



An Updated Profile of the Minimum Wage Workforce in Australia

J Healy and S Richardson
National Institute of Labour Studies
October 2006

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Australian Fair Pay Commission, 2006

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Executive summary

The purpose of this report is to provide an updated profile of workers receiving the standard, adult Federal Minimum Wage (FMW). Most of the analysis is based on data from Wave 4 of the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The first three sections of the report use HILDA to examine: (1) the number and proportion of workers who are recipients of the FMW, (2) the characteristics of these workers, including their satisfaction with various aspects of their lives and work, and (3) the relative income positions of their households. The fourth section uses data from another source – the ABS Survey of Income and Housing, 2003–04 (SIH) – to check on the HILDA results. The SIH dataset contains fewer variables than HILDA, and thus cannot match its breadth of findings, but has the major advantage of a larger sample size. This increases the confidence we have in several key inferences about the characteristics and living circumstances of workers receiving the minimum wage.

How many FMW workers?

Ten per cent of adult employees, excluding juniors and workers who are not employees, receive an hourly wage of less than or equal to the FMW. This includes 3 per cent receiving wages of no more than 80 cents below or 20 cents above the exact FMW. Another 9 per cent of adult employees have wages up to \$2.20 per hour above the FMW. Depending on how closely their wages move in response to an adjustment of the minimum, as many as 1.4 million adult employees have hourly wages that are directly or indirectly affected by FMW decisions.

Who gets the FMW?

One way to answer this question is to compare FMW workers with other adult employees. When we do this, we find that FMW workers are more likely to be young, without post-school qualifications, and working part-time casual jobs in the retail and hospitality industries. They are more likely to be unmarried, especially if they are male, and to be non-dependent in their relationships to the others in their household. They live disproportionately in outer regional areas but are not more likely to be migrants from non-English-speaking countries. Compared to other adult employees, FMW workers are less satisfied with their pay and their finances, but not with their lives generally. When asked if their pay is fair, these workers are more likely than others to indicate that it is not.

A second way to answer the question of who gets the FMW is to highlight the characteristics that are possessed by the majority of FMW workers. This perspective shows that they are equally divided between men and women, are prime age, married (40 per cent have dependent children), Australian born, live in metropolitan areas, and work one full-time job, most likely in intermediate or elementary clerical and sales jobs or as labourers. A small majority has no post-school qualifications.

Are FMW workers in low-income households?

FMW workers are disproportionately found in the lowest deciles of a distribution of equivalent household disposable income that includes only adult employees. Close to 30 per cent are in the very bottom decile (10 per cent) of such a distribution. Their concentration in the lowest deciles is less pronounced in a distribution that includes all adults in the labour force, and is overshadowed by the severe income disadvantage that appears to face the unemployed (subject to a small sample). In broader distributions, FMW workers are spread across the income deciles, and they are not confined at the bottom when the whole Australian population is considered.

1. How many FMW workers?

The first stage of analysis was to quantify the minimum wage workforce. How many individuals get the standard adult FMW, and what proportion of the whole workforce do they represent? This section explains the steps necessary to answer these questions.

First, an hourly wage was calculated for all employed individuals, in order to include full-time and part-time workers. No dataset provides this directly, so weekly earnings are divided by working hours to create a new variable. HILDA has several possible measures, but all are limited by the fact that they require *current* earnings to be divided by *usual* working hours. This mismatch is likely to increase the number of hourly wage observations that are equal to zero.

There was also a choice between using wages and hours in the *main* job, or in *all* jobs, to compute the hourly wage. We choose to use information on *all* jobs, for two reasons. The main reason is that we wish to make the results comparable with those from the other data set that we use, the Survey of Income and Housing. The latter only has information on total earnings. The other reason is that it gives more useable data (fewer 'zero' wages) and thus better inferences about the population. The maximum number of potentially useable observations in the HILDA sample was 7822, the unweighted count of all employed persons. The number *remaining* useable in an analysis of main job data is 6793 (87 per cent), compared to 6975 (89 per cent) using all jobs.

Before deriving the hourly wage variable, usual working hours were modified to apply a 'top-coding' at 50 hours. This means individuals with usual hours exceeding 50 were assigned the value 50. The adjustment avoided including among the low wage workers those who had reasonable weekly earnings, but reported working very long hours. The adjustment affected one-eighth of employed persons.

The next step was to use the hourly wage data to isolate workers earning close to the FMW. From 1997, the FMW rose each year through 'safety net adjustments' in the Australian Industrial Relations Commission. The hourly FMW rose to \$11.80 in May 2003, to \$12.30 in May 2004, and finally to \$12.75 in June 2005. (In state systems not bound by the FMW, wage cases typically increased the applicable minima by an amount matching the Federal ruling.) The 'personal interview' component of the HILDA Wave 4 survey, on which this report is largely based, began on 19 August 2004 and concluded in early 2005. The effective FMW in force during the time of the HILDA data collection was therefore \$12.30 per hour. However, \$12.30 is not a very obvious point at which to break the wage distribution, nor is it a wage that more than a handful of workers actually receive (when calculated by dividing current weekly earnings by usual hours of work). Instead, \$12.50 was selected as a cut-off point, and individuals paid at or below this level were considered FMW recipients.

Table 1 divides the hourly wage distribution into segments, for three different groups of workers. Notice how the wage categories change in size (and share of the workforce) as sample limits are applied. The first column shows all 9.81 million employed persons in 2004. An estimated 320 thousand workers had hourly wages of \$11.51 to \$12.50 in all their jobs, and another 824 thousand had wages from \$12.51 to \$14.50. Excluding those with zero calculated wages, 1.5 million workers had wages equal to or less than \$12.50 per hour in 2004.

Table 1: Estimates of the minimum wage workforce from HILDA data

Hourly wage	All employed		Employees		Adult employees	
	000s	%	000s	%	000s	%
Zero	997	10.2	223	2.6	206	2.7
≤ 6.25	248	2.5	202	2.3	116	1.5
6.26–11.50	919	9.4	856	9.8	394	5.1
11.51–12.50	320	3.3	297	3.4	215	2.8
12.51–14.50	824	8.4	803	9.2	701	9.1
14.51+	6,499	66.3	6,312	72.6	6,036	78.7
Total	9,807	100.0	8,692	100.0	7,669	100.0

Source: HILDA Wave 4.

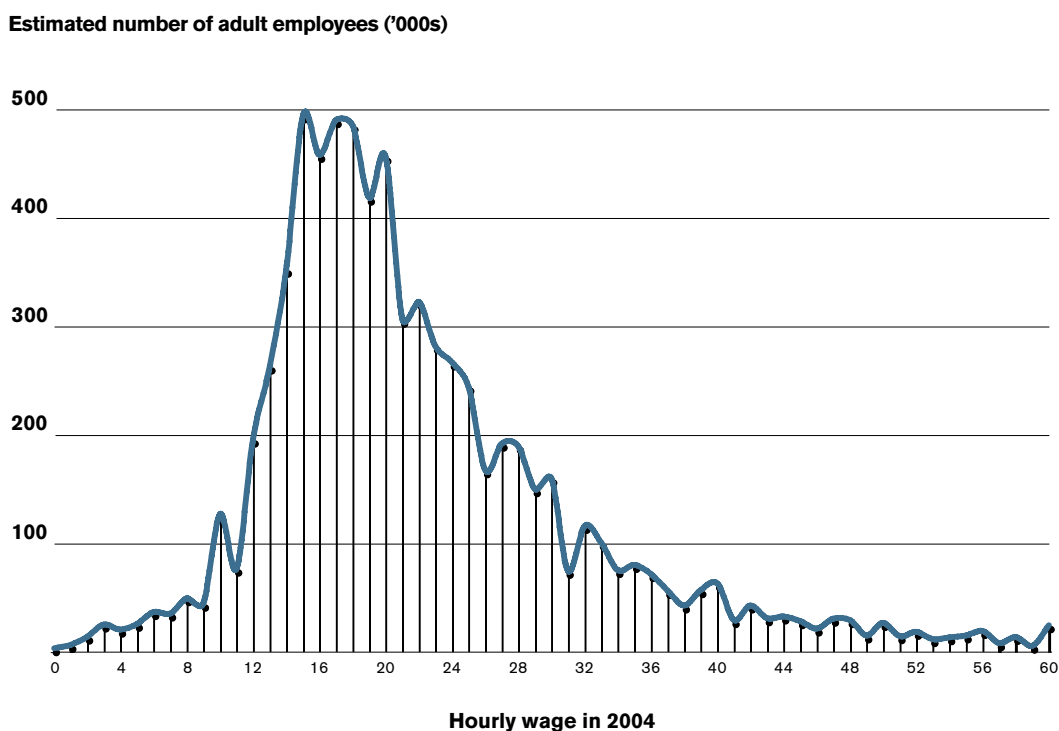
The above includes employment of all kinds. As such, it counts many individuals who, although working, may be legitimately paid a zero wage (employers and contributing family members), or a wage inconsistent with the FMW (the self-employed). In the second column of Table 1, the data are limited to 'employees'. Here, an estimated 297 thousand individuals (3.4 per cent) had hourly wages of \$11.51 to \$12.50 and, while the number of zero cases has fallen dramatically, 223 thousand such employees remain. Over one million employees had wages in a range from above zero up to and including \$11.50.

