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Who Are the Low Waged?

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Abstract

This paper provides pictures of low pay adult employees in Australia in 2004 drawing on data from the HILDA survey. The low waged are disaggregated into full-time and part-time employees. It is conservatively estimated that approximately 13 per cent of employees can be classified as low waged with just under 5 per cent assessed to have earned below the federal minimum wage in 2004. Estimates from multivariate probit models reveal that low wage employees are more likely to have casual status, single marital status, a low educational attainment, aged 21 to 30 or 60 plus, be employed in small firms, non-unionised and have lower occupational tenure. The magnitude of effect of these distinguishing characteristics is much larger for part-time versus full-time employees. Low waged employees, and more so in the case of full-time employees, are spread fairly evenly across households with different incomes, however, some differences are apparent when the data are disaggregated by employment status. For about a half of low waged employees, a low waged job, especially if it is full-time, is a stepping stone to higher paying jobs in the future. However for a sizeable proportion of low waged part-time employees, low pay is either a continuing state or a precursor for movement into labour market inactivity.

1 Background and Introduction

The numbers of and characteristics of low waged employees provide important and necessary background information for assessing the distributional and equity effects of policy options affecting the labour market, including minimum wages, education and training, and policy reforms to the taxation and social security systems. This paper reports estimates of the number of full-time and part-time adult employees likely to be effected by the federal minimum wage (FMW). In the paper, low waged employees are defined as those workers earning below, or within, 10 per cent of the FMW. In the initial description of the low waged, we provide a snapshot profile for 2004 of these individuals in terms of their individual, industry and household level characteristics relative to employees earning well above the minimum wage and relative to the unemployed. To gain a perspective on the experiences over time of the low waged, the labour market histories of low waged employees over the four years 2001 to 2004 are examined to assess the probabilities of movements in and out of low waged employment.

To date, little is known of the individual characteristics of low waged employees in Australia, although some work has been carried out in relation to the households such employees tend to belong. The fact that low wage earners are not over-represented in the most socially disadvantaged households has been relatively well established for Australia (Harding & Richardson, 1999, and Tsumori, 2004), and the UK (NIEC, 1998, and Bryan & Taylor, 2004). UK research also established that, in relation to individuals characteristics, minimum wage workers tend to be disproportionately female, part-time, young and located in industries such as Hotels and Catering (Low Pay Commission, 2003). The extent to which these and other individual characteristics are also important within the Australian context, and their magnitude of effect, is explored in this paper.

For the purpose of our study, low waged workers will be categorised as earning within 10 per cent of the FMW which stood at $448 per week or $11.70 per hour in 2004. Thus a low waged worker is defined as anyone earning less than $500 per week or $13.15 per hour for a standard 38 hour week. While the definition of 10 per cent above the minimum wage is a somewhat arbitrary approach to defining low waged

workers we are confident that this represents a reasonable definition of low waged employment. The earnings data relates ordinary time earnings in main job. Anyone earning above these wage levels will be defined as non low waged. It would be preferable to investigate the characteristics of low waged workers in a more disaggregated fashion, for example using categorisations such as below minimum wage, around minimum wage and well above minimum wage, and indeed this was our initial intention, however, data constraints rendered this approach untenable. Those unemployed meet the ABS definition of having worked less than one hour in the last week, have been actively seeking employment, and are ready to start work.

The paper is structured as follows. Section 2 describes the data available and used. Estimates of the numbers and proportion of the full-time (FT) and part-time (PT) employees aged 21 and over in 2004 who earned below minimum wages, around minimum wages, and above minimum wages are presented in Section 3. Section 4 reports the results of a multivariate regression model analysis to pick out, and to compare and contrast, the key distinguishing individual characteristics of FT and PT low waged workers relative to those earning well above the FMW, and also characteristics of the unemployed. The distributions of FT and PT low waged employees, and the unemployed, by household income are reported in Section 5. A preliminary analysis of labour market histories over the 2001 to 2004 period for FT and PT low waged employees is provided in Section 6 to provide an assessment of the transition probabilities in and out of low waged employment. A final Section 7 provides a summary and conclusions.

