent times there has been considerable debate on the notion of labour market segmentation and stratification. The latest current within this broader analytical tradition has examined labour mobility in the context of different employment regimes – at both national and sectoral levels.

A scan of the most recently published literature reveals that current researchers on mobility are primarily concerned with five issues:

- *The generation of robust data on the topic:* most of this literature focuses on gross flows and changes in labour force states (for example, flows from ‘not in the labour force’ to employment, employment to unemployment, unemployment to not in the labour force; see Davis, Faberman & Haltiwanger 2006; Shah & Burke 2004; Van Gils et al. 2008).
- *Analysis of key variables associated with these gross flows:* special attention is devoted to how wage rates affect such flows (for example, Brezzi & Piacentini 2008; Fenech, Waniganayake & Fleet 2009; Gielen & von Ours 2006; Mitchell 2008; Pavlopoulos, Muffels & Vermunt 2005)
- *A burgeoning literature on international labour mobility:* associated with this is the growing literature on region-level flows within countries, especially the huge internal migrations within China (for example, Andrienko 2010; Lucas 2008; Tunon 2006).
- *An allied literature on standards to regulate such flows:* is now emerging (for example, Baruah & Cholewinski 2006; Lemaitre 2004)
- *The small but significant international comparative literature on the nexus between mobility, working life transitions and employment regimes.* This literature explores how labour flows are closely linked to:
 - changing life courses
 - welfare state regimes
 - employment regimes (primarily national)
 - regional economic development (see for example, Auer 2005; Berndt 2010; Muffels et al. 2002).

Despite this extensive research, very little detailed work has been done on the nature of and the dynamics associated with job-to-job flows – the issue of most concern to contemporary Australian policy-makers. Serious large-scale analysis of this issue commenced with the work of the so-called neoclassical realists who dominated labour economics in the 1940s, 1950s and 1960s (Kaufman 1988). Reflecting on this work, Dunlop (1988) provided his ‘best guess’ of what non-competing groups looked like during the time he and colleagues like Clarke Kerr and Richard Lester were at their prime – in the middle of last century. His account is summarised in table 1.

Table 1 Suggested categories of non-competing groups in mid-twentieth century USA

Category	Percentage of total civilian labour force
Production and maintenance in larger enterprises (non-exempt employees)	20
Supervisory, technical, and professional (exempt employees)	12
Clerical occupations in larger enterprises	10
Top management grades in larger enterprises	2
Self-employment	8
Voluntary associations	3
Public sector (federal, state, and local)	15
Small enterprises, all grades	30

Source: Dunlop (1988).

As Dunlop (1988) notes, ‘the lines of demarcation are not hard’ – but what they lack in precision they make up for in capturing something distinctive about how labour markets are structured. What is powerful about this schema is that the workforce is not divided neatly on the basis of categories that make a priori, categorical ‘sense’. Today we often consider ‘industry’ and ‘occupational’ breakdowns. By blending industry and occupation we can sometimes get closer to how ensembles of practice work. But such splicing is limited by the categories used in the defining frameworks. Often labour cannot be helpfully classified by industry and then by occupation. It often involves a blend of both. The classic cases here are engineering and information technology (IT) labour. Maintenance engineers, such as metal fitters and machinist or boiler makers, do not just work in ‘manufacturing’. They are found in sectors as diverse as retail, wholesale and health. Equally, information communication technologies (ICT) workers are not just engaged in the specialised information services sector, but spread throughout nearly every other industry. Along with the importance of understanding labour on the basis of *the nature of work performed*, it is also important to give due weight to *the form of business organisation and labour contract within which it is embedded*. This concerns whether work is performed in a large or small enterprise, and whether it is engaged on a ‘standard employee’, casual or contractor basis.

The reality is that the nature of labour – and flows of similar streams of labour – rarely fits neatly into the categories commonly used in policy discourse today. More often than not they are most accurately classified using a schema like that of Dunlop’s. The problem is that Dunlop’s captures the world as it was in the middle of the last century.

Fortunately, a number of large-scale research programs have devised schema more relevant to today’s labour market. The hallmark of these more recent contributions is that, while they too are empirically grounded, their categories are based on carefully derived conceptual underpinnings. These schemas, and the debates around them, provide powerful pointers to the categories that should inform our analysis of labour mobility today.

Arguably, the most influential schema has been devised by industrial sociologists building on the work of John Goldthorpe and others (for example, Goldthorpe 1980; Erikson & Goldthorpe 1992). Their interest has been in social mobility at large, not job mobility in the labour market. The labour market, however, plays a defining role in their framework for understanding flows in modern society. Goldthorpe's class schema, as it is known, classifies people (and often households) on the basis of two dimensions: labour market situation and work situation. *Market situation* classifies people in terms of 'their sources and levels of income, their degree of economic security and chances of economic advancement' (Lockwood 1980, cited in Marshall 1998). *Work situation* refers to:

their location within the system of authority and control governing the process of production in which they are engaged, and hence in their degree of autonomy in performing their work tasks and roles. (Goldthorpe 1980, cited in Marshall 1998)

Using these criteria, Goldthorpe's classificatory system identified 11 basic categories for making sense of the employed workforce. This is summarised in table 2.

Table 2 The Goldthorpe class categories

I	Higher-grade professionals, administrators, and officials; managers in large industrial establishments; large proprietors
II	Lower-grade professionals, administrators, and officials, higher-grade technicians; managers in small industrial establishments; supervisors of non-manual employees
IIIa	Routine non-manual employees, higher grade (administration and commerce)
IIIb	Routine non-manual employees, lower grade (sales and services)
IVa	Small proprietors, artisans, etc., with employees
IVb	Small proprietors, artisans, etc., without employees
IVc	Farmers and smallholders; other self-employed workers in primary production
V	Lower-grade technicians; supervisors of manual workers
VI	Skilled manual workers
VIIa	Semi-skilled and unskilled manual workers (not in agriculture, etc.)
VIIb	Agricultural and other workers in primary production

Source: Goldthorpe (1980 cited in Marshall 1998).

This framework has been refined over time. In more recent work Goldthorpe and his colleagues argued that their framework was best understood as differentiating 'positions within *labour markets* and *production units* or, more to differentiate such positions in terms of the *employment relations* that they entail' (Erikson & Goldthorpe 1992, p.37). This is a subtle but significant shift in how the researchers in this tradition define the bases for their categorical system. It has enabled the further evolution of this classificatory system to allow it to engage with key changes in the nature of work that have occurred in more recent times (Marshall, Swift & Roberts 1997). Arguably, the most dramatic shifts in the nature of work have been increases in services and female employment. Capturing this requires a significant re-evaluation of how work is defined in terms of the labour market, production units and employment relations.

Oesch (2003, 2006) argues that this is best done by reworking Goldthorpe's categories on the basis of the notion of work logics – something broader than the 'production unit'. Using this extensive reworking of categorical principles for differentiating workers, Oesch produces what can be described as a 'modernised' Goldthorpe class schema. This is summarised in table 3.

Table 3 A 17-class (and collapsed 8-class) schema based on differences in work logic and in marketable skills

Self-employed		Employees			Marketable skills
Independent work logic		Technical work logic	Organisational work logic	Interpersonal service work logic	
1 Large employers (>9)	2 Self-employed professionals	5 Technical experts	10 Higher-grade managers	14 Socio-cultural professionals	Professional/managerial
Firm owners	Lawyers	Mechanical engineers	Business administrators	University teachers	
Hotel owners	Accountants	Computing professionals	Financial managers	Medical doctors	
Salesman	Medical doctors	Architects	Marketing managers	Journalists	
3 Small proprietors, artisans, with employees (<9)	6 Technicians	11 Associate managers	15 Socio-cultural semi-professionals	Associate professional/managerial	
Restaurant owners	Electrical technicians	Managers in small firms	Primary school teachers		
Farmers	Computer equipment operators	Tax officials	Registered nurses		
Garage owners	Safety inspectors	Bookkeepers	Social workers		
4 Small proprietors, artisans, without employees	7 Skilled crafts	12 Skilled office	16 Skilled service	Generally/vocationally skilled	
Shop keepers	Machinery mechanics	Secretaries	Police		
Hairdressers	Toolmakers	Banking tellers	Cooks		
Lorry drivers	Electricians	Stock clerks	Children's nurses		
	8 Routine operatives	9 Routine agriculture	13 Routine office	17 Routine service	Low/unskilled
	Assemblers	Farm hands	Mail sorting clerks	Shop assistants	
	Machine operators	Loggers	Receptionists	Home helpers	
	Freight handlers	Gardeners	Messengers	Waiters	

Note: Continuous lines indicate how classes are to be collapsed into the 8-class version.