An important part of the explanation for why so many employees appear to be paid a 'sub-minimum' wage is the presence of junior pay rates, applicable to workers under the age of 21. The final column of Table 1 excludes these workers, in order to focus on those likely to receive the standard *adult* FMW. In this specification, the low-wage groups fall further in size. An estimated 215 thousand individuals (2.8 per cent) now appear to receive a near-minimum wage (i.e., \$11.51 to \$12.50 per hour), and the number of *sub*-minimum wage workers is substantially reduced (but still significant). Combined, there were 725 thousand adult employees paid at or below \$12.50 per hour, and 701 thousand paid \$12.51 to \$14.50 per hour.

The remainder of this report concentrates on 'adult' employees, as defined above, and for the reasons given. However, the estimates in Table 1 demonstrate that there is a high degree of stability to the *share* of workers who receive a 'near-minimum' wage (\$11.51 to \$12.50). Regardless of how the workforce is defined – whether the focus is on all job-holders, on employees, or only on adult employees – the *proportion* of all workers in the near-minimum group is 3 per cent (rounded). Later analysis shows that these HILDA estimates are very close to those generated from ABS data.

Figure 1 graphs the wage distribution for adult employees, omitting both those with a zero wage, and those paid more than \$60 per hour (less than 2 per cent of the total). Each dollar point corresponds to the number of workers paid exactly that hourly wage and up to a dollar below it. Hence, the '\$12' point indicates that 192 thousand individuals had an hourly wage of \$11.01 to \$12.00, the '\$13' point shows that another 260 thousand were paid \$12.01 to \$13.00, and so on. Note that these boundaries differ from those used above. On Figure 1, the FMW falls between the points \$12 and \$13.

Figure 1: Hourly wage distribution for adult employees in 2004



Source: HILDA Wave 4. For presentation, the graph includes a 'zero' hourly wage even though such cases have been deleted.

Two important observations can be made about the hourly wage distribution shown. Firstly, there do not seem to be sharp discontinuities between those paid and those not paid the FMW. Unlike in similar distributions constructed for the United States, for instance, the Australian minimum wage does not project an obvious 'spike' onto the wage distribution where many adult employees are concentrated. As noted, there are very few individuals, even in the broadly-defined workforce, getting *exactly* the FMW. It is likely, therefore, that the implications of raising the FMW exceed its *direct* impacts on 'minimum-wage' workers.

The second point to emerge from Figure 1 is that the FMW serves as a 'wage floor' in a rather imperfect fashion, for there are several hundred thousand individuals working for wages below, and in some cases well below, the level at which it is set. Previous researchers have parted company over how to treat such cases. Leigh (2005) excluded from his analysis all who earned under half the FMW in 1994–2003, assuming them to be due to data errors.¹ Richardson (1998), however, argued against such an approach, calling it: '...a dubious practice [which] makes it rather unlikely that expectations will be disconfirmed by the data' (p 558).²

¹ Leigh, A. (2005) 'Does raising the minimum wage help the poor?' Centre for Economic Policy Research discussion paper no. 501, Research School of Social Sciences, Australian National University.

² Richardson, S. (1998) 'Who gets minimum wages?' *Journal of Industrial Relations*, Vol 40, No 4: pp 554–79.

Since steps have already been taken to top-code working hours at 50, and to remove those with a zero wage, there seems little further justification for deleting those with very low apparent rates of pay. One possibility is that these are instances of 'award-free' employment – areas of the labour market into which the current FMW does not reach. Another view is that these are manifestations of a 'black economy' in which employees receive below their legal entitlement. However, if this is the case it would not be adequate grounds for excluding the very low observations, since it is of interest to know how many workers *might* receive the FMW, if it were better enforced. A final possibility is that some adult employees have disabilities which make them subject not to the standard FMW but to the 'supported wage' system. We are unable to reliably identify such individuals from the data available.

This section has described the method for defining the FMW population. It argued that the best specification focuses on the hourly earnings of adult employees, with top-coding of working hours at 50, but without excluding those on very low hourly rates. Adult employees paid up to and including \$12.50 per hour in 2004 were judged to be potential recipients of the FMW. The next section describes the characteristics of the FMW group and compares them to other workers. Section 3 then looks at their household income, and Section 4 replicates parts of Sections 1 and 2 with alternative data from the 2003–04 ABS Survey of Income and Housing.

2. Who gets the FMW?

The next stage in the analysis involved describing in detail the characteristics of those paid the FMW, and examining how closely they resemble other workers with respect to these characteristics. This section reports the findings. Adult employees (as already defined) were placed into one of three groups. The first are those of principal concern, who had an hourly wage up to and including \$12.50. The second group is those paid \$12.51 to \$14.50 per hour, and the third is those paid \$14.51 per hour or more. These are referred to, respectively, as the 'FMW', 'above-FMW', and 'non-FMW' groups. They are compared across various characteristics, and (chi-square) tests of significance are used to determine whether differences are likely to reflect 'real' differences in the adult employee population, or 'chance' variation arising from the method of sampling.

Table 2A: Demographic characteristics of adult employees

% in each wage group	≤\$12.50 (n=566)	\$12.51-\$14.50 (n=515)	\$14.51+ (n=4839)
Sex			
Male	48	49	56
Female	52	52	44
Age			
21-24	16	21	9
25-34	25	22	28
35-44	23	23	28
45-54	22	25	24
55+	13	9	12
Marital status			
Married or de facto	58	57	70
No longer married	12	15	10
Never married	30	28	20
Country of birth			
Australia	75	74	75
Main English-speaking	8	8	11
Other	17	18	14
Relationship in HH			
Couple with dependents	30	29	39
Couple without dependents	28	28	31
Lone parent	8	8	5
Non-dependent child	14	14	8
Lone person	16	15	14
Other	5	6	5
Remoteness area			
Major city	61	65	72
Inner regional	22	21	19
Outer regional	17	14	9
Total	100%	100%	100%
Estimated no. employees	725,000	701,000	6,036,000

Source: HILDA Wave 4

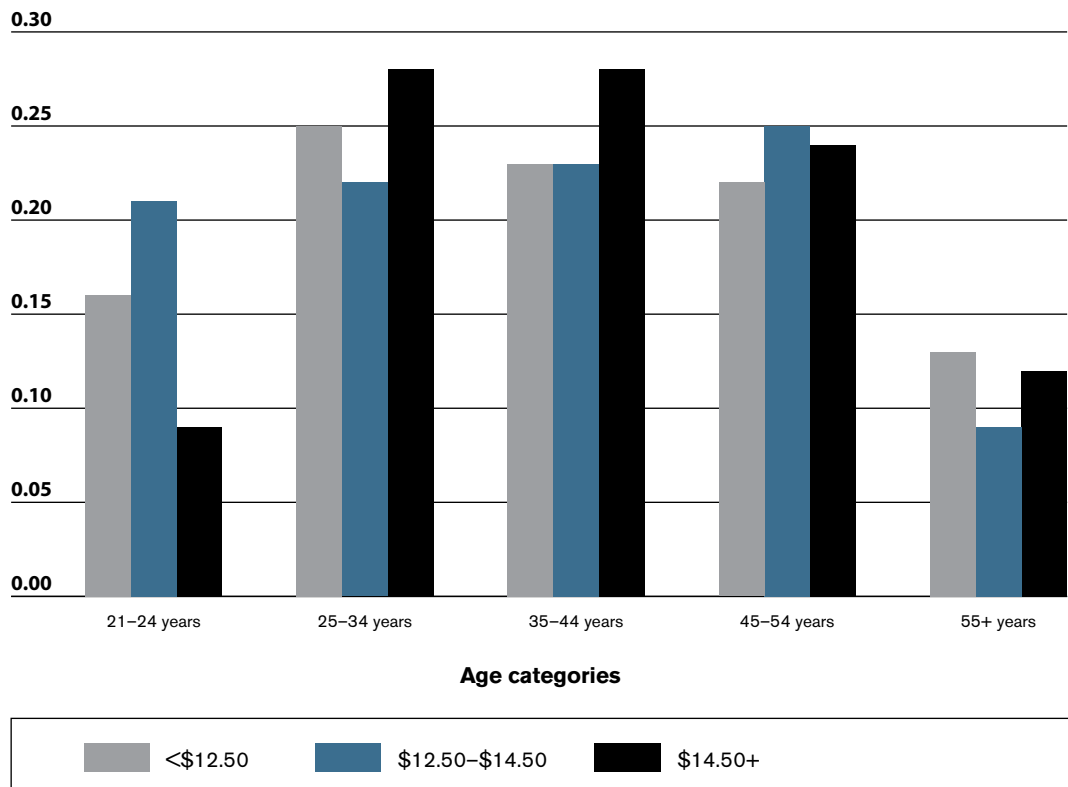
Table 2A lists several demographic variables, and reveals the following main points:

A small majority of FMW workers is female. Relative to their share of the whole adult employee workforce (45 per cent), women are over-represented in the FMW group (52 per cent). The majority of FMW workers are also of prime age. Half are 25–44, and 70 per cent are 25–54. Compared to the adult employee workforce as a whole, FMW workers are more likely to be young (21–25 years), but are no more likely to be over 55 years. Figure 2A provides a graphical representation of the age data.