2   Data and Methods

The analysis relies principally on the fourth wave of the Household, Income and Labour Dynamics in Australia (HILDA). Given that juniors[1] are subject to special FMW rates of pay, the analysis is restricted to adult employees aged 21 or over. Working proprietors are also excluded, as are any employees reporting zero earnings. Unfortunately, it was not possible to identify all workers potentially subject to special FMW rates, such as the disabled and adult trainees. Nevertheless, where possible, a control for long-term sickness is included in the analysis to account for such

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[1] Defined as individuals aged under 21.

individuals. With respect to the data used, it would also have been possible to include some comparison estimates of low waged employment derived from the ABS Survey of Employee Earnings and Hours, however, the data are considered somewhat unreliable for this purpose due to the automatic omission from the dataset of low wage cash in hand activity (see McGuinness, Freebairn & Mavromaras, 2006, for a more in-depth discussion)

3   Minimum wage coverage

According to the ABS[2], after excluding juniors, there were more than 5,185,000 full-time and 1,787,000 part-time employees active within the Australian economy in 2004. According to HILDA figures, in that same year 3.0 per cent of FT employees earned below the FMW with a further 4.2 percent earning within 10 per cent above the FMW; the corresponding figures for PT workers were 10.7 and 17.0 per cent respectively. By applying these proportions to the ABS population data, we estimate that, in 2004, 155,000 FT workers were paid a rate that lay below the minimum wage with a further 248,800 receiving a weekly wage that was around the minimum. With respect to PT employees, an estimated 191,000 were paid an hourly rate that was below the minimum, with a further 303,800 paid around the minimum[3] (Table 1). In total, therefore, it is estimated that 899,000 low waged workers earning below or around the FMW were active in the labour market during the period in question, which was equivalent to approximately 12.9 per cent of all employees. Over one third of a million employees were estimated to have earned below the FMW in 2004, which equates to approximately 5 per cent of all employees. It should also be noted that if it is determined that such low waged workers are predominantly causally employed then the above estimates can be considered conservative given that the HILDA wage data has not been adjusted to remove any casual loading.

Exactly why such a large number of employees earned below the minimum wage during 2004 cannot be established from the data. However, it is likely that the following factors, when taken together, will be responsible for a large part of the incidence of below minimum pay:

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[2] ABS Cat No 61050

[3] In this instance the estimate based on the un-calibrated HILDA sample represented the upper bound.

- A large number of workers will not have been covered by an award, and will not, therefore, have been subject to any minimum wage restrictions;

- Employees covered by state, as opposed to federal, awards could also be paid less than the FMW if State rules allowed it;

- Where workers are subject to SFMW linked awards, delays in negotiating and registering new agreements may have resulted in some individuals falling below the award rate, albeit temporarily;

- Some employers will have been non-compliant during the period;

- Non-wage compensation elements, such as received, for instance, by many agricultural workers;

- Some individuals with special FMW entitlements could not be extracted from the data; and

- The estimates are likely to incorporate some measurement error.

To get an assessment of the distribution of workers earning below the minimum wage, sensitivity analysis was carried out to determine the extent to which the numbers of such persons diminishes as we continually reduce the wage rate from the minimum level within the HILDA data. From Table 1 it is apparent that the pattern of wage dispersion around the minimum level is slightly more acute within the FT distributions with just 17 per cent of below minimum workers earning within 5 per cent of the FMW compared to over 20 per cent of PT workers. Figure 1 extends the analysis further, and we can see that the patterns converge as the wage level is reduced further with approximately thirty per cent of FT and PT workers earning within 10 per cent of the FMW. Thereafter the below wage distributions of PT and FT workers follow an almost identical pattern of steady decline as the wage rate is reduced further. However, the incidence of below minimum pay does not fall to zero as the wage cut-off point falls with an estimated 31,000 FT and 25,000 PT workers earning a rate at least 50 per cent below the FMW. It is not possible to assess the relative importance of the factors listed earlier in explaining these distributions. However, it can reasonably be suggested that individuals covered by state awards, or a delayed federal award, are likely to earn within 10 per cent of the FMW rate, implying that non-award coverage, non-compliance, non-wage compensation and

measurement error will account for approximately 70 per cent of the FT and PT figures.

