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**“YOU GET REALLY OLD, REALLY QUICK”:
INVOLUNTARY LONG HOURS IN THE MINING INDUSTRY**
(LONG TITLE 69 CHARACTERS)

INVOLUNTARY LONG HOURS IN MINING
(SHORT TITLE FOR HEADER 28 CHARACTERS)

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“YOU GET REALLY OLD, REALLY QUICK”: INVOLUNTARY LONG HOURS IN THE MINING INDUSTRY

Abstract

Is there a job quality problem in mining? Is part of this problem that mining employees are working involuntary long hours? If so, how extensive is this problem? What is the impact, if any, of involuntary long hours in mining on family life? And how much control do mining employees have over their working time arrangements? What are the possible policy responses? We address these questions through analysis of data from the Australian Bureau of Statistics, the Australian Work and Life Index survey, a survey of employees in Queensland and qualitative interviews with 135 people associated with the Queensland mining industry. We find evidence of substantial involuntary long hours in mining, closely related to 24-hour operations and twelve hour shifts, with adverse implications for the work-life balance and worsened where employees lack input into the design of rosters. The findings suggest that, in order to promote ‘good jobs’ in the mining industry, there is both a need to revisit protections for employees against being forced to work ‘unreasonable’ hours above the ostensible national standard of 38 hours per week and strong support even amongst mineworkers for a ceiling on hours worked per week.

Keywords:

long working hours

mining industry

twelve hour shifts

work-life balance

unreasonable hours

job quality

Fair Work Act

Introduction

Job quality typically encompasses a number of concepts: security, skills and training opportunities, ability to combine work and family life (including gender equity), and working conditions, which includes work intensity and the length of working hours (Erhel & Guergoat-Larivière 2010). Within Australia, much of public debate over the past decade has focused on three interrelated aspects: long working hours, work-life balance and work intensity. This is in no small part because full-time Australian employees work long hours (Campbell 2002), and these hours increased substantially during the 1990s. That said, the circumstances in which those hours are worked have been subject to debate, with some writers focusing on long hours as an expression of employee choice (eg Wooden 2007) while others see it as an outcome of employer decisions (Campbell 2002).

The mining industry has been a particular focus of attention regarding working hours. Mining was the first industry to achieve a 35 hour week but it has, in recent years, become characterised by long hours – indeed, the second longest of any industry, next to road transport (ABS Cat No 6306.0). It was the site of a recent case – the first – in which an employee sought to prevent his employer from requiring him to work ‘unreasonable’ additional hours (FMCA [2009] 881). The mining industry these days is characterised by three inter-related features: 12 hour shifts, mandatory, regularised overtime and normal weekly hours above the 38 hour per week that is technically the national standard for ordinary-time hours (Heiler et al 2000). One might expect a high incidence of mandatory overtime to be associated with many employees working involuntary long hours – that is, working long hours (above the national standard 38 hour week) while preferring fewer hours. On the other hand, it could be argued that these long hours simply reflect workers’

preferences to work as many hours as they can to maximise earnings, and that there is no ‘long hours problem’ in the mining industry. Thus conventional theory in labour economics would tell us that workers will be attracted to jobs that match their preferences for work and leisure, so workers who are dissatisfied with their hours will leave and find jobs elsewhere (eg Ehrenberg & Smith 1988:356). Thus in the liberal economic model, provided there are no significant impediments to mobility, any dissatisfaction with working hours should be only transitory. Our interest in this paper centres on whether workers in the mining sector work hours that align with their preferences, and the causes and consequences of this consonance or dissonance. To this end we ask five related questions:

1. Is there a job quality problem in mining?
2. Is part of this problem that mining employees are working involuntary long hours? If so, how extensive is this problem?
3. What is the impact, if any, of involuntary long hours in mining on family life?
4. How much control do mining employees have over their working time arrangements?
5. What are the possible policy responses?

Our paper addresses these questions in sequence. Our data show that involuntary long hours, intertwined with shift patterns, represent a significant problem of job quality in mining, that this has adverse implications for the work-family life balance, and that the problem is exacerbated by lack of employee control over hours. There is a need for policy change in this area. First, though, we outline some of the relevant literature and our methodology, and provide the background to the re-emergence of long hours in mining.

Long Hours and Mining in the Literature

Amongst nine Organisation for Economic, Co-operation and Development (OECD) countries examined by Jacobs and Gerson (2001:93-95), Australia had the highest proportion of workforce working more than 50 hours per week. On one side of the debate about long working hours stand those who argue that, 'for many people, long hours of work are not imposed on them by uncaring employers but are the result of workers exercising their preferences' (Wooden 2007) and that the 'ideal worker norm is closely connected to long work hours' (Drago, Wooden & Black 2009:591). On the other side are those like Campbell (2002) and Heiler et al (2000) who express concern about the implications of long hours and the growth in people working 'unsociable hours' leading to 'perceptions of ever-increasing time pressures' and a 'perverse result' of economic progress in the form of a 'maldistribution of working hours' (Bittman & Mahmud Rice 2005:20; see also Bittman 1999). It is a phenomenon that has been observed across a number of countries (Garhammer 1999; Schor 1991; Chan 2001). Much of this literature expresses concern about the link between long hours and the balance between work and personal lives (eg Pocock 2003, RFA 2007).