Source: Oesch, (2003)

The power of Oesch's approach is that it avoids the 'blue collar-white collar divide' at the core of the original Goldthorpe framework. Most importantly, it provides a means of capturing more usefully the key ways labour is clustered about various vectors that other statistical systems treat as mutually exclusive domains of 'industry', 'occupation' and 'legal status of employment'. The fundamental contribution of the Goldthorpe style of industrial sociology and societal effects research traditions is that they establish that there is no 'standard' labour mobility problem or solution.

Implications for research design

The study of labour flows requires careful consideration of:

- how employment situations are defined in terms of different categories of work logic and marketable skills
- the employment systems which define how labour is developed and deployed.

Insights from contrasting sector case studies of labour mobility dynamics

How can we gain a deeper understanding of the nature of the labour mobility challenges confronting Australian policy-makers today? The literature highlights the importance of grasping complexity within particular labour market segments as well as the common dynamics shaping labour flows across the labour market. A powerful method for identifying what is both generalisable across a

population of interest and irreducibly unique about a particular sub-population within it is the comparative case study method. Such a research design requires selecting cases that help map out the dimensions of diversity of the phenomenon as well as identify any underlying characteristics they share. In pursuing such a strategy we provide three contrasting case studies below. These summarise the dynamics surrounding labour mobility in the red meat-processing, early childhood services and mining sectors. These cases were selected not because they are 'representative' of the Australian workforce at large; rather, they were analysed to capture the dimension of diversity of the labour mobility problem in contemporary Australia. All rely primarily on workers with either basic or intermediate skills. One is predominantly female-based, one predominantly male and the other a mix of both. We also wanted to explore sectors with workplaces in both metropolitan and non-metropolitan settings. There has also been a degree of pragmatism in our case study choices. The first two were included because the Workplace Research Centre has been studying the dynamics of workforce development in them for two-and-a-half years. The third (mining) was included because of its strategic significance for policy in this area. Brief summaries of these synoptic cases are provided below. These provide the basis for a cross-case analysis at the end of this section which identifies what is common across seemingly totally different experiences. This allows us to identify the matters of relevance for future research on this topic.

Case study 1: Meat processing

Meat processing is one of Australia's foremost agribusiness sectors and a long-standing source of regional employment, with most operations located near rural towns. Over the years, the industry has seen substantial shifts in the nature of labour supply and worker mobility. Chief among these are the decreasing seasonal and increasing permanence of the workforce as a whole, a growing diversity of target labour pools, and a trend towards high employee turnover.

The nature of the workforce and working arrangements

Historically, employment at meat-processing plants was seasonal and made use of 'daily hire' regimes to accommodate fluctuations in demand for labour. As such, the industry was reliant on an itinerant workforce, which might typically rotate to other operations, such as sheep shearing, during the 'low season' (O'Leary 2008). Over time, advances in agriculture and transport increased the regularity of livestock provision and gave employers more security to move to weekly hire and permanent contracts (Productivity Commission 1998).

With regard to wages, there has been a gradual changeover from the prescriptive 'tally' systems set down in federal and state industry awards, whereby workers are paid per unit of output, to a model of remuneration based on time worked and/or modified incentive payments. Some major meat processors have introduced guaranteed minimum wages for their employees.

Another significant shift for the industry concerns the nature of skill sets and training within the workforce. Once a 'trade' to be learnt in its entirety, meat processing has evolved into a fragmented production chain system, with each worker performing a single operation along a moving disassembly line (Rafferty & Norton 2010). This task specialisation allows for rapid training of new staff to perform specific roles.

Labour supply

Within the rural regions, where meat-processing plants are typically located, labour pools in general are shrinking as migration to metropolitan centres intensifies. Conversely, town and city dwellers, accustomed to the diverse and readily accessible services and amenities afforded by urban living, tend

to be reluctant to relocate to remote areas (Kandel & Parrado 2005). Where in-migration to rural centres does occur, employment seekers may find themselves drawn to jobs in the mining sector, which has witnessed a recent growth in labour demand and can offer competitive pay rates. In contrast, wages in the meat-processing industry have declined since the 1980s (Rafferty & Norton 2010).

Unlike a majority of production line operations, the task of slaughtering and dismembering animal carcasses is physically intense and demands something of a 'strong stomach'. There are many who would be naturally repelled by the idea of working at an abattoir and, as such, will automatically deselect themselves from the industry's potential labour pools. Furthermore, the increasing specialisation of work roles within meat-processing plants has rendered jobs more mundane and repetitive, making employment in the sector relatively less attractive than it might once have been.

While meat processing is now effectively a year-round operation, labour demand and associated job security still have the potential to be affected by variable climatic and agricultural factors, especially at smaller plants. In recent times, periods of drought have hampered livestock supply, leading to over-capacity and prompting an increasing casualisation of the workforce (Rafferty & Norton 2010). Precarious employment prospects are only likely to further deter workers from seeking jobs in the industry.

In many countries, a common approach to addressing labour shortages in meat processing has been to recruit – on a short-term basis – foreign workers with little formal education and from non-English speaking backgrounds (MINTRAC 2006). In Australia, a number of employers have relied on temporary skilled migration (457) and working holiday (417) visa holders to fill staffing gaps. In this way, pools of what was once seen as temporary or top-up labour are now a significant part of the sector's overall labour supply.

As a result of the industry reaching into more diverse pools of labour, large meat-processing plants are now a kaleidoscope of workers of different ages, genders and backgrounds. Indeed, meat processing has become one of the first ports of entry for individuals moving into (or back into) the paid labour market and who might struggle to find employment elsewhere due to their limited skills or low level of English (Rafferty & Norton 2010).

With the recent tightening of immigration policy, however, there are suggestions that the availability of 457 visas may begin to decline, which could lead to further labour shortages in the Australian meat-processing sector. How this risk is managed remains a significant issue for employers. Some larger operations are seeking to develop relations with local secondary education institutions and to provide outreach to people not in the paid workforce as a means of encouraging ongoing supplies of labour (Rafferty & Norton 2010). New target groups include local Indigenous populations, young trainees, high school students, working mothers and travellers, including the so-called 'grey nomads'.

Turnover

The meat-processing sector is characterised by nominally high levels of labour turnover – around 50% per annum on average – although there is considerable variability in this figure across enterprises (Productivity Commission 1998). This situation may be attributed to a number of factors, not least, the residual seasonality of labour demands and the growing reliance on a transient migrant workforce, as noted above. In addition, many of the aforementioned deterrents to individuals entering the meat-processing industry in the first place – the distasteful or mundane nature of jobs, the lure of higher wages elsewhere – may equally serve to encourage quitting behaviour amongst workers once they have had some experience of the sector and found their way into the labour market.

Reporting case study research by the Workplace Research Centre, Evesson et al. (2009) cite the instance of a human resources manager at an abattoir who noted that 80% of exit surveys indicated that the worker was leaving because he or she had found a job at a mining company.

At a broader level, the meat-processing industry may be particularly appealing to those looking for short-term work only, as the pay prospects are good, relative to other sectors offering seasonal employment, such as fast food and retail (Rafferty & Norton 2010). The mobility of the workforce may further be reflective of its relatively youthful profile, as the probability of job separation is known to decrease with age (Shah & Burke 2004; Mitchell 2008).

Further explanations for the industry's high turnover rates may relate to specific aspects of meat-processing work and to the physical environments in which it takes place, together with the way in which work is organised and employees are managed at such operations. Two issues that appear particularly pertinent are health and safety concerns, and the nature of training and career pathways.

Despite technological advances and significant improvements in occupational health and safety practices, meat-processing work environments remain inherently hazardous. Among the most common risks faced by employees are manual handling injuries; collisions with moving objects; cuts and lacerations; and slips, trips and falls. It has been reported that, in the 2007–08 financial year, there were 632 major workplace injuries in the meat manufacturing, processing, wholesale and retail sector in New South Wales alone (Daley 2010). Whether injured workers choose to quit their jobs or are merely forced to take extended time off work, their absence will create gaps to be filled, and so the churn of labour is perpetuated.

Although the meat-processing industry incorporates skilled work at a number of levels, employers have traditionally invested little in long-term skills development or upgrading. The high rate of turnover in the workforce tends to limit the willingness of both employers and employees to commit to in-depth training programs. In addition, as the nature of meat-processing work has become more fragmented and specialised, there has been a move away from skill-formation approaches that focus on 'trade' or 'craft' development (Rafferty & Norton 2010). Employers are more likely to offer a short induction followed by on-the-job training for particular tasks as required.

