

**Contributors to worker induced job separation in fly-in/fly-out work arrangements;  
evidence from Northern Australia**

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## **ABSTRACT**

Population centres in Northern Australia concentrate along the coast line (the cities of Darwin and Broome in the west and Cairns and Townsville in the east), while the inland region exhibits small villages/towns scattered across space. However, the inland area is also rich in mineral resources. Given the small sized populations in the inland regions, local labour markets are too thin for the extractive industries to rely on finding qualified personnel. To meet their human resources requirements, the extractive industries have to draw workers from the dense labour markets in the coastal cities and subsequently develop fly-in/fly-out arrangements to interested city workers. Notwithstanding the attractive remuneration packages that the extractive industries offer, they struggle to meet their human resources needs through recruitment from city workers interested in fly-in/fly-out work in the extractive industry. In light of these recruitment difficulties, the extractive industry's retention policies are of crucial importance.

This paper will focus on the drivers of worker induced job separation. We exploit a unique data set of nearly 500 workers who (1) reside in either Cairns or Townsville (we surveyed fly-in/fly-out workers both at Cairns and Townsville Airport), (2) work elsewhere in Australia in the extractive industries and industries associated with the extractive industries (mainly construction) and (3) commute to work by plane. The written survey was conducted over a four week period in October / November 2012.

Besides a comprehensive set of demographic information, we collected information about their job (including type of contract, occupation, work roster, shift length and remuneration levels), educational background, their work experience (in and outside the extractive industries and as a fly-in/fly-out worker), quality of onsite accommodation, and their actual and desired intensity of social interaction with family and friends, while both at home and at work. Furthermore we asked to rate the percent chance they would voluntarily leave their current job within the next 12 months, which we use as an indicator of the likelihood of worker induced job separation. The findings from this paper are especially relevant to human resources departments of mining companies and policy makers attempting to create city hubs for fly-in/fly-out workers.

## **Introduction**

This paper presents findings from a project which sought to obtain a detailed description of Fly-In-Fly-Out (FIFO) workers who reside in the Cairns and Townsville regions and work in the resources industry in North-West Queensland and the Northern Territory. Population centres in Northern Australia concentrate along the coast line (the cities of Darwin and Broome in the west and Cairns and Townsville in the east), while the inland region exhibits small towns scattered across space. However, the inland area is also rich in mineral resources. Given the small sized populations in the inland regions, local labour markets are too thin for the extractive industries to rely on finding qualified personnel. To meet their human resources requirements, the extractive industries have to draw workers from the dense labour markets in the coastal cities and subsequently develop fly-in/fly-out arrangements to interested city workers. Notwithstanding the attractive remuneration packages that the extractive industries offer, they struggle to meet their human resources needs through recruitment from city workers interested in fly-in/fly-out work in the extractive industry. In light of these recruitment difficulties, the extractive industry's retention policies are of crucial importance.

The increased incidence of FIFO employment arrangements in Australia and the socio-economic impacts it potentially has on workers, their families and their home community led the School of Business at James Cook University to investigate these impacts for the cities of Cairns and Townsville in FNQ. To shed light on these socio-economic impacts we approached FIFO workers, who travelled through Cairns and Townsville Airports, respectively, to complete a short survey. This paper presents some results from that survey. In doing so, it focuses on the drivers of worker induced job separation.

## **Research Approach**

We examined a unique data set of nearly 500 FIFO workers who: (1) reside in either Cairns or Townsville (we surveyed fly-in/fly-out workers both at Cairns and Townsville Airport); (2) work elsewhere in Australia in the extractive industries and industries associated with the extractive industries (mainly construction); and, (3) commute to work by plane. Whilst studies that looked at the demography and job separation of FIFO workers in the resources industry in Queensland have been done before – most notably United Research Services (URS) (2012), these studies use place of work as the unit of analysis. To the best of our knowledge, no study has looked into the demography and job separation of FIFO workers that share the same residential region or city in Queensland. Therefore we sought to conduct a survey among FIFO workers who reside in the Cairns and Townsville regions, but work outside that region (though in Australia) and travel by plane.

### ***Survey design***

It was anticipated that the FIFO workers travel via the respective Cairns and Townsville Airports to their work destination. Consequently, the survey was administered to FIFO travellers at these airports in October-to-November 2012, who identified themselves as:

- (1) Working in the Australian resources sector on a FIFO basis
- (2) Residing in Cairns/Townsville (hence no in-transit FIFO workers were included).

To maximise representativeness of the sample data, the survey was conducted:

- In Cairns, over four consecutive weeks (October-November 2012), four days per week; and,
- In Townsville, over two consecutive weeks (October – November 2012), two days per week.