A majority of all three wage groups is married or in a de facto relationship, but this is more likely to be the case for non-FMW workers than for the two other groups. Almost one-third (30 per cent) of FMW workers have never married, which may reflect their low wage, their age composition (above), or both. They are also more likely to have never married than adult employees generally. There is a gender aspect to marital status which is *not* apparent from Table 2A. For men, a chi-square test measuring the association between wage category and marital status is highly significant at conventional levels ($p= 0.05$). This is not so for women. Inspection of the data suggests that the differences in Table 2A are mainly due to higher than expected rates of non-marriage among FMW and above-FMW men. Whether these men are unmarried *because* they are low-paid is suggested, but cannot be answered firmly by this analysis.

Figure 2A: Age composition of adult employees

Proportion of each wage group



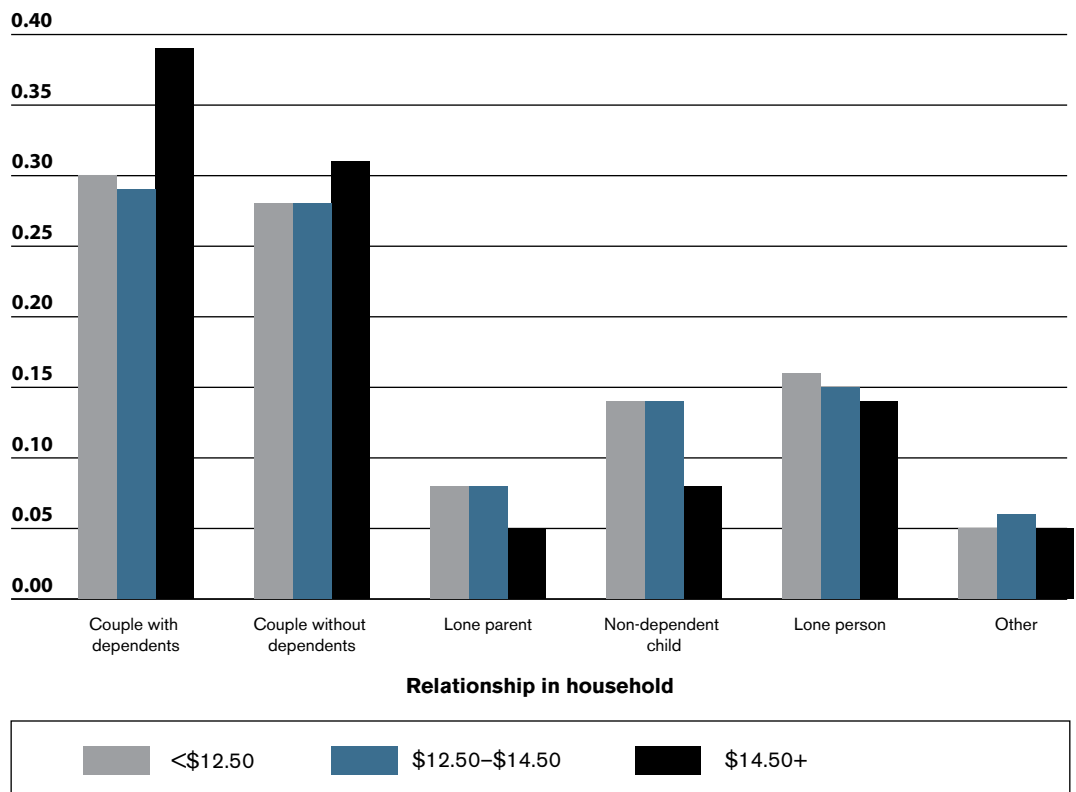
Source: HILDA Wave 4

Perhaps surprisingly, FMW workers look very much like other adult employees with respect to their country of birth. Three quarters are Australian-born, 8 per cent were born outside Australia in an English-speaking country, and 17 per cent were born in a non-English speaking country. The last figure is 3 percentage points higher than the comparable figure for non-FMW workers, but the difference is not statistically significant. It is not appropriate to characterise low wage work as being particularly focussed on providing early job opportunities to non-English speaking immigrants.

The HILDA data categorise individuals according to their relationships to the other members of their household. While a majority of FMW workers is in a couple relationship (30 per cent with dependents, and another 28 per cent without), they are under-represented in both of these categories, relative to non-FMW employees. The FMW group is, in contrast, more likely to contain lone parents (8 per cent), 'non-dependent children' (14 per cent), and persons living alone (16 per cent). Figure 2B presents these data graphically. As with marital status, it is statistically significant differences among the wage categories for men, and not for women, that most affect the results. Again, while it is only possible to speculate about cause, the fact that higher than expected numbers of FMW men are unmarried, without partners or dependents, and living with their parents as non-dependent children may be, for some, consequences of being low-paid.

Figure 2B: Relationship in household of adult employees

Proportion of each wage group



Source: HILDA Wave 4

Table 2B: Workforce characteristics of adult employees

% in each wage group	≤\$12.50 (n=566)	\$12.51–\$14.50 (n=515)	\$14.51+ (n=4839)
Highest qualification			
Tertiary	13	11	30
Diploma, adv. diploma	7	9	10
Certificate, all levels	21	27	23
Year 12	21	19	15
Year 11 or below	38	35	22
Total working hours in all jobs			
1–15	16	9	7
16–34	24	21	18
35–39	9	26	20
40–44	22	22	23
45–49	7	9	12
50+	23	14	20
Multiple job-holding			
Has more than one job	7	8	9
Has only one job	93	92	91
Contract type			
Fixed-term	6	6	9
Casual	38	21	16
Permanent	57	73	75
Industry (top 5 among FMW)			
Business services	10	7	10
Accommodation, cafes, restaurants	9	5	4
Community services	9	5	3
Personal and home-goods retailing	6	11	5
Agriculture	6	3	1
Occupation (top 5 among FMW)			
Intermediate service workers	15	12	5
Intermediate clerical workers	8	12	9
Elementary sales workers	7	13	5
Other labourers and related workers	7	6	2
Social, arts and misc. professionals	7	2	4
Total	100%	100%	100%
Estimated no. employees	725,000	701,000	6,036,000

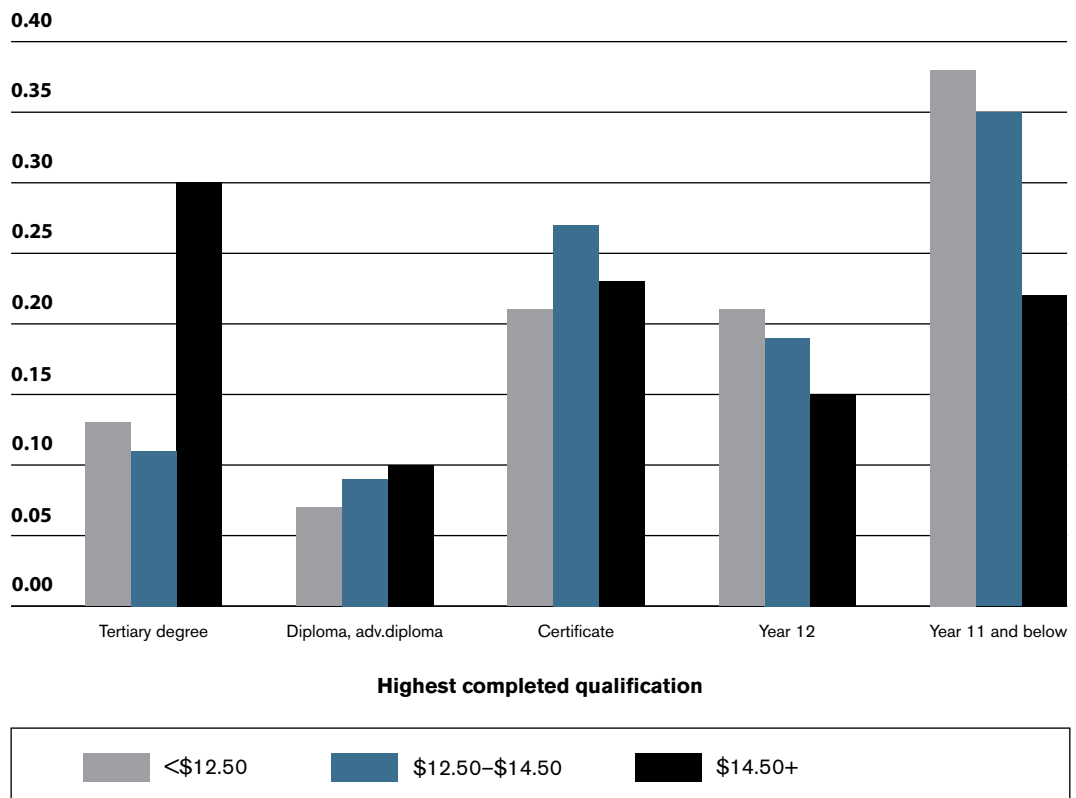
Source: HILDA Wave 4

Finally, there are regional differences in the likelihood of receiving low pay. One-sixth of the FMW group lives in an 'outer regional' area, twice the proportion of non-FMW workers. It is possible that some employees in remote areas live on rural properties providing in-kind benefits – lodging, meals, clothes laundering – that supplement their gross earnings. In such cases, the hourly wage measure used here will underestimate their true standards of living. However, data limits preclude testing of this proposition. Several characteristics relating to the workforce positions and types of employment found among adult employees appear in Table 2B. Major points of interest include:

The typical FMW worker is without any post-school qualification: 38 per cent have not studied past Year 11, and another 21 per cent have not gone beyond Year 12. Relative to non-FMW workers, the FMW group has about the same proportions with diplomas, advanced diplomas, and certificates (all levels), but far fewer have university qualifications. This final point is true also of the above-FMW group. If the same proportions of FMW and above-FMW workers had completed university degrees as had done so in the whole workforce, there would be double the current numbers of university-qualified workers in these two groups. (See Figure 2C.)

Figure 2C: Highest qualifications of adult employees

Proportion of each wage group



Source: HILDA Wave 4

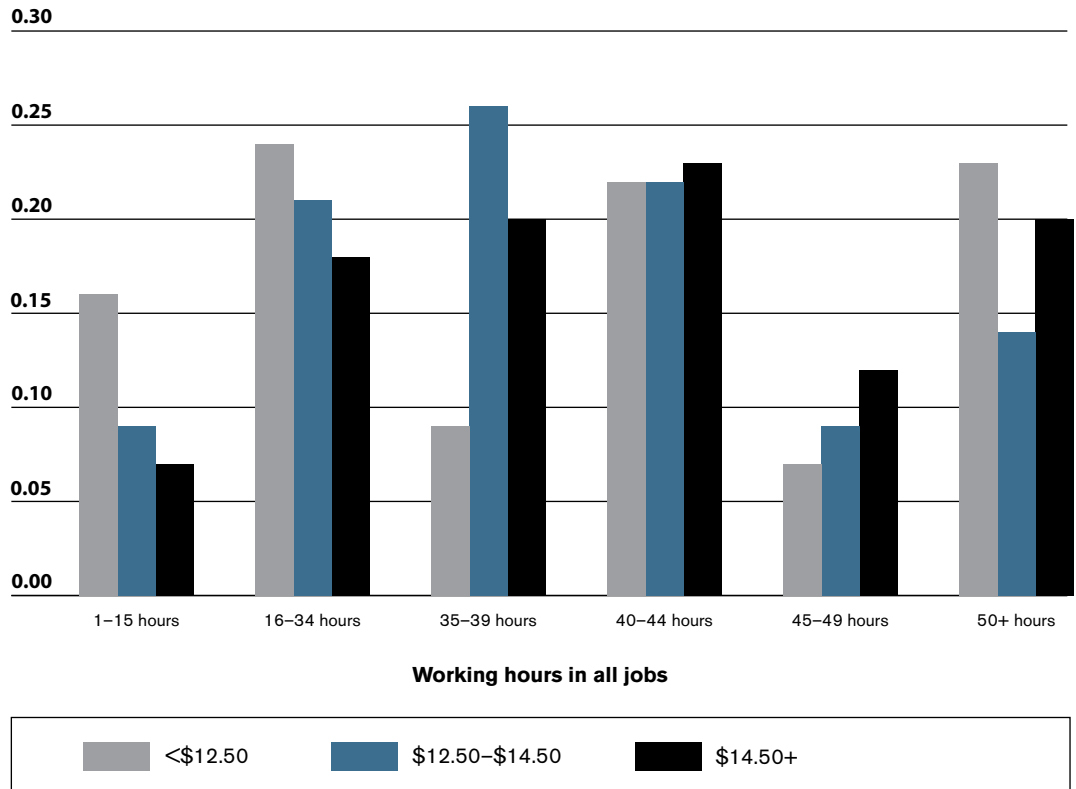
Most FMW workers are employed on a full-time basis, but compared to other adult employees they are more likely to be working part-time. Members of the FMW group are particularly unlikely to be working in 'standard' full-time jobs (those with 35–39 hours per week), and they have an increased chance of being either in short part-time (1–15 hours), or long full-time (50+ hours) jobs (see Figure 2D). It might be inferred that FMW workers seek long hours so as to obtain total earnings commensurate with their needs. However, to the extent this could be expected to increase the number of FMW workers with second jobs, the data do not support such a conclusion. Instead, like other adult employees, more than 90 per cent of FMW workers had only one job, and any differences are statistically insignificant. The data indicate that FMW workers with long working hours are more likely than other FMW workers to be men and to be working in high-skill occupations, but further analysis is needed to establish the significance and implications of these differences.

An area in which the FMW group is clearly distinctive from other adult employees is the type of contract under which these workers are engaged. The standout result is the high degree of casualisation among the FMW group, which had twice the 'all adult employees' incidence of such employment (38 per cent versus 19 per cent). If the hourly wages used in this analysis were adjusted downward to reflect the 'loadings' received by many casuals, there would be even more such workers in the low-wage groups than is presently indicated by Table 2B. Notwithstanding their high rates of casualisation, it remains the case that a majority of the FMW group (57 per cent) are in permanent positions.

The top five industries employing FMW workers are, in descending order: business services, accommodation, cafés and restaurants ('hospitality'), community services, personal and household goods retailing, and agriculture. These industries employ 40 per cent of all adult FMW employees. The data preclude analysis of where, within these broad industries, FMW workers are found. Apart from agriculture, however, the results support a view that minimum wage work is generally services-based, in part reflecting the outsourcing of services from businesses and the family home (contract cleaning is an example of the former; meal preparation and care for the elderly and the very young, examples of the latter).

Figure 2D: Working hours in all jobs of adult employees

Proportion of each wage group

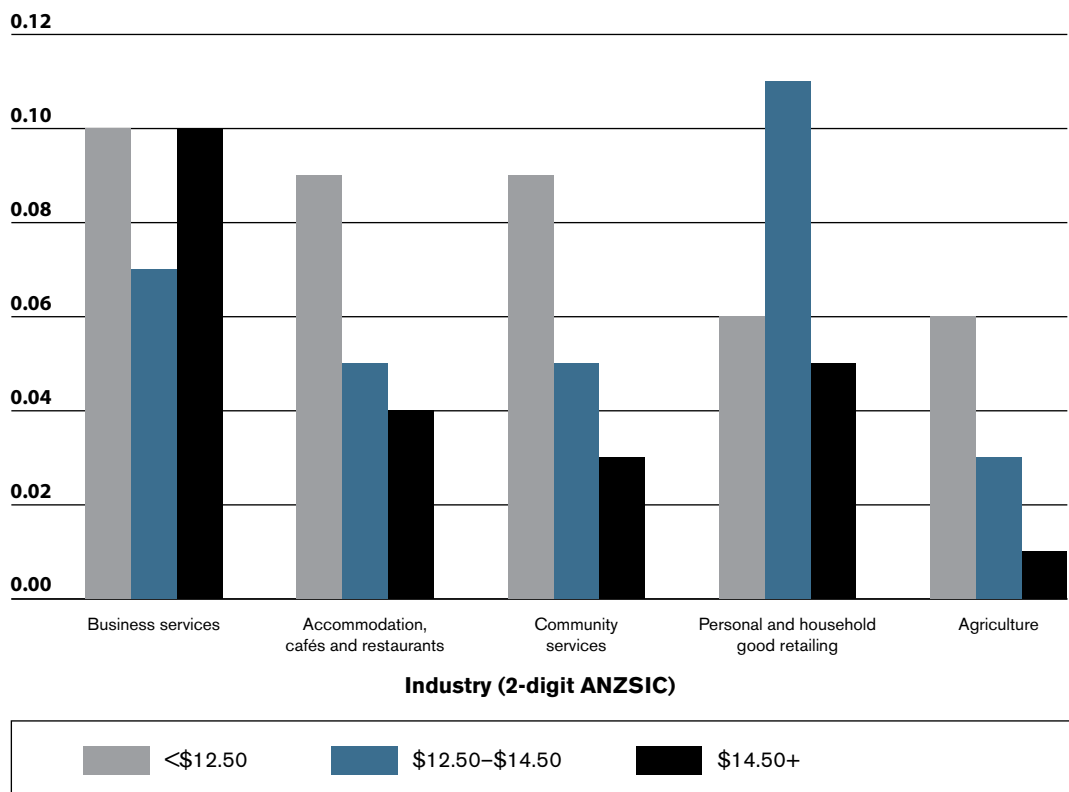


Source: HILDA Wave 4

Figure 2E shows that FMW workers are clearly over-represented in three of the five industries from Table 2B: hospitality, community services, and agriculture. Whereas 9 per cent of FMW workers work in hospitality, only 4 per cent of non-FMW workers do so. FMW workers are also three times more likely to be in community services, and six times more likely to be in agriculture. It is not the case that FMW employment is concentrated in service industries just because a high proportion of all jobs are found there. With reference to Table 2A, the fact that 6 per cent of FMW workers are in the agriculture industry suggests that only a fraction of the 17 per cent living in outer regional areas are likely to be on rural properties.