Certain other historical factors have been cited to explain the general lack of interest in training in the meat-processing industry (Productivity Commission 1998). These include:

- an emphasis on learning by experience
- a seniority system of promotion
- a cultural 'hangover' from the tally system, where quantity of output is more important than quality.

Lately, however, training systems have become somewhat more formalised and extensive, with a revival of interest in the idea of developing careers or vocations in the sector; yet, fewer than half of current traineeships are seen through to completion, and post-traineeship utilisation rates are low, due to continuing high rates of workforce turnover (Rafferty & Norton 2010). A vicious cycle may ensue, in which enterprises become reluctant to put resources into training, and job holders take steps to leave their employing organisations because of a lack of development opportunities.

Notwithstanding the issue of turnover, data pertaining to overall patterns of employment reveal that average tenure in the meat-processing sector is similar to that recorded for manufacturing as a whole (Industry Commission 1994). This suggests that the industry consists, in crude terms, of a two-tiered

workforce: those who are seeking temporary or short-term employment only (possibly as a stepping stone into or back into the paid labour market), and those who are there (and likely to remain) for an extended period. Rafferty and Norton (2010) in their case studies across four abattoirs identified at each site a 'core' of long-term workers who offered a range of insights into their choice of meat processing as a career. The 'selling points' of the industry were variously deemed to be:

- good income relative to skills and qualifications
- a convenient location
- low-stress work
- a family tradition of, or connection with, work in the industry
- stable employment (in regional areas with high levels of casual work)
- a friendly work environment.

Case study 2: Mining

From 'mining communities' to 'FIFO'

In the past, mining operations in Australia were traditionally accompanied by a growth in community settlements with permanent institutional and commercial infrastructure (Australian Council of Trade Unions 2010). In return for their contributions to the costs of local development, mining companies received benefits from the government in the form of lower rates and taxes. The communities that grew up tended to be self-sufficient and insular, serviced as they were by only narrow-gauge railway and very poor road networks (Chamber of Minerals and Industry, Western Australia 2005).

Over time, a range of social and economic factors have contributed to a rejection of the concept of the 'mining town' (Storey 2001; National Resources Sector Employment Taskforce 2010). These included:

- the higher costs and growing environmental implications of town construction and maintenance
- longer lead time for planning permission
- improved technology shortening project life spans
- the costs associated with eventual town closure
- worker preferences for urban lifestyles
- changing taxation arrangements.

In some senses, the situation may have been self-perpetuating. As mining companies became more reluctant to invest in the housing, roads and social infrastructure necessary to establish and maintain industrial communities, so workers became more disenchanted by the quality of local services and amenities, and shifted their preferences to commuting in from elsewhere (Construction, Forestry, Mining and Energy Union 2010). These developments were accompanied by an ongoing expansion of the mining industry and a growing demand for labour, which placed pressure on housing supply within the immediate area.

What then emerged in place of the 'mining community' was a commuter-based model of labour supply, in which employees live and work at the mine site for a period of time and return to their homes in between rosters. This is the arrangement known as fly-in/fly-out, or FIFO, and it has become the dominant approach to new mine developments in Australia among other countries (Costa, Silva & Hui

2006). In addition, some existing enterprises based in single-industry communities have lately switched from a residential to a commuter basis (National Resources Sector Employment Taskforce 2010).

Under FIFO arrangements, food and accommodation is provided for employees (but not for their families) at the worksite. Schedules are established, whereby workers spend a specified number of days performing duties on site, followed by a shorter number of free days back at home. Common patterns are two weeks on, one week off, or nine days on, five days off (National Resources Sector Employment Taskforce 2010).

The FIFO model is perceived to have a wide range of benefits at enterprise, financial and policy levels. Beyond representing a generally cost-effective way to mobilise the workforce (the price of air travel by far undercutting that of building new houses in remote townships), the system provides more flexibility for peaks and troughs in labour demand and personnel for short-term mining projects. The latter have become more prevalent with the emergence of a market bias towards risk-averse investment in precious metals, such as gold (Chamber of Minerals and Industry, Western Australia 2005).

From the standpoint of the mine workers themselves, notwithstanding the extended absences from home, FIFO allows for greater preservation of existing lifestyles and social networks than would a wholesale relocation. This has been cited as a factor in improving attraction and retention rates (National Resources Sector Employment Taskforce 2010).

On the flip side, some commentators have argued that mining jobs and mining careers have become intrinsically less desirable with the advent of FIFO. Costa, Silva and Hui (2006), for example, cite case study research that suggests women, and mothers in particular, face significant disadvantages under the scheme. These include:

- incompatibility with childbearing plans/pregnancy
- necessary reliance on a supportive partner/extended family to provide child care
- guilt and anxiety at separation from family
- isolation, posing challenges to social and personal life and wellbeing
- intimidation by a prevailing masculine work culture, intensified by the 'live-in' arrangements.

With regard to child care matters, the Construction, Forestry, Mining and Energy Union (2010) makes the point that 'this is not just an issue for most women; it is an issue for men who want to participate meaningfully in the raising of their children'.

In a review of current social research themes pertaining to the mining industry, Solomon, Katz and Lovel (2008) position FIFO as one of a range of measures being taken to increase the pace, scale and rate of production in response to a boom in demand for mineral resources. Extended shifts and round-the-clock rosters are likewise now commonplace, enabling worksites to maintain 24-hour operations and maximise speed, efficiency and reliability.

Intensified work patterns may, like FIFO (and for similar reasons), act as a deterrent to employment seekers joining, or remaining with, the industry, but at a global level these effects are likely to be countered in part by the competitive salaries on offer within the sector – the highest of all industry groups in the Australian economy (ABS 2010). In addition, many companies offer additional financial incentives such as sign-on bonuses and share ownership programs (National Resources Sector Employment Taskforce 2010).

Other issues in labour supply

The transition from home-grown mining communities to commuter-based operations is undoubtedly an overarching theme in the study of mobility within this industrial context. However, there are other factors that should be taken into account when constructing a picture of the ebbs and flows of labour through the mining sector, both in times past and in the present day. These more complex and systemic issues are less easily addressed with a straightforward philosophy of flying in workers to fill jobs.

One area of consideration is the readiness (or otherwise) of mining organisations to capitalise on, and invest in, potential pools of labour. This issue is discussed at some length by the Construction, Forestry, Mining Energy Union (2010). Their analysis contains some back-looking criticism, but it is also relevant to the projected future growth of the mining sector, which will see demand for both labour and skills increase and diversify (for example, Lowry, Molloy & Tan 2006).

The Construction, Forestry, Mining Energy Union's overall contention is that significant numbers of willing and able employment seekers are being excluded from the mining industry by virtue of their abilities, aptitude, OHS or family situation, and that some fundamental redesigning of jobs is necessary in order to cater to a more inclusive labour market. Key to these changes will be new approaches to recruitment and training that widen the scope of eligibility for employment – in particular, to include school leavers and those without formal qualifications – and enable staff to develop skills on the job. The Construction, Forestry, Mining Energy Union maintains that mining companies have for too long relied on 'poaching' skilled labour from other industries and overseas markets, especially via the 457 visa program. Their report also refers to 'an entrenched culture of entitlement by senior management', limiting progression opportunities, together with expectations on workers to pay for their own training prior to taking up jobs in the industry.

Partially underlying the union's concerns is the reality that what was once seen as an inexhaustible supply of young, male, blue-collar labour is drying up with the rise of a more ambitious and assertive 'Generation Y'. This predicament is compounded by the impending mass retirement of the 'baby boomer' generation, with which the mining industry is currently top heavy (Fuller 2009).

Jobs in mining are by all accounts keenly sought after; for example, in March 2010, more than 10 000 applications were received for just 52 positions at Rio Tinto's new Clermont site in Queensland (Caruana 2010). Clearly the challenge for the industry is not so much to maintain an adequate supply of labour, as to reconfigure its skill demands in congruence with the shifting nature of available labour pools.

In a similar vein, mining companies are being forced to think creatively about how working time arrangements can be adapted to encourage wider workforce participation, long hours having been identified as a key driver of employee turnover in the sector (for example, Beach, Brereton & Cliff 2003). Organisations have begun to respond to this issue by, for example, providing part-time jobs and shortened daytime shifts that better meet the needs of women and men with child care responsibilities (Construction, Forestry, Mining Energy Union 2010).

Turnover

While the long hours and potentially disruptive lifestyle associated with FIFO do not appear to be having a detrimental impact on overall labour supply to the industry, indications are that these working arrangements are, in many individual cases, unsustainable and contributing to high rates of turnover within the mining workforce. The Beach, Brereton and Cliff (2003) study revealed that, even

though staff at FIFO-based operations often spoke positively of the scheme, the regular churn of workers through such sites suggested that the system is less than conducive to long-term employment.