Declining satisfaction with the balance between work and family life is more likely amongst workers who report increases in their hours worked, or who report increases in the intensity of work (Department of Industrial Relations 1996:318). Alexander & Baxter (2005:18) note that 'the literature surrounding work-family balance recognises that the interplay between the work and home environment is crucial to the understanding of individual and family well being'. They suggest that long hours in the workplace are associated with 'less favourable outcomes' for parenting and they also 'recognise that events that affect the feelings, attitudes and experiences of a parent in either the family or work environment can "spill over" to other spheres of a parent's life' (Alexander & Baxter 2005: 25). Another study using longitudinal data from the Household, Income and Labour Dynamics in Australia survey, found 'overall

father's satisfaction with their work hours decreases with the number of hours worked that increases beyond the standard working week' (Gray et al. 2004:269).

The struggle over working hours has been fought in many industries but few more so than mining. In 1970, coal miners were at the forefront of the move to shorter hours, winning a 35 hour week, with the working day reduced from eight to seven hours (Thomas 1983). Few other industries achieved this, with most settling for a 38 hour week in the early 1980s. Through this period to the 1980s, the industry operated in an environment of high coal prices and highly regulated industrial relations (Di Mila & Bowden 2004). There was a permanent workforce with limited shiftwork restricted to eight hours. In 1988, as part of a national 'award restructuring' process, the specialist tribunal granted increased flexibility to employers including an extension of shift lengths from seven to eight hours, with longer shifts by agreement, and continuous production including six-day-a-week coal production. Under pressure from the tribunal, the unions negotiated with employers for new work models with enhanced numerical and functional flexibility (Barry, Bowden & Brosnan 1998). In 1995, roughly one third of mining workplaces had at least some employees on 12 hour shifts. This was mainly concentrated in metals mining as coal mines, being more highly unionised, were less likely to have long runs of consecutive shifts (Heiler et al. 2000). Katherine Gibson, in her study of four Queensland mining towns, found a negative reaction to long hours worked even then through extensive overtime. She reported that some wives in mining communities had begged their partners to leave the mines to save their marriages and that they had forced their partners to make choices 'between them and their families and the family versus mining and the money' (Gibson 1994: 63-75).

Other institutional factors moved against the unions, including, from 1996, the coming to office of a conservative (Liberal-National Party) federal government that introduced legislation delivering flexibility in work scheduling and employment sought by employers. Companies were able to use individual contracts to undermine collective organisation; seniority, which protected union activists against targeting for dismissal, was abolished as a criterion for determining order of redundancy; and perhaps most importantly, mining companies were permitted to make unrestricted use of contract labour, often non-union and able to be used to maintain production during disputes. These moves can be depicted as part of a march toward global integration (Robinson 2010: 290) and the standardisation and discipline of labour (Jessop 2002:14). Most coalmines joined metals mines in moving onto 24 hour operations, first of all through rotating eight hour shifts, then on rotating twelve hour shifts.

The move to longer hours in mining is inextricably linked to the introduction of 24 hour operations and twelve hour shifts. With four crews, a minimum of 42 hours (one quarter of the hours in a week) per week per worker is necessary to ensure that machinery is being operated 24 hours a day, seven days a week, though usually this would be averaged over a roster cycle that lasted anything from 16 to 28 days. With changeover times, 12-hour shifts are often $12\frac{3}{4}$ - hour shifts and the working week around 44 hours. By 2006, coal mining employees worked an average of 43.8 hours per week and metals mining employees averaged 46.2 hours per week (ABS Cat 6306.0). Several major disputes were fought over the move to 12 hour shifts (Murray & Peetz 2010:167-190).

There are indications that these arrangements are not universally beneficial. Pocock and her team in the 'Fifty families' project found that, of the five families that were miners, all of the men felt that because of the roster with twelve hour shifts they worked unreasonable hours

and that meant ‘they missed out on ‘full fathering’ in the sense that they had missed important events for their children...in each household the women parented and worked around their partner’s hours, adopting a residual model of partnership, where the fulltime, shift working pattern of the male breadwinner dominated household life. The impact of the unreasonable hours upon the whole community was very clear in this town’ (Pocock et al. 2001:156). They summarised the situation amongst families working long hours as ‘overwhelmingly when asked about the impact of their hours on their families, most named negative affects’ in regard to impacts on relationships with intimates and children. The child’s age mattered with ‘absences in relation to children in age groups from 0 to 18’ remarked upon. These absences resulted in a sense of loss amongst many workers – and in some cases their relationships with their children were compromised - perhaps irreparably’ (Pocock et al. 2001:35).