Figure 2E: Industry (2-digit ANZSIC) of adult employees

Proportion of each wage group



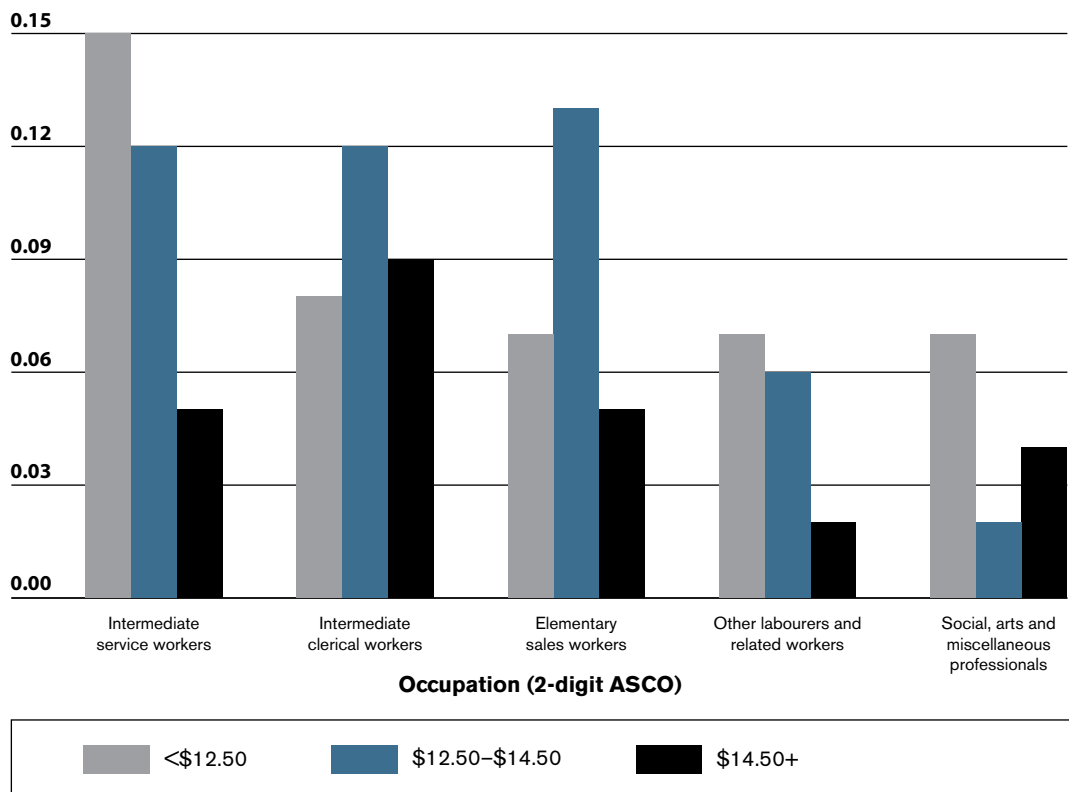
Source: HILDA Wave 4

Turning to occupation, FMW workers are most likely to be employed (again in descending order) as: intermediate service or intermediate clerical workers (15 per cent and 8 per cent respectively), elementary sales workers, labourers and related workers, and 'social, arts and miscellaneous' professionals (each constituting 7 per cent). These five occupations in combination represent 44 per cent of FMW workers. The first two together account for just under one quarter of the group. Without detailed data, it is not possible to be more specific about the kinds of jobs that FMW workers do, but there is likely to be substantial overlap between the industry picture conveyed in the previous paragraphs and the results for occupation given here.

Figure 2F makes this clearer. It shows that FMW workers are three times more likely than non-FMW workers to be in intermediate service and labouring jobs, and roughly twice as likely to be working as social, arts and miscellaneous professionals. The over-representation of FMW workers in intermediate service jobs is highly consistent with the earlier industry findings. These are individuals employed, for instance, to care for children and the elderly, and as prison officers, croupiers, and travel agents. However, FMW workers are less likely than *above*-FMW workers to be in elementary sales jobs, including the stereotypical 'minimum wage' jobs: checkout operators, telemarketers, and service station attendants. An unexpected result from Figure 2F is that the FMW group is over-represented, relative to all adult employees, among 'social, arts and miscellaneous professionals'. However, since this classification includes social workers, family counsellors, priests, authors and other visual artists, it is plausible that many are correctly identified as low-paid. On the other hand, the same category includes pilots, barristers, and economists, who are likely to be receiving more than the minimum wage.

Figure 2F: Occupation (2-digit ASCO) of adult employees

Proportion of each wage group



Source: HILDA Wave 4

In addition to collecting data about demographic and workforce characteristics, the HILDA survey asked respondents about their levels of satisfaction with different aspects of their jobs and lives. The original responses (on an 11-point scale from 0 to 10) were recoded so that: 0–4 = 'Dissatisfied', 5 = 'Neutral', 6–8 = 'Moderately satisfied', and 9–10 = 'Strongly satisfied'. (The 'Dissatisfied' category is wider because there were typically fewer responses in this range.) The data were used to explore whether FMW workers are distinguishable from other adult employees on some of the more obvious indicators of satisfaction. The results can be summarised as showing the following:

- FMW and above-FMW workers are more likely than non-FMW workers to be dissatisfied with their pay. The proportion of FMW workers dissatisfied with their pay was 25 per cent, compared to 21 per cent for above-FMW workers, and just 10 per cent for non-FMW workers. Despite this, a majority of FMW workers (59 per cent) reported moderate or strong pay satisfaction (but compared to 81 per cent of the non-FMW group). Differences between the three wage groups with respect to pay satisfaction were statistically significant in a chi-square test;
- in contrast to the strong result for pay satisfaction, there are fewer differences between the three wage groups on other dimensions of job satisfaction, namely with perceived job security, the work itself, and overall job satisfaction. There is no clear evidence that FMW workers, as a group, are any more likely than non-FMW workers to be dissatisfied or satisfied with these aspects of their jobs. However, gender is a mediating variable in one of these relationships. FMW women are less satisfied with the nature of their work itself than FMW men, and differences between the three wage groups on this measure of satisfaction are statistically significant for women only; and
- several questions about life satisfaction showed a similar pattern to the above responses about job satisfaction. The tendency is for FMW workers to be less satisfied with aspects of their jobs and lives pertaining to remuneration, wealth, and finances, but *not* to be less satisfied with the overall circumstances of their lives. Whether this reflects stoicism – the discontent of the rich and the forbearance of the poor – or is the result of real success by low-paid individuals in crafting for themselves positive identities and roles outside work, cannot be established from the present data. What can be noted is that FMW workers had twice the rate of dissatisfaction with their financial situation found among *non*-FMW workers (25 per cent compared to 12 per cent), but only a slightly higher rate of dissatisfaction with their lives overall (9 per cent versus 6 per cent).

A final inspection and comparison of the perceptions of workers in the three wage categories was conducted using two questions from the 'self-completion' section of the HILDA survey. The questions related to respondents' views about the fairness of their own pay, and perceived levels of prosperity. Responses to the fair pay question were originally on a 7-point scale. This was recoded so that: 1–3 = 'Disagree', 4 = 'Neutral', 5–6 = 'Tend to agree', and 7 = 'Strongly agree'. Responses to the prosperity question were recoded as 'Well-off', 'Comfortable', 'Getting by', or 'Poor', from a 6-point scale.

The data indicate that FMW workers are substantially more likely than other adult employees to disagree with the proposition that their pay is fair. By inference, 38 per cent of FMW workers believe that their pay is *unfair*, compared to 34 of above-FMW workers, and 25 per cent of non-FMW workers. In relation to their own prosperity, while FMW workers are no less likely than non-FMW workers to consider themselves 'well-off', a much higher proportion indicated they are 'just getting by' (39 per cent versus 25 per cent). There are more missing responses to these questions than to the others used in this section, presumably because they were asked in the self-completion section of the survey and not in personal interviews. No attempt was made to estimate the missing values (10 per cent of adult employees in the sample), so caution is required in interpreting these particular results. With this proviso, the data provide a perspective on the lives of low-wage workers that is rarely available from labour force surveys, and which acts as an interesting counterpoint to the main results of this section.