It is interesting to note, however, that the increasingly fluid nature of the mining workforce, rather than being regarded as a 'problem', is starting to be used as something of a selling point for the industry, particularly in relation to targeting the 'Gen Y' labour pool (Fuller 2009). Short-term employment, extended time-off periods, and the opportunity to move between jobs and locations (even while remaining with a single employer) may be appealing to a new generation of workers, for whom flexibility, variety and independence are key to job satisfaction.

In sum, the transition to FIFO arrangements, in conjunction with the financial benefits realised by working in the mining sector, has generated a more mobile and in some senses more willing supply of labour to the industry. At the same time, the difficulties associated with a commuter-based model appeared to have rendered the workforce more transient and fickle, as well as serving to exclude or deter particular groups from entering the profession altogether.

Case study 3: Early childhood services

Research on the early childhood education and care (ECEC) workforce tends to be framed around the issues of quality and stability, rather than the movements of workers between jobs or locations per se. Reporting on the first wave of consultations for a new National Quality Framework for Early Childhood Education and Care, the Department of Education, Employment and Workplace Relations (2009) notes that 'workforce issues were consistently raised in all consultation formats, and are widely seen as a key constraint to the successful implementation of the reform proposals'.

Both recruitment and retention represent serious problems for the early childhood education and care industry. Inferior wages, low qualification levels, poor working conditions, and negative perceptions of child care as a prospective career path all serve to create and perpetuate labour and skill shortages within the sector (Evenson et al. 2009). Vacancy rates are high, with both qualified and unqualified job roles becoming harder to fill (Sumison 2007), and annual turnover rates of up to 60% have been reported (Liquor, Hospitality and Miscellaneous Workers Union 2008).

The difficulties of attracting and retaining early childhood education and care workers have led to an increasing reliance on part-time and casual staff, as well as a growing use of labour hire. Workers sourced via these means may be relatively less well suited to child care roles and have little intention of staying in the sector long-term. This instability within the workforce contributes to work intensification for permanent employees (Evenson et al. 2009).

Wages

Low wages are a key driver of turnover in the early childhood education and care sector, as well as representing a deterrent to job seekers entering the profession and a barrier to workers improving their qualifications. The Liquor, Hospitality and Miscellaneous Workers Union reported in 2008 that early childhood education and care staff were generally earning between \$15 and \$19 per hour – approximately \$10 per hour behind the established key classifications for similarly qualified workers.

For qualified teachers, schools may represent a much more attractive employment proposition than early childhood education and care establishments, offering up to 25% higher wages, longer holidays and more time to develop teaching programs (Evenson et al. 2009).

Qualifications and training

Poor qualification levels among child care workers may be regarded as both a cause and an outcome of high labour churn within the industry. Recent figures from the Liquor, Hospitality and Miscellaneous Workers Union (2008) indicate that just 10% of early childhood education and care employees are qualified to university degree level, while between 30 and 45% have no relevant formal qualifications. However, around one-third of the child care workforce holds an Australian Qualifications (AQF) certificate or diploma.

A number of interrelated factors contribute to and compound this situation:

- Service providers may lack the resources (time, money and teaching cover) to facilitate the upskilling of their workforce (Department of Education, Employment and Workplace Relations 2009).
- Employers are less likely to invest in training and development if it is unlikely that workers will stay with them long-term.
- The monetary incentives to workers for upgrading from certificates to diplomas are minimal, despite significant associated increases in regulatory responsibilities.
- As noted above, higher-qualified teachers are more likely to choose to work in schools, where the pay and conditions are better.

Employment conditions and perceptions of the sector

Fenech, Waniganayake and Fleet (2009), along with other commentators, argue strongly that early childhood education and care is a marginalised profession. This assertion is in part self-evidenced by the long-standing differentiations in pay and status between early childhood education and care workers and their primary and secondary teaching counterparts. However, the authors also note that 'poor work conditions, heavy workloads, a lack of time to fulfil multiple responsibilities ... and onerous administrative duties' are contributing to burnout, staff turnover and job dissatisfaction amongst staff in early childhood education and care services.

Fenech, Waniganayake and Fleet (2009) further contend that both state and national policy directives undermine the status of early childhood teachers. They cite the examples that:

- Some state-based teacher registration agencies (such as the NSW Institute of Teachers) do not include early childhood education and care teachers who work with children from birth to five years in preschools or similar settings.
- Australian Government inquiries into teacher education have not, to date, encompassed the early childhood sector.

Cross-case analysis and implications for research design

The key insights arising from this stage of the research are:

- There is not one, standard labour mobility 'problem':
 - In mining there is allegedly insufficient flow of labour into the sector.
 - In meat-processing and child care there is too much flow in and out (that is, excessive churn).
- The changing nature of labour supply does, however, have common effects.

- The root of many mobility problems is related to the structure of jobs, not necessarily excessively ‘immobile’ labour.
- The nature of mobility dynamics can change dramatically over time. They are best understood as occurring in the context of particular employment regimes or skill ecosystems.
 - The clearest case of this is the mining sector. Previously this sector had been characterised by a fairly predictable set of labour flows built around ‘mining districts’ and ‘mining towns’. Much of the growth today is based on ‘fly-in, fly-out’ operations – the polar opposite in terms of the reality of ‘journey to work’ dynamics.
 - An equally dramatic transformation has occurred in meat processing. As recently as 20 years ago this sector was built upon highly skilled day labour that moved from abattoir to abattoir and was paid based on the tally system. The tally system has now been replaced altogether, production has been rationalised into a smaller number of larger abattoirs that rely on a more geographically stable, but lower-skilled workforce with more entry-level workers.
 - Early childhood education and care is different again. Within the early childhood education sector there is relatively stable employment with limited turnover. This is built around the teaching profession. In long day care and before and after school care the core activity is built around a lower skill level, wages are very low and the workforce is part of the low-paid sector – with all its associated churning. This reflects, in part, the historic role of community services work being undervalued work as it was previously performed by women on an unpaid basis. Moves to integrate early childhood education and care, along with the current community worker pay equity case, have the potential to change the nature of the work and associated pay. If this occurs, the mobility associated with the sector will change as part of broader change in the sector employment regime (or skill eco-system).

Insights from Australia at Work

Rich as the findings are from case study work, questions remain about the prevalence of the arrangements and dynamics identified in such research. To help assess this matter, we consider insights available from a recent large-scale longitudinal survey: the *Australia at work* dataset. First we use this source to examine the dynamics of job-to-job mobility in aggregate before and after the recent economic downturn. We then ‘drill down’ and use the data to understand what happened in the three case sectors analysed in the previous section during the Global Financial Crisis.¹

The *Australia at work* study is tracking 8300 workers’ experience of work and working life between 2006 and 2011. Data on the final wave are currently being collected (as at May 2011). Material from the first three waves was examined to yield basic insights into how labour flows have changed over the latest phase of the business cycle. Further details can be found in appendix 1. In short it reveals:

- As with previous business cycles labour mobility rose during the up-swing and fell during the downturn.

¹ Analysis in this section is based on the *Australia at work* study, a project being run by the Workplace Research Centre and funded as an Australian Research Council Linkage Grant jointly with Unions NSW and a network of other unions. Analysis of the kind that follows could also be done using the Household, Income and Labour Dynamics of Australia (HILDA) dataset. At the time this project was undertaken HILDA data on the GFC were not available. Any future researcher on this topic should consider using this dataset to examine these issues. It should also be noted that the NCVET commissioned a complementary study to this one based on the HILDA material (see Watson 2011).

- There were qualitative as well as quantitative changes in these labour flows. In particular, those changing jobs were less likely to move to jobs with paid leave than overall.
- Those who changed jobs were more likely to experience a drop in earnings and hours of work.

This last finding is very important. It is well known that during the Global Financial Crisis aggregate hours fell by more than aggregate employment. A number of commentators asserted that this was evidence of ‘job sharing’, that is, hours instead of jobs were cut to keep people in work. In terms of relevance to this project, mobility out of the labour market was reduced by rationing hours. The data reported in appendix 1 reveal, however, that the only group of workers who, as a group, reported that more of them reduced their hours after the downturn than before, were those without leave entitlements who changed jobs. Indeed, the proportion of workers reducing their hours amongst those who stayed on in the same job or moved to a ‘permanent’ job actually decreased during the depths of the downturn. (See appendix table 1.4 for details.)