Table 1: Sensitivity analysis						
	FULL TIME EMPLOYEES			PART TIME EMPLOYEES		
	Wage bands ('000)	5% less ('000)	10% less ('000)	Wage bands ('000)	5% less ('000)	10% less ('000)
Below MW	155.55	129.62	108.89	194.78	151.90	132.24
Above MV	5034.6	5055.54	5076.27	1592.35	1635.23	1654.89
Total	5185.16	5185.16	5185.16	1787.13	1787.13	1787.13

Source: HILDA (2004)

Figure 1: Distribution of below minimum earners
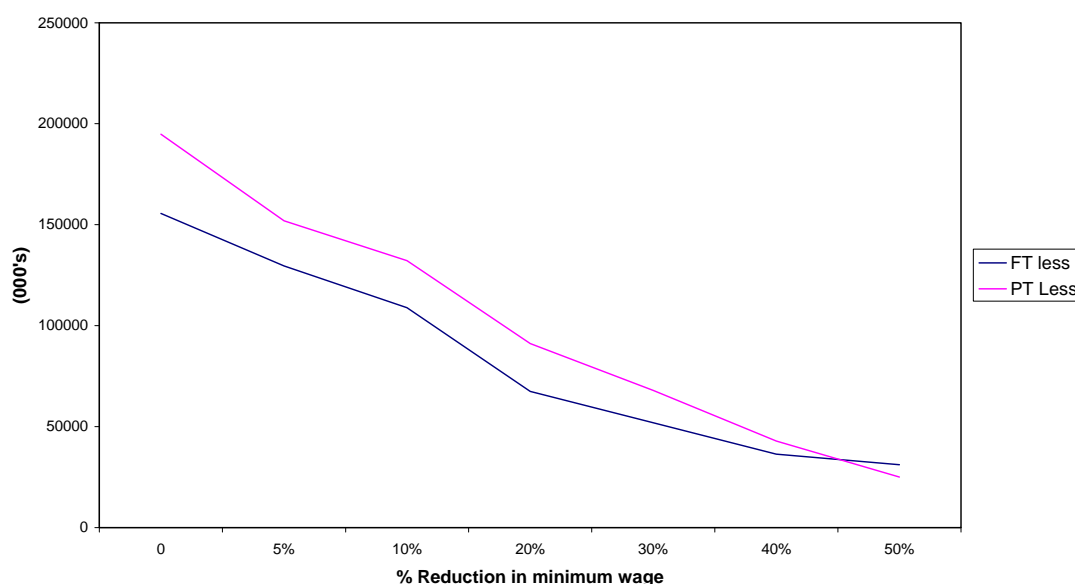
Source: HILDA (2004)

4   Individual Characteristics of the Low waged

A number of individual and job related characteristics have been suggested as distinguishing characteristics of the low waged relative to the high paid and the unemployed. These include gender, marital status, education level, age, migration status, firm size, trade union membership, employer size, occupation and job experience, rural location, long term health condition or disability, type of employment (part time versus full time, as well as contracts which do not provide paid holidays and sick pay), industry and occupation. Often these comparisons are derived from simple bivariate cross tabulations for employees of different pay levels by the individual characteristics. McGuiness et al. (2006) and Healy and Richardson

(2006) provide recent examples of this approach for Australia. With the objectives of looking for the independent effects of the different potential distinguishing characteristics of the low waged, and of reducing the chances of reporting spurious correlations, in this paper we report the results of a multivariate analysis.