That said we should not expect that the relationship between working hours and employee outcomes to be unconditional. The impact is very likely to be contingent on employees’ ability to determine or at least influence the length or timing of their working hours themselves. There is a substantial literature on the impact of employee participation in decision making, and it shows that participation often increases job satisfaction and employee commitment and reduces labour turnover and absenteeism (Strauss 1992:303). Research more focused on working hours shows that employees opportunity to decide on working conditions during a roster change determined the level of acceptance (Conrad-Betschart 1990 cited in Loudoun 2001). Latack and Foster (1985) likewise found employee support for a long shift schedule was related to their participation in the decision to implement it. A review of literature found that ‘shiftwork research has suggested that employee participation and sense of control is crucial’ (Smith et al. 1998:224) while a review of the International Labour Organisation (ILO) research pointed to the importance of participation in roster design

(Kogi & Di Martino 1995). So the influence that employees have on their rosters and hours worked are likely to be important in determining whether workers are dissatisfied with their hours. It is important, then, to know something about the control mining employees have over their rosters and working hours; as employees who have little say over their hours are likely to value their working time less and hence prefer to work fewer hours.

Methodology

As mentioned, we consider five questions regarding job quality and hours in mining. To address the first question, as to whether there is a job quality problem in mining, we apply a simple economic model of job quality, earnings and labour turnover, using labour turnover data from the ABS Labour Mobility Survey (Cat No 6309.0) and unpublished hourly earnings data from the ABS Employee Earnings and Hours (EEH) survey (Can No 6306.0). Our model is $T = f(w, Q)$ where T is labour turnover, w is hourly earnings and Q is job quality. In this model, labour turnover is negatively related to hourly earnings (Freeman and Medoff 1984) and job quality. Job quality is not directly measured. However, we can detect unusually high or low job quality in a particular industry i (in this case, mining) with wage level w_i if there is a substantial difference between the actual level of labour turnover and the level of labour turnover that would be predicted from the prevailing level of hourly wages in that industry. Note that, as we do not directly observe job quality, and job quality may be related to wages, any large gap between observed and predicted labour turnover is not indicating whether job quality is above or below average for the economy as a whole, but whether job quality is above or below that which would be normally associated with industry wages of w_i . There are, of course, other more extensive and nuanced ways of measuring job quality; our method simply aims to identify whether there is a 'red flag' pointing to a major

problem in the mining industry that warrants further investigation.

Our second question – on whether part of this problem that mining employees are working involuntary long hours – is addressed through data from the Australian Work and Life Index (AWALI) survey. AWALI is undertaken annually by the Centre for Work + Life at the University of South Australia since 2007 (Skinner and Pocock 2008; Pocock, Skinner and Ichii 2009). AWALI surveys a representative, national, stratified random sample of the Australian workforce. Sample sizes were 1435 in 2007, 2831 in 2008 and 2691 in 2009. Telephone interviews were conducted by Newspoll and household selected through random digit dialling, with individuals within households randomly selected through ‘last birthday’ screening (Skinner and Pocock 2008, pp.15-16). A request was made to the AWALI project team for unpublished data on hours preferences in the mining industry. In order to achieve a reasonable sample size, data from the three years of AWALI (2007 to 2009) were aggregated to produce a total N for mining of 188 for the question on hours worked and 176 for hours preferences. Of these mining employees, 84 per cent were male, consistent with ABS data on mining employment. We do not focus here on problems associated specifically with night shifts although the long involuntary hours do overlap with these. Unfortunately the sample is not large enough for authoritative disaggregation by gender or age.

The third question – about the impact on the work-life balance – is addressed through AWALI and through qualitative data. The latter come from 135 interviews we undertook with miners and their spouses in coal mining communities in Queensland between 2006 and 2009.¹

The fourth question – regarding how much control mining employees have over their working time arrangements – is addressed through the above qualitative data and from reanalysis of unpublished survey data from the Griffith Work Time Project, a study

undertaken in 2002-03 which included a survey of 953 employees from 15 organisations operating in Queensland across a range of industries. Two organisations of particular interest were a mine and a company that provided services to the mining sector, and so its rostering arrangements partly reflected those in the mining industry. For this particular question, we focus on the mine itself.

The fifth question – concerning the possible policy responses – is addressed through Griffith Work Time Project data above, and from an analysis of the legislation and of the only relevant case that has so far been completed.

Is there a job quality problem in mining?