To take the analysis further, we explored labour flows in the three case study industries. Our initial findings are summarised in table 4. The sample sizes here are very small and the attrition rates have reduced them even further. Consequently, the data should be regarded as at best indicative and are in no way demonstrating an authoritative trend in these sectors at this time. They do provide, however, the basis for informed hypotheses that can be explored in further research.

This material provides *prima facie* evidence that the impact of the latest cyclical downturn on labour flows was very different between sectors. The classical change in flows was clearly evident in mining, with intakes outweighing departures before and after the downturn and the opposite prevailing during the downturn. In early childhood education and care a very different dynamic prevailed. Among respondents, flows into and out of the sector were pretty evenly matched in all years, with a slight excess of inflow in the downturn and indeed great turnover during this period. This development was quite different from aggregate trends. The numbers from meat processing are too small to draw any major inferences.

Table 4 Labour stability and flows in the mining, meat-processing and early childhood education and care sectors, Australia at Work sample counts, Australia 2006–09

	Mining				Total
	2006	2007	2008	2009	
Remained (<i>n</i>)	104	98	81	70	
Left industry (<i>n</i>)	-	6	10	5	21
Joined industry (<i>n</i>)	-	19	9	16	44
Left study (<i>n</i>)		-	26	15	41
	Meat processing				Total
	2006	2007	2008	2009	
Remained (<i>n</i>)	33	27	19	17	
Left industry (<i>n</i>)	-	6	6	1	13
Joined industry (<i>n</i>)	-	2	-	1	3
Left study (<i>n</i>)		-	10	2	12
	Child care/preschool workers				Total
	2006	2007	2008	2009	
Remained (<i>n</i>)	110	94	67	71	
Left industry (<i>n</i>)		16	19	8	33
Joined industry (<i>n</i>)		14	23	7	44
Left study (<i>n</i>)		-	22	11	33

Notes: Sample sizes are very small and should be regarded as at best indicative. They are reported here to help formulate hypotheses and not to provide robust estimates of trends over time.

Source: Australia at Work. Sample counts for reported industries.

To help sharpen our research questions further we conducted a very preliminary assessment of particular work histories reported in the data to help generate further *prima facie* findings worthy of further investigation. This material is reported in table 5.

A preliminary scrutiny of this material indicates that workers probably move in distinct occupational or vocational ‘streams’. Particular hypotheses worth exploring are:

- Skilled and semi-skilled manual workers move within and between related sectors like mining, construction and logistics (corresponding to classes 7 and 8 in the Oesch schema depicted in table 3).
- Those undertaking less skilled manual work flow between low-skill, low-pay sectors like food processing and other parts of process manufacturing and forestry and agriculture (classes 8 and 9 in the Oesch schema).
- Those undertaking undervalued ‘care work’ move between low-pay services work – but not necessarily community services (class 17 in the Oesch schema, for example, cleaning).

Implications for research

This preliminary consideration of longitudinal data highlights the potential power of statistics for deepening the understandings generated by qualitative research. In particular they highlight the distinctiveness of labour flows by sector, even during a period of macroeconomic turbulence. The consideration of unit records also highlights the potential value of investigating the possibility that the labour market is comprised of a number of distinct occupational or vocational streams. *Prima facie*, the modernised Goldthorpe framework of the kind devised by Oesch appears to provide a useful starting point for ascertaining whether this schema (or something like it) helps makes sense of job-to-job labour flows.

Table 5 Select work histories of Australia at Work respondents from mining, meat processing and early childhood education and care

In 2007	2006	2007	2008	2009
Left mining in 2007	Male, educated to Year 10 or below	Earthmoving construction	Same job (earthmoving construction)	No longer in study
Joined mining in 2007	Male, educated to Year 12	Diesel mechanic, construction company	Diesel mechanic, mining company	New job (leading hand fitter, mechanical/hydraulic repairs)
Stayed in mining	Male, trade qualified	Diesel fitter, coal mining company	Diesel mechanic, mining company	New job diesel fitter (contractor)
Meat processing	Female, educated to Year 12	Meat-processing worker, abattoir	Meat-processing worker, abattoir	Same job
Left meat processing	Male, educated to Year 10 or below	Meat processor, slaughterhouse	Firewood cutter, sawmill	Same job (firewood cutter, sawmill)
Joined meat processing	Female, educated to Year 10 or below	Cleaner/receptionist, motel	Meat processing, abattoir	Same job (meat processing, abattoir)
Stayed in child care	Female, educated to Year 10 or below	Child carer, preschool	Same job (child carer, preschool)	No longer in study
Left child care	Female, degree qualified	Teacher's aide, preschool	Trainee solicitor (traineeship legal services)	New job, legal role with Queensland public sector agency
Left child care	Female, educated to Year 12	Child care worker, child care centre	Barista, café	No longer in study
Left child care	Female, educated to Year 12	After school care, primary school	Food server, takeaway food shop	New position with same employer
Left child care	Male, diploma/certificate	Director, child care centre	Director, child care centre	Same job (receptionist)
Stayed in child care	Female, diploma/certificate	Preschool teacher, preschool	Same job (preschool teacher, preschool)	Same job (preschool teacher, preschool)
Joined child care	Female, educated to Year 12	Waitress, café	Child care worker, early learning centre	No longer in study
Left child care	Female, diploma/certificate	Food preparation, mobile food kiosk	After school care assistant, after school care	New job (program officer, sport & rec.)
Joined child care	Female, educated to Year 11	Bookkeeper, farm cleaning service (self-employed)	Child care worker, child care on the go	Same job (child care worker, child care on the go)

Source: *Australia at Work* Unit Records.

Suggestions for further work

Research can assist in devising improved approaches to managing labour mobility by providing three kinds of information:

- *Foundational*, that which generates robust, new ways of understanding the challenges and opportunities associated with labour flows. Greater clarity of this issue will ensure that any new initiative engages with reality rather than impressionistic or intuitive understandings of it.
- *Strategic*, that which helps public officials to ascertain whether the wider policy mix is appropriate or indeed amenable to specialist interventions in this space.
- *Operational*, that which generates specific insights which could contribute to the design of labour market programs or the content of workforce development and deployment agreements.

It is important that the power of each type of research is appreciated. People impatient for ‘outcomes’ will be attracted to the idea of acquiring operational insights. If the underlying definition of the issues is poor, however, endeavours of this nature will potentially miss the mark. Equally, even if the dynamics are better understood, it is simply not possible to run off and design specific interventions. If the broader policy mix is not supportive or deficient, specific interventions in the mobility space are likely to flounder.

Our assessment is that much of the current literature has not grappled with the changing nature of today’s job-to-job mobility. A lack of understanding here is partly the legacy of a policy regime which has not acknowledged the dynamics of labour mobility as something which is complex and in need of careful attention. Our suggestions of what should be done next are, therefore, in order of importance.

Clarifying what needs to change: mapping labour flows

Overview

Currently we lack a coherent map of how labour actually flows through the economy. Without such a map, understandings and interventions are partial at best, and at worst ad hoc and intuitive. Such a map needs to be empirically based and not simply derived by reassembling categories developed for other purposes (for example, standard industry and occupational categorical systems).

Given the time and resources available for this project, we cannot produce a comprehensive map for the entire economy. We could, however, using unit record data from the *Australia at work* dataset:

- provide a carefully derived map of labour flows in key areas of interest (for example, the three case sectors, plus that which is of most importance for labour market entry: the customer service, that is, retail/hospitality sector)
- having completed an initial documentation, provide a framework for a more comprehensive, economy-wide mapping of labour flows.

Key objective: identify new categories for understanding flows of labour

An example of the type of distinctive categorical system we have in mind is provided by Dunlop’s account, cited earlier, of what non-competing groups in the labour market looked like in the 1950s and 1960s in the United States. It will be remembered this was an untidy set of categories – but that

is what labour markets are like. The aim would be to get categories that capture the key realities of flow instead of relying on categories devised for other purposes and which consequently provide only a partial way of understanding what labour flows today actually look like. The debates and insights concerning schemas like those of Goldthorpe, complemented by Marsden's powerful (but minimalist) categories for understanding employment systems, could provide a very powerful point of departure for such an analysis.

Approach: intimate engagement with unit records to identify patterns

In essence this approach would involve researchers working with unit records from the *Australia at work* data. Beginning with the case study industries, they would test to see whether labour moves into and out of these sectors along the lines hypothesised at the end of the previous section. For example, respondents beginning in mining would be tracked to see where they end up. Equally, respondents joining mining in later waves of the study would be tracked to identify their origins. To help order the process, we would initially 'match' sectors and test whether the flows were there. The following sectors would be matched:

- Mining would be matched with construction (and if resources permit: manufacturing and logistics).
- Children's services would be matched with community services and business services (especially support work like cleaning).
- Because of its small numbers, our analysis of meat processing would centre on food manufacturing more broadly and seek out differences in flows between workers moving in metropolitan and regional labour markets.
- Given that nearly all labour mobility research identifies age as a key variable and notes that the young in particular are mobile, it would be important to study flows in and around the customer service sectors of retail and hospitality.