The limited but informative objective of this section is to show how several individual characteristics of employees may be *simultaneously* associated with the probability that an employee is low waged and, where such associations are detected, to establish the degree to which they are statistically significant.

We retain the same sample that was used in the preceding analysis, namely low waged adult employees. We estimate the probability that an employee will be a low wag earner, and how these probabilities are affected by the different job and individual characteristics. Unfortunately, we could not include household characteristics in the econometric framework as, at least to some extent, these variables are an outcome of wages. The estimation technique employed is probit. The left hand side takes the value 1 for those employees who are low waged and zero otherwise[4]. We report estimates of the marginal effects of each explanatory characteristic instead of coefficients as they lend themselves to a natural interpretation in the present context. Due to potential problems of colinearity we adopt what can loosely be defined as a Forward Stepwise Regression approach to ensure the robustness of our estimates i.e. we report a number of partial regression along side the full regression to demonstrate the stability of the coefficients.

Table 2 gives the output of the model showing the principal characteristic differences of a FT low waged worker relative to all other FT workers earning above the $500 low wage cut-off point[5]. The table contains three specifications, with additional variables added within each consecutive specification up until model three which contains all variables. Within the table, the estimated parameters for all the explanatory variables carry the expected sign. The results suggest that, relative to all other FT workers, those earning a low wage are more likely to be on casual contracts,

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[4] This approach is distinct from the standard wage equation framework where the dependant variable typically takes the form of log wages.
[5] A detailed description of the variables used in the multivariate analyses is proved in Appendix 1.

be single, educated to year 9 or below, aged between 21 and 29 or over 60, be migrants from countries where the first language is not English, come from non-professional backgrounds, work in firms with 10 or less employees, have lower occupational tenure, and do not belong to a union. The model is relatively stable throughout, with the exception of the female effects which disappear in the final specification, indicating that observed higher incidences of low pay amongst FT females is more likely to reflect certain job characteristics rather than gender discrimination. The model is also relatively well specified explaining approximately 20 per cent of the variation in the data. However, the magnitudes of the reported impacts are quite small. For instance, after taking all other factors into account, single and casual workers are approximately only 2 and 3 per cent more likely to be below minimum wage relative to married individuals or workers on a permanent or fixed term contract.

Estimates of the model for PT low waged workers is given in Table 3. Relative to the model for FT employees, it is less well specified explaining under 10 per cent of the variation in the data. The results indicate that, compared to other PT workers, those earning below the $13.15 per hour cut-off are more likely to be on casual contracts, single, be educated to year 12 or below, aged over 60, and employed in firms within the 10 to 19 and 20 to 49 size bands. An urban location and longer occupational tenure also lowers the likelihood of a low wage among PT workers. Relative to the model for FT employees, the marginal effects of some characteristics for PT employees are somewhat larger in magnitude. For example, single marital status increases the likelihood of a low wage by almost 6 per cent, and PT workers on casual contracts are over 7 per cent more likely to be low wage earners.

The principal factors distinguishing low waged FT employees from their PT counterparts are then determined by pooling the results from the two low pay models and testing for statistical differences between the coefficients in each model. The results of this exercise are reported in Table 4. Relative to their PT counterparts, FT low waged workers are more likely to have lower levels of schooling, be aged between 30 and 40 or between 50 and 60, be employed in very small firms, and be migrants from a country where the first language is not English.

We then estimate a probit model for all low waged workers pooled across FT and PT employees. The results are given in Table 5. Notwithstanding the differences identified in Table 4, the analysis gives us an indication of the factors associated with low wage employment more generally and allows us to test for important interaction effects. Specifically, the model contains controls for employment status interacted with contractual status on the grounds that we might expect PT workers on a casual wage to be more likely to earn a low wage. The model explains just under 17 per cent of the variation in the data, and the magnitudes of the estimated parameters are relatively stable throughout the three specifications. Although both PT and FT workers on casual contracts are likely to be low waged, a Wald test confirmed that the estimated likelihood of low wage employment being exactly the same for both types of worker is a somewhat surprising result. Other general associations include a higher incidence of low wages for workers who were female, single, educated to year 9 or below, aged other than 30 to 40, in firms employing less than 50 workers, migrants from non-English speaking countries, living in rural areas, lower occupationally tenured, non-unionised, not working in the Construction, Defence, Finance or Communication industries and working in the Cultural sector.