Higher wages are normally associated with lower labour turnover (e.g. Freeman & Medoff 1984; Ehrenberg & Smith 1987), and so we would expect labour turnover to be low in the mining industry because it has the highest hourly earnings. Some labour turnover is necessary to enable workers to move to jobs that better match their preferences, to move to areas that accommodate their family needs and to follow the fluctuating needs of commodity markets. However, relatively low or high labour turnover could be symptomatic of satisfaction or dissatisfaction with working conditions. If involuntary long hours persist it would suggest a need to think about the labour market in mining in different ways and to reconsider regulation of working hours.

Analysis of ABS data suggests there is a substantial labour turnover problem in mining. Figure 1 shows a strong relationship between industry-level turnover and ABS EEH hourly earnings estimates. Mining, however, has a much higher rate of turnover than would be predicted by its hourly earnings. A simple regression equation on 16 industries in 2006

indicates that for each \$1 increase in hourly earnings, industry level labour turnover falls by an average of 1.1 percentage points, with an industry dummy for mining indicating that turnover in mining was well over 10 percentage points above the rate predicted by its earnings level.² The solid line in Figure 1 shows that simple OLS regression line.

*****Insert Figure 1: Labour turnover and hourly earnings
by industry, 2006 about here*****

Equally important, the labour turnover problem has worsened in recent years. In 1996, labour turnover in mining was 20.2 per cent, slightly below the national average of 21.2 per cent. By 2006, turnover in mining had risen to 23.5 per cent, whereas in every other industry it had fallen, to a national average of 18.4 per cent. Although we would expect some variation from year to year, the data suggest that there is a real and growing issue with labour turnover in mining. Under our model, this suggests a problem with poor job quality in the industry, requiring further investigation.

Is part of the job quality problem that mining employees are working involuntary long hours?

In AWALI, respondents were asked 'How many hours per week do you usually spend in paid work, including any paid or unpaid overtime?' They were also asked 'If you could choose the number of hours you work each week, and taking into account how that would affect your income, how many hours would you choose to work?'

The distribution of hours preferences in mining is shown in Figure 2. This shows that the majority of miners like to work less than forty-one hours per week. The distribution

concentrates in the 38-41 hour range, preferred by 35 per cent of respondents. The median of preferred hours – that is, the 'mid point' – was 40 hours per week. In total, 64 per cent of mining employees prefer to work *less* than 44 hours per week and only 36 per cent prefer to work 44 hours or more per week. By far the *most common* (modal) hours preference in mining was for a 40 hour working week.

*** Insert **Figure 2: Preferred work hours per week, Mining employees, AWALI survey**

around here ***

The data for the mining industry as a whole includes long distance commuting (LDC) mineworkers, who travel from their home, often on the coast or in capital cities, to the mine site and live on-site for the duration of their 'on' period. We would expect that LDC workers would have longer hours preferences than other mining industry workers because of the longer blocks worked and the need to factor in blocks of time for travel. Accordingly, hours preferences of workers in residential community sites are likely, on average, to be shorter than those described here.

AWALI also asked employees the number of hours that they worked. It was thus possible to estimate the extent to which hours worked matched hours preferences of employees. The median mining employee in AWALI worked 48 hours per week, and the median full-time mining employee worked 50 hours per week. Further information is in Table 1. This shows

that 47 per cent of employees in the mining industry are working more hours than they would prefer, even after taking into account how that would affect their income, while 44 per cent are working the number of hours they would prefer and 9 per cent would prefer to be working more hours. Amongst those who would prefer to be working more hours, the average gap between what they would prefer and what they are working is 7.8 hours. But amongst the 47 per cent of mining employees who would rather be working fewer hours, the average gap between the hours they are working and the hours they would prefer to work is almost 16 hours. Overall, across the mining industry as a whole, employees are working on average nearly 7 hours per week longer than they would prefer. The idea that current working hours arrangements in the mining industry are driven primarily by changes in employee preferences is thus shown to be incorrect.

*****Insert Table 1: Gap between hours worked and hours preferred,**

Mining industry, AWALI, 2007-2009. About here ***

There is, of course, some labour market sorting before these data are collected. These data refer to the hours preferences of workers currently employed in the industry at the time of the survey. Some workers who do not like the current working hours arrangements will have entered and left the industry before they could have been observed in this survey. We certainly met people who had previously been employed in mining and who said, like Ingrid, that ‘I won’t go back there, [the shifts] are too long, especially 12 hour night shift.’

The survey is therefore likely to understate the gap between employee preferences and the actual hours worked for those workers who have entered the industry. Full-time mining employees were more likely than full-time employees elsewhere to prefer long hours, but the difference was small, compared to the difference in actual hours worked. Average hours worked by full-time employees in mining (53.2 per week) were substantially above average hours worked by full-time employees in 2009 across the economy (45.2 per week) (Pocock et al. 2009), a difference of 8.0 hours. Yet the average hours preferred by full-time employees in mining (no greater than 42.1 per week)³ were much closer to hours preferred by full-time employees across the economy (39.4 per week), a difference of no more than 2.7 hours – only a third of the difference in hours worked, and again suggesting that the process of labour market sorting to match preferences is only partial at best.