The variables that would be examined in seeking out patterns would be:

- activity of the employer (that is, industry)
- highest educational attainment
- size of the workplace
- size of the enterprise
- worker's skills level
- worker's job description/occupation
- age
- sex
- supervisory status
- tenure in job
- form of employment
- marital status and care obligations
- local labour market setting (that is, metro or non-metro).

The process would be an iterative one:

- Researchers would acquaint themselves with the unit records of the matched sectors.
- *Prima facie* patterns would be identified.
- Data would be coded with derived variables according to these patterns.
- Data could be reassembled to report on the distribution of workers, based on clusters of common characteristics.

Outcome

Instead of relying on intuitive assessment of how flows represent ensembles of particular variables, we could reach a more robust empirically derived assessment of what the features are that shape movements over time through distinct labour markets. We are also realistic. We do not expect the entire population within the sectors of interest to all be so classified. The aim would be to identify the key ‘streams’ of labour flowing through the labour market. Having identified these, an assessment could then be made on how best to manage them. The key outcome will be that we will not have a one-size-fits-all approach to supporting mobility; instead, we can have an empirically informed debate on whether streams are amenable to reform, and, if they are, how best to modify them.

Identify the pre-conditions for successful interventions

Overview

As the best of the recent literature reveals, levels of mobility are institutionally specific. But the institutional differences are not simply a matter of a particular program or isolated policy initiative. Careful cross-country analysis would help to reveal what clusters of policy or ‘workforce mobility and development models’ are necessary for making a difference. The most useful to compare in this regard would be:

- Sweden (this country was initially the world leader on mobility policy. Today, it has a very average labour market performance. Analysis of this experience would identify the limits of policy innovation in this area if it is not matched with supportive policies elsewhere.)
- Norway (one of the few countries to have successfully managed a resources boom over two decades)
- Select states or sectors in the US. (It is not possible to study the whole country, but given our interest in job-to-job mobility and regional dynamics, it is worth learning from localised initiatives in that country to enable an understanding of both what is possible and impossible in a liberal market economy.)

Key objective

To understand how different ensembles of policy shape the flows of labour in particular economies.

Approach

Undertake a comparative analysis of the three countries noted. Sources would primarily come from published academic and policy research. Having exhausted these sources, key informants in the countries of interest – usually recognised policy researchers – would be interviewed to get the latest information. They would also be encouraged to critique our analysis based on published sources.

Outcome

Clear understanding of how the wider mix of policies influences labour mobility. Special attention would be devoted to the Swedish experience given:

- Historically its policies were the most advanced in the world and very successful in nurturing widespread mobility.
- As a result of ‘excessive’ mobility’, that country then embarked on extensive work ‘humanisation’ in the 1970s and 1980s.
- Policy has subsequently evolved, but still actively supports rapid redeployment of its labour force to where economic need is greatest.

Learn from local failures as well as nascent successes

Overview

For this scoping paper we conducted initial analyses of two local attempts to manage labour mobility more effectively.² These experiences and others like them deserve deeper analysis. While studying success and ‘best practice’ has an obvious appeal, reflections on failure or limited success can be just as, if not more, instructive. Greater understanding of constraints helps evidence to determine the limits of the possible. Such research need not be purely ‘analytical’. If focused on the case study sectors, it could gather data to help a very specific policy question; for example, how viable is it to have ‘mobility agreements’ between employers in different sectors to nurture more orderly approaches to workforce development and deployment? New data and analysis on this question could help to ensure that policy moves forward with a solid evidence base. Just as importantly, it could mean that valuable resources are not wasted on initiatives that are based on expecting employers to show collective self-reliance in this domain of labour market operations. If they cannot be expected to be self-reliant, the need for other policy interventions would then be more clearly established.

Objectives

- to identify how best to design new labour market programs to improve mobility
- to ascertain the viability of the federal government’s playing a brokerage role in settling multi-employer agreements on the fair and efficient development and use of labour amongst employers drawing on the same streams of labour.

Approach

Labour market program design study: conduct studies of recent interventions directed at improving labour mobility in Australia. These studies would be based on direct interviews with all relevant key players, along with a number of employers and workers directly involved in the intervention. Ideally, interviews would be face to face, but phone interviewing would also be possible.

² These were the Australian Regional Agricultural and Mining Skills (ARAMS) initiative and the so-called ‘Fire and Ice’ initiative. The former endeavoured to improve the management of labour flows between the agricultural and mining sectors in three regions. The latter was an initiative of Gold Coast TAFE, which endeavoured to organise a flow of hospitality workers between the Gold Coast and southern state ski fields to provide continuity of employment for workers when demand dropped for their labour in the region in winter and summer respectively. See, for example, the Department of Education, Employment and Workplace Relations, Minerals Council of Australia and the National Farmers Federation (2009).

Workforce development and deployment agreement study: this would take the form of a potential draft agreement being generated by the research team, which would be ‘road tested’ and modified in light of comments provided by key stakeholders. An assessment of the viability of the agreement being taken forward by the parties would be provided.

Outcomes

Labour market program study: specific findings about what is likely to work and not work in light of recent experience would be provided. Recommendations on how government support could overcome potential flaws in program design would be outlined.

Workforce development and deployment agreement study: compile an account of the ability and interest of employers in the sectors studied to assume responsibility for developing and deploying their workforce responsibly. Possible options would be identified in relation to the course to take if this interest or capability is lacking. This latter aspect will require completion of the other proposals noted above.

Conclusion

Prima facie problems of labour mobility appear relatively straightforward: how do we move people who need work to employers with jobs needing to be done? But appearances can be deceptive. As is well known, the people needing work rarely have the skills that employers with excess demand require. Just as importantly, redeploying workers with the necessary skills from a current position in the labour market to another is also difficult.

Any lasting improvement in the flow of workers within the labour market requires a better understanding of the nature of current labour flows and the types of interventions that can improve them. This paper has identified the critical issues that must inform such an analysis and the types of material that can ensure that future interventions are more evidence-based. But research alone is never enough. There is a need for all key stakeholders concerned to contribute to making the changes required to deliver enduring improvements to the way labour is deployed (as well as developed). Without such a change, any interventions are likely to be, at best of limited efficacy, or at worst 'solve' problems in one sector by merely shifting the problems elsewhere.

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Appendix 1

Changing flows and forms of employment before and after the Global Financial Crisis: insights from the Australia at Work Project

In this appendix we explore how the form of employment has changed for individual employees over the last two years. We do this by examining the experiences of the same employees as they navigated, first, the peak of the cycle (2007 to 2008) and, then the initial phase of the GFC-induced downturn (2008 to 2009).

We know from ABS labour force data that there have been intriguingly divergent trends in unemployment, employment and hours of work since the onset of the GFC. Between the 2009 wave of the survey and the last, unemployment rose to 5.8%, the highest level since 2002. The number of employed persons rose marginally by 35 900, and aggregate hours of work fell by 2.8% – the equivalent of 270 000 effective full-time jobs. ABS material also revealed that behind these aggregate trends other changes have been underway. Some industries such as manufacturing have lost tens of thousands of jobs, with others like health care and social assistance have grown commensurately. While many males have lost full-time work, on the whole, women gained full-time jobs and there are more part-time workers of both sexes.

How are these distinct developments connected? It has been speculated that the relations between these data are indicative of rising levels of de facto work-sharing (see for example, Gillard 2009; Davis 2009; Wragg 2009; Henderson 2009). That is, those in employment are assumed to be cutting their hours, to share the available work more broadly. An allied assertion from commentator Gerard Henderson and finance industry analysts, including those from CommSec and Macquarie Bank, has been that increased labour market flexibility – such as increased levels of casualisation – has allowed employers to vary the hours of their employees more directly (see for example, Davis 2009; Henderson 2009).

Analyses of the 1990s' downturn point to a less flattering story. For example, after examining labour flows in the early 1990s, Campbell and Webber (1996) noted *that one of the key dynamics in that recession was employers' greater use of casual modes of engaging labour*. The recession and recovery were critical to entrenching a longer-term structural change involving increased reliance on non-standard forms of employment. The longitudinal nature of our data allows us to explore these issues with greater sensitivity than has previously been possible. In this appendix we explore three questions regarding forms of employment:

- 1 How has the proportion of workers engaged on the basis of different forms of employment changed either side of the peak in the trade cycle?
- 2 How have hours and earnings changed for people in different forms of employment?
- 3 How have the characteristics of those in different forms of employment and continuity of employment experiences changed as conditions have changed?