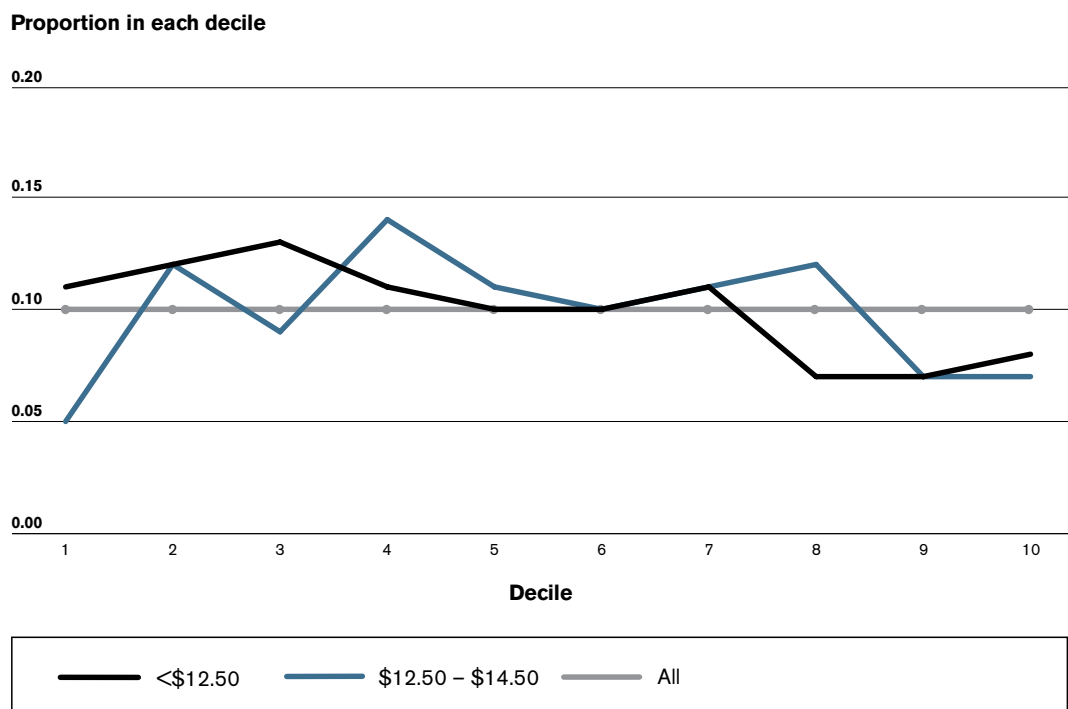
In sum, the HILDA data show that FMW workers are more likely than other adult employees to be female, young, unmarried, and living in remote areas. Although a majority are in couple relationships, they are also more likely to be lone parents and non-dependent children. Most FMW workers have no post-school qualification, work full-time hours, typically in a single, permanent job, and perform sales or clerical roles within the service or hospitality industries. Compared to other adult employees, FMW workers are less satisfied with their pay and their financial situations, but are no less satisfied with their work or their lives generally. When asked whether their pay is fair, FMW workers are more likely than other workers to indicate that it is not, and when asked about their own prosperity, they more frequently report to be 'just getting by'.

3. Are FMW workers in low-income households?

The third component of the research involved using the HILDA data to examine, in a manner similar to that used previously by different authors, whether low-wage (FMW and above-FMW) workers live in 'low-income' households. There is no agreed way of conducting such an analysis. Contentious issues include how to adjust for variations in household size, which income measure to use, and how narrowly to limit the sample against which the incomes of those receiving a low wage are compared. The choice of income measure is perhaps the simplest to resolve for the present purposes. At issue is the standard of living that different households are likely to obtain from the income available for consumption. This is a separate concept from the 'wealth' that individual household members have, which is not explored here. The chosen measure is total, financial year, household disposable (after-tax) income, from all sources. This value is assigned to each member of the household. The focus here is on *household* income, rather than family or 'income unit' income. A limitation of this approach is that it assumes household members pool and share their incomes, which may not occur in the small number of households with multiple families. A household comprises all the people who live under the same roof and share cooking facilities.

The following graphs show the positions of FMW and above-FMW employees in four different household income distributions. For Figure 3A, no sample restrictions have been applied, and income is unadjusted for household size. The sample is weighted to represent the whole Australian population, including children. Household income is first ranked and is then divided into ten equal segments (deciles). The line marked 'All' on Figure 3A remains, accordingly, at 0.10, or 10 per cent of the population. The two additional lines on the Figure then plot the positions of FMW and above-FMW adult employees against this overall income distribution. If the members of these two groups had the same distribution of household incomes as the population at large, they would not deviate from the 'all' line set at 0.10.

Figure 3A: All persons, unadjusted household disposable income



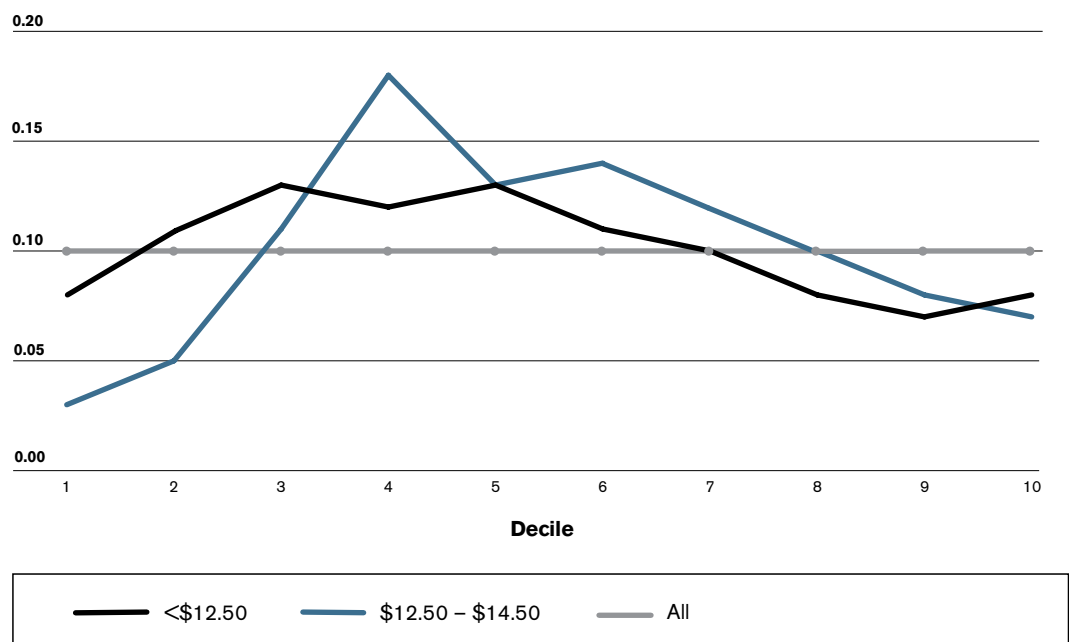
Source: HILDA Wave 4

Instead, Figure 3A shows several areas of divergence above and below the 10 per cent line, although these occur within a quite narrow range, and never exceed deviations of more than 5 percentage points. The unbroken black line, representing FMW workers, shows that these employees are over-represented relative to the whole population in the lowest four deciles, and under-represented in the top three. Just under half (47 per cent) of the FMW group have household incomes in the bottom four deciles. Above-FMW workers are represented by the lightly-shaded line. The main difference between these groups is that FMW workers are twice as likely as above-FMW workers to be found in the bottom decile (poorest 10 per cent) of households. At the opposite end of the distribution, there is a slight 'up-tick' in the proportion of FMW workers in the top decile, which is not apparent for the above-FMW group. Overall, Figure 3A is interpreted as showing that FMW workers are more likely than above-FMW workers, and the population as a whole, to live in poor households, although 22 per cent of them are found within one of the top three deciles.

Figure 3B retains the basic methodology used to produce Figure 3A, but makes two alterations to the comparator sample and the measure of household income. First, the sample is restricted to individuals who are at least 21 years of age. Since the aim is to see where adult FMW employees are situated in the overall distribution of incomes in the population, there is a strong case for removing from the analysis those who could not conceivably hold a standard minimum wage job (children, and teenagers likely to get junior rates of pay if they are employed). The second change involved applying to the household income observations an 'equivalence' factor. This was done by dividing the disposable household income by the square root of the number of individuals living in the household. This equivalence scale is simple and commonly found in the relevant literature. The adjustment recognises that larger households must share incomes, but that there are economies of scale to cohabitation. In simple terms, the equivalence scale takes into account the fact that the same income confers a different standard of living to members of large, as compared with small, families.