The length of the survey period ensured that at least half a cycle of FIFO rosters was covered; the weekly intensity ensured most flights that (based on their destination) could arguably be identified as FIFO flights were covered. At the end of the two week period a total of 485 completed surveys were obtained: 197 (Cairns) and 288 (Townsville). These constituted the basis for this paper.

## Results

### *Demographics*

The surveyed FIFO workers are not all that different from the average worker in Cairns or Townsville, or previous research for that matter (e.g. Carrington, & Pereira, 2011; Joyce, Tomlin, Somerford, & Weeramanthri, 2013; McLean, 2012), in that they are predominantly male, more likely to be partnered and with the dominant age group being 30 to 39 years of age. Notably, younger and older cohorts are underrepresented when benchmarked to the Cairns and Townsville workforces. Key demographics of both cohorts are presented in Table 1. Both samples (Cairns and Townsville) show strong similarity in terms of age, relationship status, dependent children and work experience in the resources industry.

**Table 1: Key demographics of FIFO workforce surveyed**

Surveys	Cairns	Townsville
Demographics		
<b>Gender:</b>		
Female	1.3%	13.2%
Male	98.7%	86.8%
<b>Age (average years)</b>	38.5	37.9
<b>Relationship status:</b>		
Single	20.0%	21.4%
Relationship	80.0%	78.6%
<b>Dependent children:</b>		
Yes	49.4%	45.3%
No	50.6%	54.7%

### *Occupations of FIFO workers*

For FIFO employment, three types of careers were identified: 'Managers and Professionals', 'Technicians and Trade Workers', and 'Machinery operators and Labourers'. Table 2 shows the percentage of FIFO workers in each of these categories and identifies that one in five FIFO workers are 'Managers or professionals', while the remaining FIFO workers are almost equally divided among 'Technicians and trade workers', and 'Machinery operators and labourers'.

**Table 2: Occupations of FIFO workers**

	<b>Managers &amp; Professionals</b>	<b>Technicians &amp; Trade Workers</b>	<b>Machinery operators &amp; Labourers</b>
<b>Occupational distribution</b>	<b>21.0%</b>	<b>42.0%</b>	<b>38.6%</b>
Geologists/Engineers	24.1%		
Managers/Supervisors	22.2%		
Administrative Officers	13.5%		
Fitters		36.1%	
Electricians		15.7%	
Technicians		15.9%	
Operators			44.2%
Miners			15.4%
Drivers			9.1%

These findings present a profile of the types of occupations which are characteristic of the resource sector.

### ***FIFO employment: worker perceptions***

To provide insight into the FIFO worker's perceptions about FIFO employment, respondents were asked to rate (on a scale from 0 to 100) the likelihood that they would:

- leave their current job in the next 12 months;
- lose their current job in the next 12 months, and;
- find a job that would be at least as good as their current job (in terms of pay) in the event that they lost their current job.

The findings from the FIFO survey were compared to those from the Household, Income and Labour Dynamics in Australia (HILDA) survey, which asks the same questions of a representative sample of the Australian workforce. Unfortunately, the latest available wave of HILDA data is for the year 2009 (FaCHSIA, 2009); however, this is consistent with after the start of the global financial crisis. Moreover, comparison through time shows that ratings for these questions are fairly stable. Table 3 contains the average ratings for the three questions outlined above.

**Table 3: Job separation FIFO workers – average of all respondents**

Percentage chance to:	leave your job voluntarily	lose your job	to find similar or better job if need be
Job characteristics			
<b>Overall:</b>			
FIFO workers, 2012 (JCU)	27.0	29.6	61.4
Australia, 2009 (HILDA)	23.9	11.5	84.8

FIFO workers think on average there is a 27.0% (Overall) chance they will resign from their current job within the next 12 months [23% (Cairns) and 31% (Townsville)]. That is moderately higher than the Australian average of 23.9%.

Of the overall FIFO workforce in North Queensland, 27.0% think they will lose their job within the next 12 months; this is over twice as many as the Australian average of 11.5%. Perhaps, the FIFO workers are aware of the cyclicity of the industry they work in. Recent media attention announcing the end of the mining boom may play a role here. Nonetheless, other results later on suggest, that some FIFO workers are confident in that if they resign from their jobs they can “find a similar job with better conditions elsewhere in the resources sector” (Table 5).

### ***Workers remuneration***

In addition to the above, 61.4% of the FIFO workers [59% (CNS) and 63.5% (TSV)] said that they will leave to find a similar or better job; this is two-thirds the number for the Australian average (84.8%), i.e. a substantially lower number than the Australian average. Perhaps this is no surprise, given the lucrative remuneration packages on offer in the resources industry (Table 4).