Lost leave entitlements and workers who change employers

We begin our analysis by examining the changes in employees' reports of paid leave entitlements across the different survey waves. These findings are summarised in table A1.1. This table reports on

the proportion of employees who keep, gain or lose access to paid leave entitlements between survey periods. It provides an account of year-on-year change for the each of the two-year periods of 2006–07, 2007–08 and 2008–09. Only respondents who were employees in the latter year are included in the analysis. Employees were grouped into one of six categories:

- those with paid leave entitlements in both years
- those with no paid leave entitlements in both years
- those who reported paid leave entitlements in the latter year after not reporting them in the previous year (that is, ‘gained’ entitlements)
- those who no longer had paid leave entitlements after reporting them in the previous year (that is, ‘lost’ entitlements)
- those who became an employee (after either not working or self-employment in the previous year) and were entitled to paid leave (that is, ‘moved to paid leave’)
- those who became an employee (after either not working or self-employment in the previous year) and were not entitled to paid leave (that is, ‘moved to no paid leave’).

Table A1.1 Change in employees’ paid leave entitlements in main job, 2006–09, %

	2006–07		2007–08		2008–09	
	%	n	%	n	%	n
Paid leave in latter year						
Paid leave both years	68.5	4544	60.2	3997	69.9	3731
Gained paid leave	5.5	323	6.1	323	4.3	184
Moved to paid leave ^(a)	2.2	161	8.8	210	6.4	121
Sub-total (had paid leave)	76.2	5028	75.1	4530	80.6	4036
No paid leave in latter year						
No paid leave both years	18.5	1062	12.7	708	12.0	524
Lost paid leave	2.8	172	2.8	159	3.2	142
Moved to no paid leave ^(a)	2.5	205	9.4	146	4.2	71
Sub-total (no paid leave)	23.8	1439	24.9	1013	19.4	737
Total	100.0	6467	100.0	5543	100.0	4773

Notes: (a) ‘Moved’ implies the respondent was not an employee in the previous year and moved into a job as an employee.
Population: Employee in the latter reference year.
Weights: Longitudinal 0607; 0708; 0809.

Source: Australia at Work W1 to W3.

As noted previously, in a longitudinal study the sample matures over time. The data report on people who were either working or looking for work in March 2006. Not surprisingly, as people get older they are more likely to move into jobs with paid leave. Table A2.1 shows that employees who reported paid leave in the following year of the survey steadily increased over time from 76% to 81%. In the period 2007-08, the proportion of employees reporting paid leave in consecutive surveys dipped to 60%, and this appears to be a result of more change between jobs with and without paid leave. There was an increase in those who entered into a job with paid leave (15% in total) and people who entered into a job without paid leave after not working or being self-employed (9%). The next table further examines job change over the survey period.

Table A1.1 provides some clues as to the impact of the downturn, in terms of respondents reporting they entered a job with paid leave. The proportion of employees who reported paid leave in one year, after not doing so in the previous year, peaked just as the economy did between 2007 and 2008 (at a total of 15% of employees), and falling back to 11% in the most recent wave. Table A2.1 implies that

the proportion of workers retaining, gaining and losing leave entitlements changes considerably from year to year. It is important to examine whether this arises from employers changing entitlements for continuing employees or whether it occurs for those who change jobs or re-enter paid employment. Before examining this issue in detail, it is helpful to understand how many people stay in the same job from year to year and how they may enter a new employment relationship. Table A1.2 summarises the nature of job continuity and change between the survey waves.

Table A1.2 Change in employer or employment situation, 2006–09, %

	2006–07		2007–08		2008–09	
	%	n	%	n	%	n
Same employer or business	78.2	6390	63.8	5162	69.7	4739
Different employer or business	14.8	1127	16.9	1205	14.7	860
Gained employment in the latter year	2.8	288	15.2	257	9.7	158
No longer employed in the latter year	4.3	323	4.2	299	5.9	342
Total	100.0	8128	100.0	6923	100.0	6099

Notes: Population: Employed in one of the reference years.
Weight: Longitudinal 06, 07, 08 & 09.

Source: Australia at Work W1 to W3.

As is well known, movement between employers, as well as into and out of employment, is closely associated with the business cycle. Within our survey population, as the economy peaked, the proportion of the workforce remaining with their same employer fell from 78 to 64%. As it slowed, the proportion remaining stable increased to 70%. The proportion of people who gained employment in the survey period fell from 15 to 10%. This is typical of a slowdown. Not only do more people lose work, fewer change jobs than was previously the case.

To get more insight into how the downturn is affecting employees' entitlements to paid leave, it is useful to examine how, if at all, this changes as workers change jobs. Authors such as Campbell and Webber (1996) have noted that it is at the point of recruitment that employers have most capacity to dramatically change employment forms. Table A1.3 summarises the data on how change in entitlements to paid leave differs between three distinct groups of workers, described in Table A1.2:

- those who remain with the same employer between survey waves
- those who report a different employer between survey waves
- those who were not employed in the previous wave but are now an employee.

The table highlights the very different outcomes, in terms of paid leave entitlements for employees, depending on whether they remain with employers or were engaged by a new one. A greater proportion of employees who remain with the same employer report paid leave entitlements in both reference years – at 84% in the last survey wave. However, 'conversion' into paid leave entitlements is quite low, at around 3%.

The situation for those who change jobs and join a new employer is quite different. This is the group dealt with in the middle rows of table A1.2. What is most striking about this group is that significantly fewer employees were upgraded to paid leave status in the most recent survey period: only 14% compared with over one in five (21%) between the previous two waves. Correspondingly, a larger proportion reported losing leave as they changed employer: 14% in the most recent wave compared with 10% previously. Indeed, in aggregate among employees who changed employer in the most recent wave, the total proportion reporting they did not get paid leave was 34%, an increase from 30% of the previous wave.

The bottom rows report on those who had not previously been employed and became employees in the year of the survey. This group is comprised of two very distinct sub-groups: those who had previously been unemployed or out of the labour force altogether and those who had taken extended leave. The former are likely to have limited capacity to gain paid leave initially; the latter are, by definition likely to return to a position with paid leave entitlements. As the economy prospered between 2007 and 2008 strong economic growth increased both the demand for labour and job quality, as measured by access to leave entitlements. This explains the shift to higher levels of paid leave in this period. Table A1.2 showed that, as the economy cooled between 2008 and 2009, the proportion of people moving from unemployed and non-employed to employed status fell from 14 to 8%. This means that the proportion of those ‘moving to a new job with paid leave’ in this group rose dramatically. This is because it is now made up of a much higher proportion of those on leave returning to work. As noted, this is a sub-group that, by definition, is most likely to have access to paid entitlements.

Table A1.3 Change in paid leave entitlements in main job by change in employer, 2006–09, %

	2006–07		2007–08		2008–09	
	%	n	%	n	%	n
Same employer						
Paid leave in latter year						
Paid leave both years	77.3	4160	80.5	3541	83.8	3379
Gained paid leave	3.1	152	3.4	128	2.6	88
Sub-total (had paid leave)	80.4	4312	83.9	3669	86.4	3467
No paid leave in latter year						
No paid leave both years	18.4	866	14.6	544	12.3	411
Lost paid leave	1.1	55	1.5	57	1.3	47
Sub-total (no paid leave)	19.5	921	16.1	601	13.6	458
Total	100.0	5233	100.0	4270	100.0	3925
Different employer						
Paid leave in latter year						
Paid leave both years	39.7	396	42.5	466	45.7	359
Gained paid leave	18.3	171	20.8	195	14.7	96
Moved to paid leave ^(a)	5.4	61	7.1	83	5.9	42
Sub-total (had paid leave)	63.4	232	70.4	278	66.3	138
No paid leave in latter year						
No paid leave both years	22.5	205	17.2	165	17.3	114
Lost paid leave	12.0	117	9.7	102	13.6	95
Moved to no paid leave ^(a)	2.2	26	2.6	36	2.8	24
Sub-total (no paid leave)	36.7	143	29.5	138	33.7	119
Total	100.0	976	100.0	1047	100.0	730
Gained employment						
Moved to paid leave ^(a)	34.8	88	45.1	117	58.8	72
Moved to no paid leave ^(a)	65.2	170	54.9	209	41.2	46
Total	100.0	258	100.0	226	100.0	118

Notes: (a) ‘Moved’ implies the respondent was not an employee in the previous year and moved into a job as an employee.
Population: Employees in the latter reference year.
Weight: Longitudinal 0607, 0708, 0809.