Many of the above factors have been significant within the context of previous FT and / or PT models. It is notable that each of the under 50 firm size bands are now significant, indicating a higher concentration of low waged workers within small and medium sized enterprises. It is also clear that the gender effect that has become standard within many low wage studies is qualified in the sense that overall females are more likely to be low waged given that they are over-represented amongst PT workers who in turn have a higher incidence of low pay. When females are examined within the context of the FT and PT distributions separately, the gender effect is not present.

Finally, it is worth comparing the characteristics of low waged workers with those of the unemployed. Given that the unemployed will have no associated job characteristics, the models are based on individual characteristics only, which simplified the analysis considerably allowing a more straightforward estimation. The approach follows the previous format whereby models are estimated for FT and PT low waged workers separately and then for low wage workers generally. The results

are given in Table 6. Within these regressions, the observed gender influences are to be expected and merely reflect the over-representation of females within the PT employment distribution and their under-representation with respect to FT employment. The models relating to PT employment explain approximately 16 per cent of the variation in the data, compared to approximately 10 per cent where FT employees represent the comparator. A number of common factors are apparent within most, if not all, of the models. For example, Aboriginal people are on average over 25 to 30 per cent more likely to be unemployed than in low waged work; the attainment of certificate / diploma level schooling reduces the chances of unemployment relative to those educated to year 9 or below; individuals in the 21 to 30 age bracket are much more likely to be unemployed relative to any other of the age groupings; and, single status raises the relative likelihood of unemployment by over 15 per cent.

Table 2: FT low waged, estimated probit model (marginal effects)

	(1)	(2)	(3)
casual	0.059+++	0.050+++	0.033+++
	(0.010)	(0.009)	(0.008)
LTsick	0.038+++	0.035+++	0.028+++
	(0.009)	(0.009)	(0.008)
female	0.024+++	0.024+++	0.010
	(0.007)	(0.007)	(0.006)
marital_sgl	0.026+++	0.025+++	0.018+++
	(0.007)	(0.007)	(0.006)
edu_yr1012	-0.048***	-0.045***	-0.045***
	(0.014)	(0.013)	(0.011)
cert_dip	-0.062***	-0.058***	-0.055***
	(0.014)	(0.014)	(0.012)
Thirdlevel	-0.116***	-0.105***	-0.095***
	(0.016)	(0.015)	(0.014)
Reference below year 10			
dad_prof	-0.027**	-0.026**	-0.023**
	(0.013)	(0.012)	(0.010)
aage_3040	-0.041***	-0.036***	-0.023***
	(0.009)	(0.009)	(0.008)
aage_4050	-0.038***	-0.033***	-0.017**
	(0.010)	(0.009)	(0.009)
aage_5060	-0.052***	-0.046***	-0.018*
	(0.011)	(0.011)	(0.011)
aage_60p	-0.029	-0.021	-0.001
	(0.024)	(0.023)	(0.021)
Reference age_2130			
firmsz_05		0.074+++	0.059+++
		(0.010)	(0.010)
firmsz_09		0.025++	0.020++
		(0.011)	(0.010)
firmsz_19		0.008	0.006
		(0.011)	(0.010)
firmsz_49		0.022++	0.018++
		(0.009)	(0.008)
Reference firmsz_50+			
ab_aborg			-0.012
			(0.029)
migranteng			-0.000
			(0.010)
migrnoteng			0.041+++
			(0.008)
urban			-0.006
Reference non-migrant			
occtenure			-0.003***
			(0.001)
emptenure			0.001
			(0.001)
union_yes			-0.022***
			(0.008)
indcat_const			-0.037**
			(0.018)
indcat_accom			0.033++
			(0.016)
indcat_finc			-0.056**
		(0.025)	(0.016)
indcat_def			-0.048**
			(0.019)
indcat_hlth			0.031++
			(0.014)
indcat_cult			0.040++
			(0.019)
indcat_pers			0.036++
			(0.017)
Reference cases – Mining and Electricity, Gas & Water			
Constant	-0.099***	-0.114***	-0.070***
	(0.016)	(0.016)	(0.018)
Observations	3877	3877	3877
Pseudo R^2	0.1046	0.1347	0.1952
Chi2(38)	213.32***	247.59***	268.89***