**Table 4: Annual remuneration package FIFO worker**

Occupation	Managers & Professionals	Technicians & Trade workers	Machinery operators & Labourers	Total
Income cohorts				
Less than \$80,000	9.3%	5.4%	7.6%	7.1%
\$80,000 up to \$99,999	11.6%	9.5%	28.8%	16.9%
\$100,000 up to \$124,999	27.9%	50.0%	37.9%	40.4%
\$125,000 up to \$149,999	20.9%	25.7%	19.7%	22.4%
\$150,000 up to \$174,999	9.3%	5.4%	4.6%	6.0%
\$175,000 or more	20.9%	4.1%	1.5%	7.1%

It is possible that the combination of an above average chance of losing their current job and below average confidence in finding a similar or better paying job in case of job loss, may contribute to elevated levels of anxiety about employment security or employment continuity among FIFO workers and impact on employees’ performance and well-being.

***Potential factors affecting possible resignation***

Further to the foregoing, we asked those who rated the percent chance of resignation above 50% to indicate whether the following factors contributed to that elevated rating (Table 5).

**Table 5: Potential factors affecting high (>50%) chance of resignation**

	CNS*	TSV*	% respondents
“don’t like the job, because the impact FIFO has on private life”	6	37	8.9%
“don’t like the job, because of the physicality of the work”	0	20	4.1%
“like the job, but can find a similar job with better conditions elsewhere in the resources sector”	16	48	13.2%
“like the job, but expect to be promoted to a different job at the same employer”	6	36	8.6%
<b>TOTAL</b>			<b>34.8%</b>

\* Numbers indicate number of times the factor was mentioned

Table 5 shows that 13.0% would probably resign in the next 12 months because they did not like the job, with 8.9% because of the impact of FIFO on their private life; and 4.1% “because of the physicality of the job”. The table also shows that 21.8% would probably resign even though they liked the job, because of better prospects.

It is reasonable to say that the 8.9% who will leave because of their private life is not a large proportion of the sample. Possibly, this indicates that families are coping better than the public view and as presented in the media. This is consistent with findings from research emerging which indicates that FIFO work is having a lesser than expected impact on lives of FIFO workers and their families (e.g. Kaczmarek & Sibbel, 2008).

Table 5 also shows that the most prominent reason for affecting job separation is that of the 13.2% of respondents who indicated that while they liked their job, they think they can “find a similar job with better conditions elsewhere in the resources sector”. This suggests that there is some optimism in the future of the mining industry. Equally, it can indicate that people may be entering FIFO work by working in less than their ideal conditions with the hope that they can use those jobs to find work with companies offering better conditions once they have gained some FIFO experience.

***Potential factors affecting possible job separation – Type of contract***

Further analysis of the data examined the type of contract, employer, occupation and differences between mine sites to better understand perceived job satisfaction and job security for FIFO workers. This data is presented in Table 6.

**Table 6: Job separation FIFO workers – average of all respondents**

Percentage chance to:	leave your job voluntarily	lose your job	to find similar or better job if need be
<b>Overall:</b>			
FIFO workers, 2012 (JCU)	27.0	29.6	61.4
Australia, 2009 (HILDA)	23.9	11.5	84.8
<b>Type of contract:</b>			
Casual	41.5	43.5	65.0
Fixed term	34.6	37.9	58.6
Permanent	22.2	23.2	58.4

Source: JCU FIFO survey / HILDA 2009 survey

Table 6 shows that FIFO workers on a fixed term contract and even more so FIFO workers on a casual contract, rate the likelihood of leaving their current job more highly than workers on a permanent contract. The likelihood of leaving voluntarily may be a result of fears that if they do not leave voluntarily in the next 12 months, they will be made redundant in that period, as the reported likelihood of losing their job is very high; for FIFO workers on casual contracts this is nearly five times as high as for the average Australian worker. Nonetheless, FIFO workers have higher expectations of finding comparable alternative employment (65.0%) but that rating is well below the Australian average (84.8%).

### ***Potential factors affecting possible job separation – Type of employer***

We then looked at the ‘type of contract’ to see how this was impacting on possible job separation (Table 7).

**Table 7: Job separation FIFO workers – average of all respondents**

Percentage chance to:	leave your job voluntarily	lose your job	to find similar or better job if need be
<b>Overall:</b>			
FIFO workers, 2012 (JCU)	27.0	29.6	61.4
Australia, 2009 (HILDA)	23.9	11.5	84.8
<b>Type of employer:</b>			
Contractor	32.4	33.2	61.9
Mine operator	21.8	21.8	58.3

Source: JCU FIFO survey / HILDA 2009 survey

Table 7 shows that FIFO workers who work for contractors indicate they are more likely to leave their job voluntarily than those who work for mine operators. The same applies for likelihood of losing current job.



These differences are mainly driven by the fact that contractors are more likely to offer casual or fixed term contracts than mine operators, and therefore, people working for contractors may feel that their work is less secure. In addition, contractors service mines, e.g. in operations such as shut-downs; hence, the work is inconsistent and its duration variable.