What is the impact of involuntary long hours in mining on family life?

When all industries are ranked on an index measuring the degree of interference between work and family life, the mining industry is ranked the second worst (Skinner & Pocock 2008, p.7). This AWALI index is constructed from responses to five questions concerning whether: work interferes with activities outside work; work interferes with enough time with family or friends; work interferes with community connections; respondents feel rushed or pressed for time; and respondents feel satisfied with their work life balance.

One reason for mining's poor ranking on work-life interference is the divergence between hours preferred and hours worked. The AWALI index is scored from zero (best possible fit between work and life) to 100 (worst possible fit). Nationally, male workers who are working more hours than they would prefer have an index score 35 per cent higher (ie 35 per cent worse) than male workers who are working at or near their preferred hours. For female workers, the impact is 46 per cent. According to the AWALI researchers, this finding has

important implications, as 'measures which help workers find a better fit between actual and preferred hours will result in lower work-life conflict' (Skinner & Pocock 2008).

To deepen the story behind these numbers, we turn to data from our interviews of men and women in the mining communities of central Queensland. These emphasised the importance of the interaction between long weekly hours and long shifts. Melissa spoke of her miner husband's relationship with his children:

...when they are on day shift they are gone before the children get out of bed. The kids are usually ready for bed by the time they get home...because you have got to get up again early the next morning... The twelve hour shift involved weekend work, so [with] sporting [activities] – I have got to take the children which is a lot of travel.

Mandy, another wife, focused on the emotional aspects:

You don't get any communication from your husband really. He comes home at eight o'clock at night, you feed them, they have a shower and basically you don't have much communication with them while they're working. But the four days you have them at home you try and cram it all in, because you know the next four or five days you're not going to get too much involvement. And it's hard on the kids, you know "where's Dad", "oh he's at work". And that's hard, you know you can't go anywhere, you can't do anything...You try and keep the kids quiet when they're on night shift, Friday night, Saturday night, Sunday night, you've got to try, 'cause the houses aren't that big.

Winona, told us that her husband, a mineworker, 'gets just buggered from it'. Beryl, a

mineworker herself, told us

The roster and the long shifts make you very old, very quick. Anybody that wants to get into it I recommend they do it early in their life, get in, be diligent, make your little fortune and get out because you get really old, really quick.

The move to longer hours and rotating twelve hour shifts has led a number of workers' families to move away from the mining towns. Other families have stayed in coastal towns while the mineworker in the family became a long distance commuter, travelling to or from the mine sites every few days for blocks of time because, as Meredith, a miner's spouse, said, 'if you are not going to see your kids for four days, and I can live at the beach for four days and you are going to see them on your four days off whether you live here or whether you live in there, of course it is a much better lifestyle.'

Not all people were opposed to the working patterns. As we saw in AWALI data, nearly half of coal employees were content with how many hours they worked. But even some enthusiasts for twelve-hour shifts could see disadvantages. Wynne, a mineworker, liked the compressed roster:

You get more time away from work which is better...Twelve hour shifts are the go – time away. But it ruins the town, because everyone is gone. It's ruined the sporting clubs like football... [On] the eight hour shifts you could go after work, but by the time you get home the game is over. Yeah it's not very good for family. Kids are in bed asleep. But I like it.

The quantitative and qualitative data indicate that working hours in mining are negatively affecting the balance between work and personal lives. A key element in this effect is the interaction between compulsory long shifts and compulsory long weekly hours. Even

amongst some who favour the long shifts, there is recognition that there are adverse effects on family life. Because the two are integrally connected, we cannot as yet quantify the separate effects of long shifts and long weekly hours.

How much control do mining employees have over their working time arrangements?

To date the mining industry provides relatively little say for employees in choosing their hours of work or rosters. Some of our respondents told us how they had been able to swap shifts to meet their personal needs (for example, to enable a husband and wife to work the same shifts). But overall, employee input was minimal. Some told us how their social lives had been transformed because they were no longer on the same shift patterns as their friends (or even husbands) and could not socialise or go away with them.

A study of workers in 15 Queensland organisations across many industries found that workers in the mine included in the study were the most likely of any workers to say they had ‘no say’ in their start and finish times (81 per cent said this, compared to 31 per cent in other organisations), or in their workload (67 per cent compared to 32 per cent) or the number of hours they work in a week (74 per cent compared to 33 per cent). These mine employees were the second most likely to report ‘no say’ in the shifts they worked (67 per cent compared to 42 per cent) (Peetz et al. 2003 unpublished data). The lack of employee input into decisions on hours worked is part of the explanation for the high work-life interference amongst mining workers identified earlier in AWALI.