Figure 3B: Aged 21years and over, equivalent household disposable income

Proportion in each decile



Source: HILDA Wave 4

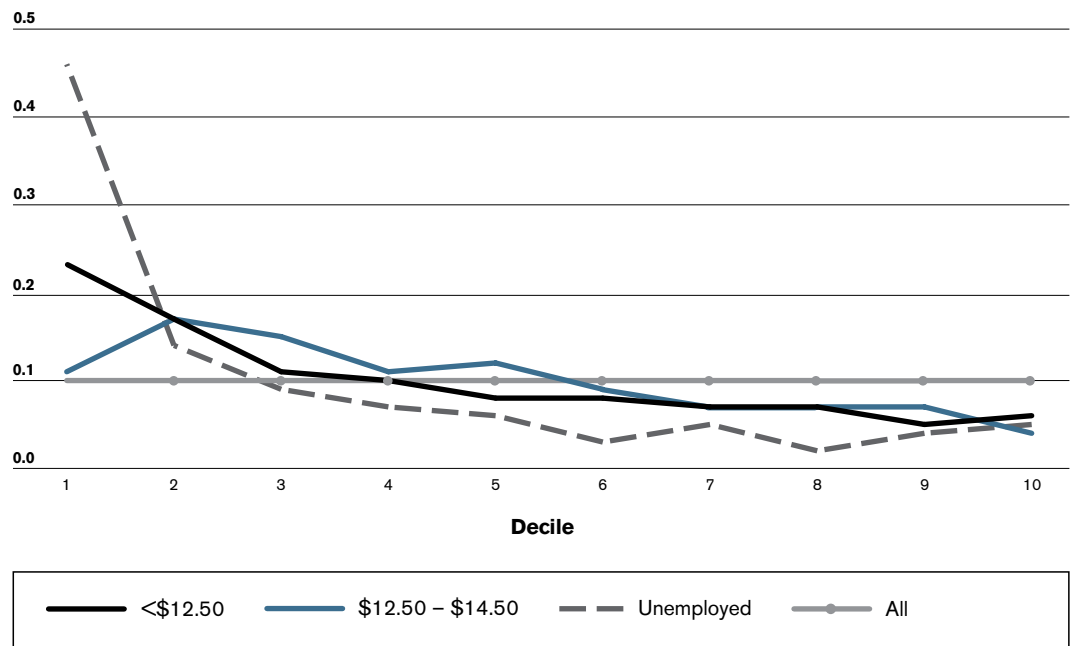
What effect do these two alterations have on the relative income positions of low-wage workers?

The most immediate effect is to reduce the proportions of FMW employees in the bottom two deciles. Comparing Figure 3B with 3A indicates that the proportion has fallen from 24 to 18 per cent. The likelihood of FMW workers being found in one of the middle income deciles (4 through 6) has increased, from 31 to 35 per cent. However, the equivalence adjustment and the exclusion of those under 21 have had less effect at the top end of the distribution: in both Figures 3A and 3B, 15 per cent of the FMW are found in the top two deciles. Much the same can be said about the changed positions of the above-FMW group. There is now a pronounced 'peak' in the line for these workers, at the fourth decile. Less than 10 per cent reside in poor or very poor households, and a quarter have incomes placing them in the top three deciles.

In the transition from an 'all persons' income distribution (Figure 3A) to one including only adults (Figure 3B), a quarter of the estimated total population was removed from the analysis. A comparable reduction was required to construct Figure 3C, which is limited to 21+ year olds *in the labour force* (approximately 9 million individuals). This includes 326 thousand unemployed adults, but omits another 5 million adults who are outside the labour force (whereas both contributed to Figure 3B). The argument for restricting the analysis to adults in the labour force is that these are the group against whom the minimum wage workers are most appropriately compared. Those without work, and who are not looking for it, include many retired and elderly individuals who can be expected to have lower than average incomes. The effect of their exclusion can be best illustrated by the fact that it raises the cut-off point for the first decile of the equivalent household income distribution from \$13,600 (Figure 3B) to \$19,300.

Figure 3C: Aged 21 years and over in the labour force, equivalent household disposable income

Proportion in each decile



Source: HILDA Wave 4

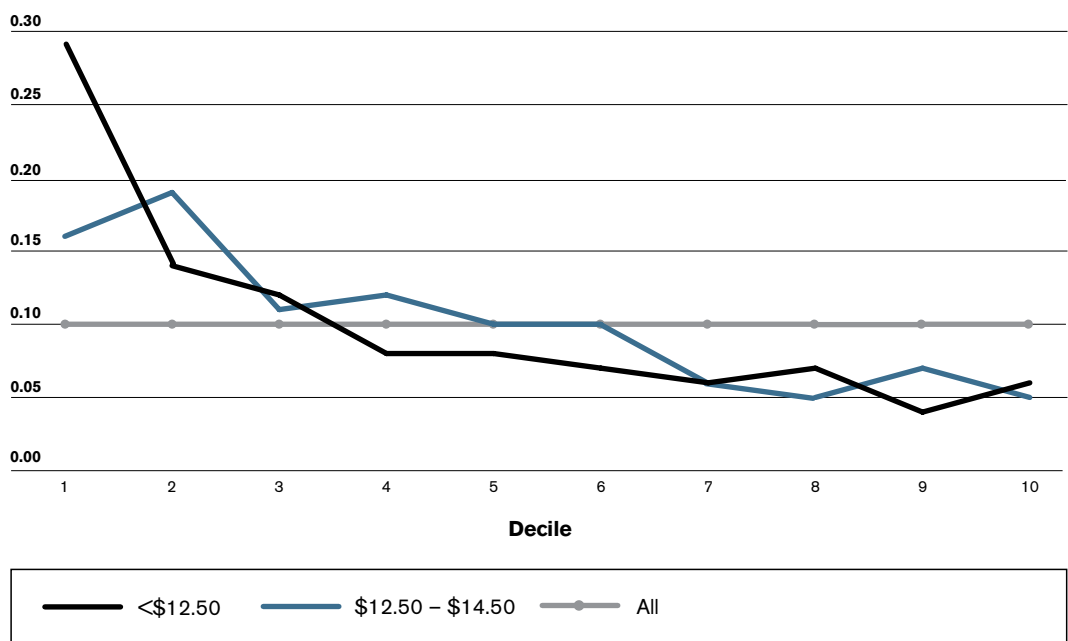
It is unsurprising that a focus on those in the labour force impacts adversely on the relative income positions of the FMW and above-FMW groups. In the distribution depicted in Figure 3C, close to one quarter (23 per cent) of FMW workers are found in the first decile, and 40 per cent are in the bottom two deciles. Beyond this point, there is an almost linear decline in the relative proportion of FMW workers found in each successively higher income decile (though the detail is somewhat obscured by the wide scale on the Y-axis, from 0 to 0.5 which is necessary to accommodate an additional trend line representing the unemployed).

An argument advanced in opposition to minimum wage increases is that those most likely to face hardship, despite participation in the labour market, are not those with low wages, but those without work. This argument assumes that a fall in the real value of the minimum wage will generate additional employment for those who are currently employed. The extra line representing the unemployed on Figure 3C is intended to help in evaluating this proposition. It must be acknowledged that the sample on which this line is constructed is small ($n=246$). Still, in the absence of better data, its interpretation is straightforward: just under half of all unemployed adults in the HILDA sample had equivalent incomes placing in them in the bottom decile of the distribution for adults in the labour force. On this limited evidence, the jobless are worse off, with respect to their households' disposable incomes, than workers on the FMW. The question this analysis does not address, and which deserves more attention and debate, is how best to assist the unemployed move onto higher incomes.

Figure 3D differs from Figure 3C in two respects: it removes from the sample those without jobs, and further removes those who are working but not as employees (i.e., employers, own account workers, and contributing family members). The focus is on adult employees, and the income measure remains equivalent disposable financial year income

Figure 3D: Adult employees, equivalent household disposable income

Proportion in each decile



Source: HILDA Wave 4

for each household. Figure 3D shows just how different and in particular, how skewed towards the lower income deciles, are the positions of FMW and above-FMW workers relative to all adult employees. Up to the third decile, FMW workers are substantially over-represented. More than a quarter (29 per cent) are in the first decile, and over half (55 per cent) are in one of the bottom three deciles. As in earlier distributions, above-FMW workers look similar to FMW workers, although more of them are found in the middle deciles, and far fewer live in the poorest households. One third of both the FMW and above FMW groups have equivalent household incomes sufficient to place them in the top *half* of the adult employee distribution shown in Figure 3D.

The clearest result to emerge from this section of the analysis is that the answer to the question, 'are FMW workers in low-income households?', depends critically on the group against whom FMW workers are compared. Minimum wage workers are disproportionately found in the bottom four deciles of a distribution that makes no adjustment for household size or workforce status. When equivalent income is used, FMW workers are most often situated in the middle income deciles of a distribution that contains all persons aged 21 years or more, but are clearly concentrated towards the lowest rungs of distributions restricted to adults in the labour force and, finally, to adult employees. In most cases, a line tracing the positions of *above* FMW workers in these same four distributions resembles the FMW curve, but usually with lower proportions in the very bottom deciles, and often with a one decile 'offset' or 'shift' towards the higher deciles. In sum, FMW workers are strongly concentrated among low income households when compared with other workers. They are not, however, particularly concentrated among the lowest income households when the entire Australian population is considered.