***Potential factors affecting possible job separation – Type of occupation***

We also explored the differences between types of occupation (Table 8).

**Table 8: Job separation FIFO workers – Type of occupation**

Percentage chance to:	leave your job voluntarily	lose your job	to find similar or better job if need be
<b>Overall:</b>			
FIFO workers, 2012 (JCU)	27.0	29.6	61.4
Australia, 2009 (HILDA)	23.9	11.5	84.8
<b>Type of occupation:</b>			
Managers & Professionals	21.3	23.1	60.5
Technicians & Trade workers	30.8	30.2	61.1
Machinery operators & Labourers	25.4	26.9	58.4

Source: JCU FIFO survey / HILDA 2009 survey

Table 8 shows that differences in perceptions about job satisfaction/security between occupational categories are limited, although ‘Technicians & Trade workers’ and ‘Machinery operators & Labourers’ rate the chance to lose their current job within the next 12 months moderately higher than ‘Managers & Professionals’. These two occupational categories are also moderately more likely to leave their job voluntarily compared with workers in the category of ‘Managers & Professionals’. However, all occupational categories are similar in their indication that they will leave “to find similar or better job if need be”.

### ***Potential factors affecting possible job separation – Mine sites***

And, we examined differences for FIFO workers from different mine sites (Table 9).

**Table 9: Job separation FIFO workers – Mine sites**

Percentage chance to:	leave your job voluntarily	lose your job	to find similar or better job if need be
<b>Overall:</b>			
FIFO workers, 2012 (JCU)	27.0	29.6	61.4
Australia, 2009 (HILDA)	23.9	11.5	84.8
<b>Mine sites:</b>			
Century	23.8	27.6	62.1
Ernest Henry	31.7	23.0	63.2
Cannington	<b>23.1*</b>	19.7*	<b>54.4*</b>
Phosphate Hill	25.0	26.6	68.9
Groote Eylandt	<b>19.2*</b>	23.1	<b>45.3*</b>
Other	39.1	42.5	66.2

Source: JCU FIFO survey / HILDA 2009 survey

Finally, Table 8 shows that FIFO workers at Groote Eylandt and Cannington mines think that they are relatively less likely to find comparable alternative employment if they leave their job. This concern is also reflected in a lower likelihood to leave voluntarily for workers from these mines when compared with workers from other mines. The higher rates (or main problems) seem to be localised at the smaller mines (or category of ‘other’), where likelihood of resignation and job loss is high. Equally, responses that workers will leave “to find a similar or better job” are also high for workers from the smaller mines. As mentioned earlier, this could be an indication that workers use the smaller mines as a means to get into the industry and then use the experience gained therein as a vehicle for entry into work for the larger mines.

In terms of future research, it would be worthwhile to determine if there is any correlation between the above findings for ‘other’ in particular, and the qualifications, skills and experience of this cohort of workers. A possible option is to look at the data and examine pathways into FIFO employment, journey from home to mine site, contractual arrangements as contributors to job separation for FIFO workers in Northern Australia.

### **Summary and Conclusions**

In terms of demographic characteristics, the FIFO workers surveyed are not all that different from other workers of the Cairns and Townsville workforces, although women are less engaged with FIFO type of work, but this is consistent with findings from other research.

In comparison to the average Australian worker, FIFO workers rate the chance of job loss moderately higher than the average Australian and the chance of finding a similar or better paying job in case they lose their current job is much lower, by comparison. This combination is worth noting as it may lead to elevated levels of anxiety about employment security and continuity and impact on employees' performance and well-being.

Of the potential factors affecting possible resignation, the least dominant factor was the physicality, followed by private life factors. Other factors were examined for their impact on job separation, i.e. type of contract, employer, occupation and mine site. These did lend some insight into reasons for job separation, and the findings suggest that people are finding any opportunity to enter the FIFO workforce and in particular, seem to be using work in smaller mines or mines with less amenable conditions as entry points to gain further experience and use this as vehicles for accessing work with better conditions or work in the bigger mines. Hence, they are willing to tolerate these conditions in light of the potential to gain better work.

A further interesting finding was the marginal number of workers who will leave the mining industry for family reasons. To date it has been thought that family factors play a key role in workers sustained engagement with the mining industry. The findings of this study suggest that families may be coping better than has been previously reported.

This research has presented findings from a region of Australia, which has not been examined in previous research. It highlights that in many ways the complexities of and challenges for FIFO workers are similar to their counterparts in other regions. In other ways, the results provide a platform from which interested stakeholders of the region can plan future strategies that support workers, their families, communities, labour markets, and related industries. It is envisaged that the findings from this paper are especially relevant to human resources departments of mining companies and policy makers attempting to create city hubs for fly-in/fly-out workers.

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