Several respondents in our qualitative research contrasted the compulsory nature of current overtime arrangements with the voluntariness of overtime in the days before 24 hour operations. For example, Victor, another mineworker, described how:

When I came here there were two thousand people. Everybody used to work eight

hour shifts Monday to Friday. They would do overtime on Saturday or Sunday if they wanted to, but rarely anybody did that because sport was played.

Vern, a miner from Mt Isa, emphasised the regulatory aspects:

I worked eight hour shifts...But I only ever worked Monday to Friday and I never worked overtime for the whole time I was there. The Industrial Court [said] at one stage that if you work underground and it's a critical job then you may be required to work overtime, that was in the Award. [The company] told me after that I'd have to work overtime; otherwise they'd be breaching the law. I took that to Industrial Court on the grounds that it's their responsibility to hire enough people to do the work, it's their responsibility to project what work has to be done and when. I won.

The lack of employee control these days also helps us understand the failure of the labour market to match hours worked to hours preferred. Some 69 per cent of jobs in mining require more than 40 hours per week, yet only 31 per cent of mining employees want to work that long. The power resides with the mining company, not the employee, to determine hours worked, and so employees are forced to accept hours they do not prefer. Changes to the legal and policy framework through and since the 1990s, and the growth of contractors, have shifted the balance of power decidedly towards the mining companies, in comparison with earlier decades. The bargaining power of employees to insist on more family-friendly work patterns is further eroded by the downward stickiness of reservation wages: high incomes lead to high consumption which can in turn generates higher indebtedness which then requires the maintenance of high wages to be serviced. Gina, a miners wife, was one of several respondents who considered that 'it's the debt, I believe' that kept people working long hours with rotating shifts.

The 12 hour shift regime has led to a loss of employee control over the shifts they can be made to work. We should consider, then, the scope for policy initiatives to deal with this.

What are the possible policy responses?

One option for dealing with involuntary long hours would be setting an upper limit on hours worked each week. Such a policy would have widespread support among employees, at least in principle. The Griffith Work Time Project found 67 per cent of employees across the 15 organisations agreed that there should be an upper limit on how many hours someone can work each week (only 14 per cent disagreed). This included 78 per cent agreement in the mine, the highest proportion of any organisation in that survey (Peetz et al. 2003 unpublished data). In another organisation in that survey, providing services to mines, a widely supported upper limit on hours had been put in place but it failed because of inadequate systems to enforce it, managers' and supervisors' desire to circumvent it to satisfy client requests and the willingness of a minority of employees to subvert the limit (Peetz et al. 2003). This reinforced the importance of collective (including external) regulation of working hours, rather than just leaving it to individual choice, as well as the need for enforcement to prevent minorities from subverting the will of the majority to regulate their own hours.

Another approach to dealing with involuntary long hours, seemingly already available to employees, may be use of the protections in the Fair Work Act's National Employment Standards, which hold that 'an employer must not request or require an employee to work more than' 38 hours per week 'unless the additional hours are reasonable' (s62(1)) and that 'the employee may refuse to work additional hours...if they are unreasonable' (s62(2)).

These provisions have yet to be tested, though the operation of their predecessor provision in the WorkChoices legislation provides little reassurance. Its Australian Fair Pay and Conditions Standard provided that 'an employee must not be required or requested by an

employer to work more than' 38 hours per week plus 'reasonable additional hours' (s228 (1)(b)). A fitter and turner in coalmining, Allan Macpherson, attempted to use these provisions to resist a demand by his employer, Coal and Allied (part of Rio Tinto), that he work 44 hours per week, in place of the 40 hour week previously worked. Mr Macpherson had three children between the ages of 15 and 21 and a working wife. He initially refused to work the new roster, arguing this was not what he was contracted to do and the new roster comprised unreasonable additional hours because of the impact on his family responsibilities, making him too tired to function properly with his family, unavailable or unsafe to drive his children to sporting venues where he was a soccer coach and too tired to execute his job safely. He had to take his complaint to the Federal Magistrate's Court, which found that the benefit to the employer of the new roster outweighed the detriment to Mr Macpherson and rejected his claim (FMCA [2009] 881). The requirement that account be taken of 'the operational requirements of the workplace' gained precedence over that to take account of 'the employee's personal circumstances (including family responsibilities)'.

The union's industrial officer commented afterwards that it was 'hard to see how any worker in the mining industry would benefit from the guarantee of reasonable hours if this test is applied' (Endacott in Workplace Express 2009). However, this is yet to be fully tested, as many other mineworkers have even more onerous hours and clashing family responsibilities than Mr McPherson who neither worked rotating night shifts nor weekends and did not have very young children. Our qualitative research suggested that the worst time effects are felt in family households by partners with young children; with a miner spouse, and arise from the interaction of long hours with rotating twelve - hour shifts.