Source: Australia at Work W1 to W3.

The data reported in table A1.3 highlight the importance of paying particular attention to separating out what has been happening to those who change employer from those who have continuous engagement between waves of the survey and those becoming employees where previously they had

no job. For the remainder of this appendix we report separately on employees by whether they have paid leave or not and we cross-reference this with whether they remained with or changed employers between different waves of the survey. Organising the data according to these categories sheds important new light on how different groups of employees are experiencing the downturn. We are especially interested in how variables most central to labour market adjustment – hours and earnings – have changed for these different groups of employees.

Changes in hours and earnings: Where labour adjustment is occurring

The key findings about how hours have changed either side of the cyclical peak are summarised in table A1.4. It reports on the proportion of employees with and without paid leave entitlements in the last reference year and whether they have experienced change in their hours of work between two survey waves.

Table A1.4 Change in usual hours in main job by paid leave entitlements in the latter year, 2007–08 & 2008–09, %

	Same employer				Different employer			
	Paid leave		No paid leave		Paid leave		No paid leave	
	2008 N = 3660	2009 N = 3449	2008 N = 592	2009 N = 449	2008 N = 741	2009 N = 495	2008 N = 294	2009 N = 228
Increase >2 hrs	36.0	23.1	42.4	27.1	53.8	43.4	49.0	35.3
No change	32.3	52.8	20.5	43.5	13.1	28.8	9.0	18.5
Decrease of >2 hrs	31.7	24.1	37.1	29.4	33.1	27.8	42.0	46.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes: Population: Employees with known form of employment in latter year.
Weight: Longitudinal 08; Longitudinal 09.

Source: Australia at Work W1 to W3.

One of the most striking developments summarised in table A1.4 is the relative ‘cooling’ of the labour market. As noted earlier, it is well known that levels of job change fall in downturns. Not only do fewer people change jobs, but across the board fewer people change their hours. In the case of employees with paid leave who remained with the same employer, the proportion reporting unchanged hours increased from 32% in 2008 to 53% in 2009. Among those with no leave and who changed jobs, the proportion of those with unchanged hours rises from just under one in ten (9%) to around one in five (19%).

And while significant attention has been devoted to the fall in aggregate hours worked, around one-quarter of those with the same employer increased their hours, as did well over a third of those who changed employer. The most intriguing finding in our study concerns the proportions reporting falls in hours. Clearly the fall in aggregate hours has not come from employees remaining with the same employer, nor has it come from those who changed to a job with paid leave. In all of these cases the proportion reporting fewer hours fell, roughly, from around a third to around a quarter. The only deviation from this trend was among those changing employer and ending up in a job without paid leave. The proportion of this group reporting fewer hours rose from 42 to 46% from 2008 to 2009. On the basis of these data, neither the ‘work-sharing’ nor the ‘more flexible labour’ story have much support. Instead, among workers who were either in, or looking for, work in 2006, the fall in hours appears to have come from fewer employees increasing their hours compared with previous years and a fall in hours among employees without paid leave entitlements.

The situation concerning annual earnings is a little different. The relevant data are summarised in table A1.5. In contrast to the situation on hours, there is far less evidence of labour market ‘cooling’. The proportion of employees reporting no change in annual earnings increased a little or not at all; and this is small in scale and comes from a low base. For example, in the case of those who remained in the same job with no paid leave entitlements, the proportion reporting ‘no change’ rose from 7 to 10%. Despite the economic downturn prior to the survey period, over half of those without leave and around two-thirds of those with paid leave reported their annual nominal salary had increased from 2008 to 2009. The proportion reporting increases was, however, down from 2008 levels and this was offset by the increase in the proportion of employees reporting a fall in their annual earnings.

Table A1.5 Change in yearly salary in main job by paid leave entitlements in the latter year and change in employer, 2007–08 & 2008–09, %

	Same employer				Different employer			
	Paid leave		No paid leave		Paid leave		No paid leave	
	2008 N = 3203	2009 N = 3127	2008 N = 505	2009 N = 391	2008 N = 624	2009 N = 448	2008 N = 247	2009 N = 199
Increase	71.4	65.6	57.4	53.9	75.9	66.5	63.5	52.7
No change	8.6	10.3	7.3	9.7	2.8	4.1	2.6	4.8
Decrease	19.9	24.1	35.3	36.4	21.3	29.4	33.9	42.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes: Population: Employees with known form of employment in latter year.
Weight: Longitudinal 08; Longitudinal 09.

Source: Australia at Work W1 to W3.

Greater proportions of employees without paid leave are more likely to report a lower income than the previous year – 36% of those with the same employer and 43% with a different employer. However, employees who appear to be affected by the economic downturn, again, appear to be employees with a different employer, as the proportion of this group who reported lower earnings increased in the last survey period. The proportion of employees who changed employer, had paid leave in the latter year and reported lower earnings increased from 21% to 29%. And their counterparts without paid leave who reported lower earnings rose from 34% in 2008 to 43% in 2009.

In summary: who are the shock absorbers?

It is clear that, on the question of adjustment in hours, those bearing the greatest burden are those starting with new employers in jobs that do not provide paid leave. When considering ‘downward’ adjustment in earnings, this group is joined by those without leave who continue with the same employer. How, if at all, has the composition of those who lost leave entitlements between the most recent and previous waves of the survey changed? The findings are summarised in table A1.6.

It is well known that casual workers are typically female, young, part-time and low-skilled. What is interesting to note, however, is that the composition of the group of workers who are no longer entitled to paid leave has changed over the survey period. Between the two most recent survey waves, two key shifts have occurred. Firstly, the proportion of males who lost paid leave entitlements has increased from 39% to 55%. In addition, the proportion of employees who are aged over 25 who have lost paid leave has also increased, up from 64% to 69%.

Table A1.6 Employees who are no longer entitled to paid leave compared to previous year, 2006–09, %

	2006–2007		2007–2008		2008–2009				
	'Lost'		'Lost'		'Lost'		All		
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	
Sex									
Male	47.1	83	51.3	39.2	59	50.8	54.5	75	50.9
Female	52.9	89	48.7	60.8	103	49.2	45.5	68	49.1
Age group									
Below 25 yrs of age	25.9	42	20.1	36.2	50	15.8	31.1	35	12.0
25 yrs and above	74.1	130	79.6	63.8	112	84.1	68.9	107	87.9

Notes: 'All' refers to all employees entitled to paid leave in the latter year.

Population: Employees who reported losing paid leave entitlements since being interviewed in the former year.

Weight: Longitudinal 06-07, 07-08 & 08-09.

Source: Australia at Work W1 to W3.

This appendix has given us new insights into how the nature of working life is evolving by drawing on the longitudinal nature of our data. We opened by confirming the well-established truism: levels of job changing drop during a downturn. But among those who are changing employers, there is a disproportionate growth in the proportion of employees without paid leave entitlements. This provides a window on the future. After the last two recessions non-standard employment grew significantly. We appear to be on track for repeating this trajectory out of the latest downturn.

More significant is what has not been happening in our sample. For most categories of worker, hours are not falling, nor are they rising. Clearly many are 'battening down' their hours and their job changes. The only groups who have experienced a noticeable reduction in hours are those moving to jobs without paid leave. These are arguably the most vulnerable employees in the workforce. The earnings story is similar. The majority of workers – indeed as many as 71% of continuing employees with paid leave – report increased annual earnings. The largest proportional growth in the employees not reporting a rise in annual earnings occurred among those who changed employer. Indeed, among those without paid leave who changed employer, a little over two in five report reduced earnings – up from a third in the previous wave.

So how do findings help make sense of the divergent trends in employment and hours noted earlier? Among our survey population the fall in aggregate hours appears to be arising from a reduced number of workers increasing their hours and a growing number of 'leave-less job changes' working fewer hours. Clearly it is those without paid leave, especially when they change jobs, who are the prime bearers of labour adjustment. The visions of 'time-poor', extended hours workers sharing their work and ongoing, flexible labour adjusting hours spontaneously to a downturn make for good news copy. These narratives, however, do not account for reality. For most workers in our study, the past year has not involved 'crisis' or even a personal 'downturn' – at worst for most it has been a personal 'slowdown'. Those actually taking the shock of 'crisis' and encountering serious drops in hours and earnings are those least able to afford it. This is indicative of the inequality and fragmentation that has been a growing feature of our labour market for the last 30 years (Watson et al. 2003, chapter 6).

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