The over-representation of FMW workers in the bottom deciles is exceeded only by the fact that nearly half the sample of unemployed adults ($n= 246$) are living in the very poorest households. Whether they remain in this state for very long is a question the present analysis cannot answer.

4. How reliable are the HILDA results?

This section presents a confirmatory analysis, undertaken to test whether the results from Sections 1 and 2, which were both based on HILDA data, are in line with those produced using a different data source, the ABS Survey of Income and Housing, 2003–04 (SIH). An important difference between the datasets related to their timing. Whereas HILDA data collection began well after the 2004 safety net review decision increased the hourly FMW to \$12.30, the SIH data collection period occurred earlier, and overlapped the 2004 decision by only a month. To ensure data comparability, the FMW cut-off for the SIH analysis was reduced from \$12.50 to \$12.00 per hour. This remained, as in the HILDA approach, 20 cents above the *actual* FMW (\$11.80) which prevailed at the time (following the May 2003 safety net review decision). In this part of the analysis, adult employees paid up to and including \$12 are placed in the FMW group. The above-FMW group includes adult employees on \$12.01 to \$14.00 per hour, and the non-FMW group represents those on higher hourly rates.

The first step is to examine similarities and differences between the HILDA and SIH data at the 'quantification' stage of the analysis, i.e., how many workers fall into the FMW and other groups. Table 4 shows the different estimates of the sizes and shares of the FMW, above-FMW, and non-FMW groups for adult employees, using the two datasets. Margins between them are given in thousands of persons, and in percentage points, in the 'Difference' columns. If the two datasets were entirely consistent, and if it can be assumed that in the short interval between the two surveys the characteristics of the minimum-wage group are constant, there would be only small differences in the estimated shares of the three wage groups. On the other hand, it cannot be expected that the two datasets will be in *exact* agreement, for both are samples, and some of the differences will reflect the unavoidable imprecision of survey estimates of population characteristics.

Table 4: Comparison of HILDA and SIH estimates for adult employees on low pay

WAGE GROUP	HILDA		SIH		DIFFERENCE	
	000s	%	000s	%	000s	%
Zero	206	2.7	81	1.1	125	1.6
FMW	725	9.5	769	10.3	-44	-0.8
Above-FMW	701	9.1	678	9.0	23	0.1
Non-FMW	6,036	78.7	5,973	79.6	63	-0.9
Total	7,669	100.0	7,501	100.0	168	0.0

Source: Calculations from HILDA Wave 4 and ABS Survey of Income and Housing CURF, 2003–04

There is remarkable consonance between the HILDA and SIH data in Table 4. After rounding, both surveys estimate that 10 per cent of adult employees receive an hourly wage up to and including the FMW. They also agree that the proportion who are in the above-FMW group is 9 per cent. Although not shown in Table 4, their estimates of the percentage paid a 'near-minimum' wage (\$11.50 to \$12.50 for HILDA and \$11 to \$12 for the SIH) are identical, at 3 per cent. There is a slightly higher proportion of the workforce with a current hourly wage of zero in HILDA than there is in the SIH. This result is likely to reflect differences in the precise framing of the questions on the two surveys. Since the following analysis excludes the zero observations (to retain consistency with the earlier sections of the report), no attempt has been made to resolve the discrepancy.

To what extent does the SIH support the HILDA findings about the characteristics of FMW workers? Overall, we find that there are many more areas of agreement than disagreement between the two datasets. A comparison reveals the following:

- first, both datasets generate a similar age profile for FMW workers. The adult employees who appear in this group are predominantly of prime-age (in both cases, close to half are aged 25–44 years). They are substantially more likely to be young (21–24 years) and slightly more likely to be older (55+ years) than the typical adult employee;
- unlike HILDA, the SIH data show that a small majority of the FMW group is male, and that it is among the above-FMW group that females are most over-represented relative to the whole workforce. Taking the two datasets together, the best conclusion is that while women tend to be over-represented among the lowest-paid, the FMW group upon which this research focuses is probably quite evenly divided along gender lines;
- both datasets show that three-quarters of FMW workers are Australian-born. The FMW group is not more likely to contain individuals born outside one of the main English-speaking countries, and differences between the three wage groups with reference to the country of origin are not statistically significant;
- like HILDA, the SIH data show that most workers with low hourly wages are married, but that they are more frequently unmarried than adult employees in general. The differences are strongest for men, who appear to be significantly less likely to be married if they are also on a low hourly wage. Further testing is needed to establish the direction of causality that is at work here;
- the SIH data reinforce some of the earlier impressions relating to the families and households in which FMW workers live, and their positions within these. The lowest-paid are mostly in couple relationships with or without children, as are adult employees generally. Only small proportions are dependent students and lone parents with dependent children, but a more substantial number are found to be 'non-dependent children' (approximately 15 per cent in both datasets). It would be useful in future to explore further the interactions between work, low pay, marital status and expectations, and family dependency for some of these individuals;
- the findings relating to the qualifications held by FMW workers are verified by the SIH data. Like HILDA, these show that a majority of FMW workers is without a completed post-school qualification, and that the FMW group is over-represented in this category relative to the whole workforce. At the higher levels, FMW and non-FMW workers have about the same likelihood of having a diploma or certificate, but FMW workers are about half as likely to have graduated from university. Both HILDA and SIH estimate that 13 per cent of FMW workers have degrees, compared to one third of the non-FMW group; and
- adult FMW employees have a diverse array of working hours but the pattern evident from the SIH conforms to that already depicted using HILDA.³ Again there appears to be a 'polarisation' of working hours among the lowest-paid, and a substantial under-representation within the standard full-time categories. Relative to all adult employees, FMW workers are over-represented among those with part-time, and long full-time, working hours (in all jobs). We cannot confirm from the SIH the high incidence of casualisation found using HILDA.

³ The original working hours categories on the SIH file were recoded at the mid-point of each band, to produce a quasi-continuous variable for the hourly wage computation, and for this comparison.

- SIH data contain less detail than HILDA about the occupations and industries in which FMW workers are employed, but nonetheless confirm the findings generated earlier. FMW workers are concentrated in business, property and community services, in hospitality, and in retail trade. In the last two of these industries, they are over-represented relative to the whole workforce, as are above-FMW workers. With respect to their jobs, FMW workers tend to be found in 'elementary' or 'intermediate' clerical, sales and service occupations, and they are far more likely to be labourers than the typical adult employee.

5. Conclusions

The purpose of this report was to make use of the most recently available workforce and income data to present an updated picture of workers with hourly wages close to the standard, adult Federal Minimum Wage. The bulk of the report used data from the HILDA Wave 4 survey, supplemented in the final section by data from the larger ABS Survey of Income and Housing, 2003–04. The result is a comprehensive picture of FMW workers, combining statistical analysis with rare qualitative insights into the views of those who actually receive a low hourly wage.

The results can be summarised in three parts. First, an attempt was made to estimate the number of workers likely to be paid the FMW, and what proportion of the whole workforce they represent. There is strong evidence that up to 10 per cent of all adult employees (i.e., excluding juniors and other non-employees) receive an hourly wage of less than or equal to the FMW. This includes a robust 3 per cent who receive wages of no more than 80 cents below or 20 cents above the exact FMW at any time. A further 9 per cent of adult employees are shown to have wages up to \$2.20 above the precise FMW. Depending how closely their wages move in response to any adjustment of the FMW, this means that potentially as many as 1.4 million adult employees have hourly wages directly or indirectly affected by FMW decisions, excluding a small number with a zero 'current' hourly wage.

The second part of the study explored the characteristics of FMW workers and their satisfaction with different aspects of their jobs and lives. The results established clearly that adult FMW employees are more likely than other adult employees to be young, without post-school qualifications, and working part-time, casual jobs in hospitality or retail. They are more likely to be unmarried, especially if they are male, and are more likely to live in outer regional areas. While they are more likely to be non-dependent children in their relationships to the others in their household, FMW workers are not disproportionately migrants from non-English speaking countries. Compared to other adult employees, FMW workers are less satisfied with their pay and their financial situations, but are no less satisfied with their work or their lives generally. When asked whether their pay is fair, FMW workers are more likely than other workers to indicate that it is not, and when asked about their own prosperity, more report 'just getting by'.

The third stage of the research examined the relative household incomes of FMW workers. The conclusions of this analysis depend crucially on the chosen comparison population. In a distribution of equivalent household disposable income that includes only other adult employees, FMW workers are disproportionately found in the lowest deciles, with close to 30 per cent in the very bottom decile. Their concentration at the bottom is less pronounced in a distribution counting all in the labour force, and is overshadowed by the severe income disadvantage facing adults without jobs (subject to a small sample size). In still broader distributions, FMW workers are spread across the household income deciles, and are not noticeably confined at the bottom when the whole Australian population is considered. Further work is needed to investigate how long the low-paid remain in the income positions indicated by the various 'snapshots'.

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