The Fair Work Act requires that, in deciding what is unreasonable, the Court must have regard to 'the usual patterns of work in the industry, or the part of an industry, in which the

employee works'. This provision, which was only introduced in the Fair Work Act, ignores the way in which power relations shape the usual patterns of work in an industry. In particular, in this context, it ignores how the shifting power relations in the mining industry, brought about in no small part by the Workplace Relations Act and the WorkChoices amendments, led to the high incidence of involuntary long hours. Corporations use their increase in bargaining power to increase working hours and then in a circular process they argue that the new level is perfectly reasonable because these are the hours that are now worked. The provision represents a loophole that policymakers should close. It gives inadequate consideration to the often restricted degree of involvement by employees in designing the hours and rosters they work.

Conclusions

In mining, nearly half of employees are working more hours than they prefer, a result of long hours worked in rosters based around mandatory, rotating twelve-hour shifts. We cannot separately quantify the distinct effects of long shifts and long weekly hours, as the two are integrally related in mining: more research is needed in this area. But it is clear that the compulsory nature of long hours is a problem. Working hours arrangements have not been designed by employees or their union but by management and the hours are unlikely to reasonably serve employee interests. High labour turnover, rather than enabling employees to match hours and preference, appears simply to be a result of extensive employee dissatisfaction with poor job quality arising from working hours arrangements. It weeds out many employees whose families cannot cope with the working arrangements, but does not overcome the problems they create. There are adverse implications for the work- life balance. The problem is exacerbated by lack of employee control over hours. Involuntary long hours in mining reflect the expression of preferences by employers, not employees.

Over a period of many decades, as national income grew and people's expectations of what is 'reasonable' were raised, standard maximum working hours were gradually reduced, allowing more time for leisure and family life. Yet recently, the standard maximum hours of work have, in effect, increased – for many in the mining industry, they appear to have risen to 44 hours, without any public debate. This deterioration in what is 'reasonable' is not due to a drop in per capita income and hence societal expectations. Rather, it reflects a change in power relations. While policy makers are effectively revising standard hours upwards, a large majority of employees are calling for a cap on hours worked.

The findings suggest that in order to promote 'good jobs' in the mining industry there is a need to revisit protections for employees against being forced to work 'unreasonable' hours above the ostensible national standard of 38 hours per week. The 'reasonable additional hours' loophole created by WorkChoices, and expanded by the Fair Work Act, and which can only be enforced at considerable cost through employees taking complaints to courts, undermines the 'maximum weekly hours' standard. If it cannot be tightened, to give workers genuine say in the design of rosters and real choice, this loophole should be abolished.

Endnotes

¹ The qualitative project was part of a broader project on the history of women in mining in Queensland and received financial support from the Queensland District of the CFMEU Mining and Energy Division, for which we express our thanks. We are also grateful to the AWALI team for their cooperation in providing data.

² A simple linear equation is $\text{turnover} = .466 - 0.11\text{earnings} + .192\text{ mining}$. Adjusted $r^2 = .65$, $N=16$, with both coefficients significant at the 0.1% level. In quadratic form, it is $\text{turnover} = .779 - 0.37\text{earnings} + .001\text{earningsquared} + .124\text{ mining}$. Adjusted $r^2 = .71$, but with small N and an additional variable the first two coefficients are significant at the 10% level and the third was not significant, so the former, more parsimonious equation is preferred.

³ We do not have separate data on hours preference of full-time employees, but have the hours worked by the 90 per cent of mining employees are full-time workers. So this estimate is based on the highest 90 per cent of expressed hours preferences. It is therefore expressed as a maximum as it is possible that some full-time employees would have preferred to work fewer hours than those preferred by some part-time employees.

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Table 1: Gap between hours worked and hours preferred, mining industry, AWALI, 2007-2009.

Hours preference	Percentage of mining employees	Average gap between hours worked and hours preferred
want more hours	9.1	-7.8
want same hours	44.0	0
want fewer hours	46.9	15.9
Total	100.0	6.7

Source: unpublished AWALI data, 2007 to 2009. A negative sign indicates hours worked are less than hours preferred, a positive sign indicates hours worked are greater than hours preferred.

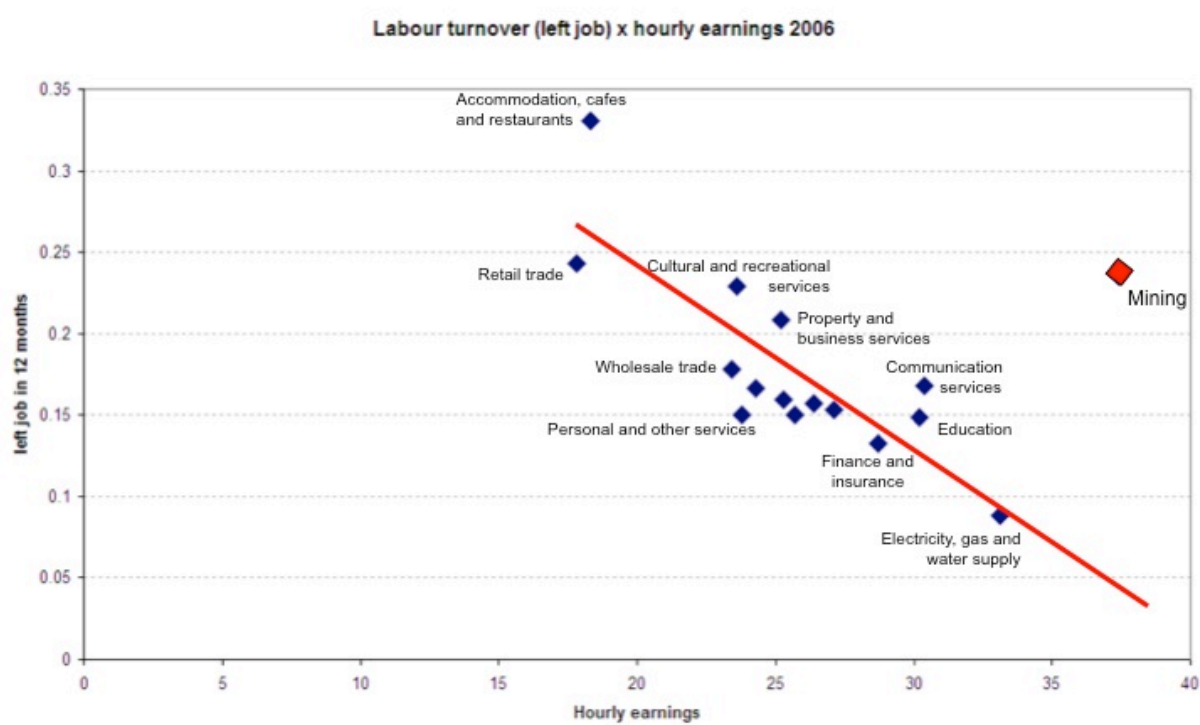


Figure 1 Labour turnover and hourly earnings by industry, 2006

Source: ABS Cat Nos 6306.0, 6309.0

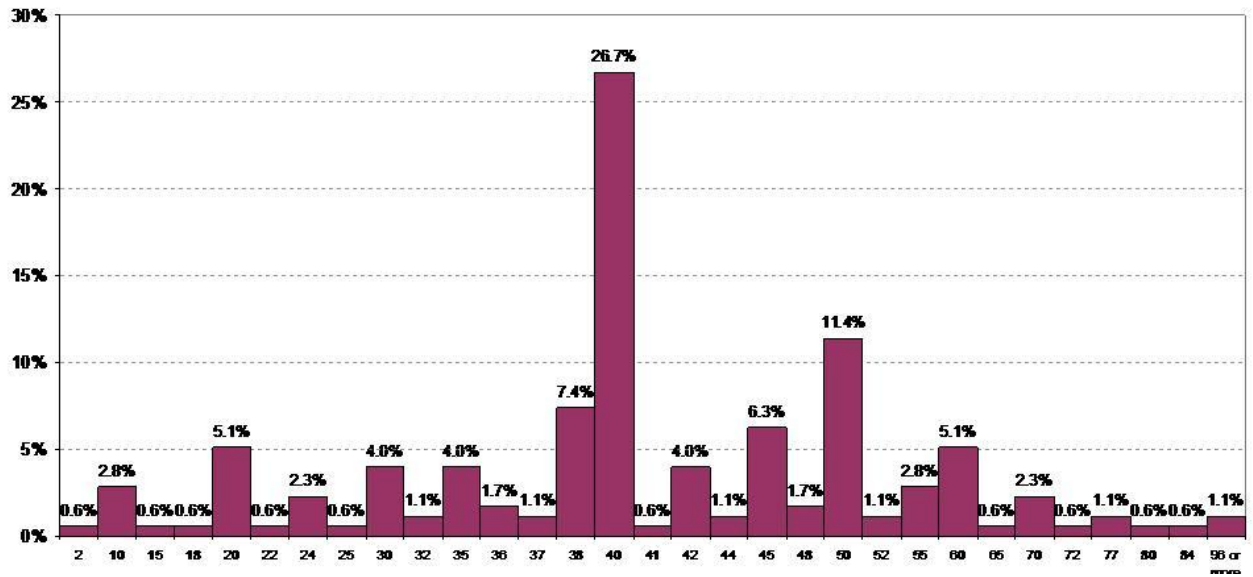


Figure 2 Preferred hours per week, mining employees, AWALI

Source: unpublished AWALI data, 2007 to 2009.