Standard errors in parentheses
+ significant at 10%; ++ significant at 5%; +++ significant at 1% (positive)
* significant at 10%; ** significant at 5%; *** significant at 1% (negative)
Model includes controls for industry.

Table 3: PT low waged, estimated probit model (marginal effects)

casual	0.099+++	0.088+++	0.071+++
	(0.019)	(0.019)	(0.020)
LTsick	0.048++	0.049++	0.045+
	(0.024)	(0.024)	(0.024)
female	-0.000	0.003	0.008
	(0.022)	(0.022)	(0.023)
marital_sgl	0.062+++	0.063+++	0.059+++
	(0.021)	(0.021)	(0.020)
edu_yr1012	-0.027	-0.026	-0.007
	(0.039)	(0.039)	(0.038)
cert_dip	-0.078+	-0.082++	-0.070+
	(0.041)	(0.041)	(0.041)
Thirdleve l	-0.153***	-0.150***	-0.124***
	(0.043)	(0.043)	(0.043)
Reference below year 10			
dad_prof	-0.022	-0.020	-0.023
	(0.029)	(0.029)	(0.028)
aage_3040	0.014	0.011	0.016
	(0.028)	(0.028)	(0.028)
aage_4050	-0.005	-0.008	0.014
	(0.028)	(0.028)	(0.029)
aage_5060	0.021	0.020	0.051
	(0.030)	(0.030)	(0.031)
aage_60p	0.044	0.047	0.087+
	(0.042)	(0.043)	(0.045)
Reference age_2130			
firmsz_05		0.063++	0.045
		(0.028)	(0.029)
firmsz_09		0.024	0.007
		(0.029)	(0.030)
firmsz_19		0.076+++	0.072+++
		(0.027)	(0.027)
firmsz_49		0.064++	0.067++
		(0.028)	(0.028)
Reference firmsz_50+			
ab_aborg			0.025
			(0.083)
migranteng			-0.030
			(0.031)
migrnoteng			0.001
			(0.028)
urban			-0.050**
			(0.019)
Reference non-migrant			
occtenure			-0.004+++
			(0.001)
emptenure			0.000
			(0.002)
union_yes			-0.049+
			(0.026)
indcat_cult			0.146++
			(0.060)
Reference cases – Mining and Electricity, Gas & Water			
Constant	-0.257***	-0.289***	-0.234***
	(0.050)	(0.050)	(0.067)
Observations	1610	1610	1610
Pseudo R^2	0.056	0.0637	0.0996
Chi2(38)	83.81***	94.98***	148.21***

Standard errors in parentheses
+ significant at 10%; ++ significant at 5%; +++ significant at 1% (positive)
* significant at 10%; ** significant at 5%; *** significant at 1% (negative)
Model includes controls for industry%

Table 4: Characteristic differences across FT relative to PT low waged workers

casual	0.010
	(0.015)
LTsick	0.015
	(0.016)
female	0.011
	(0.015)
marital_sgl	-0.005
	(0.013)
edu_yr1012	-0.058**
	(0.025)
cert_dip	-0.041
	(0.026)
Thirdlevel	-0.068**
	(0.029)
dad_prof	-0.021
	(0.020)
aage_3040	-0.040**
	(0.018)
aage_4050	-0.030
	(0.019)
aage_5060	-0.051**
	(0.022)
aage_60p	-0.043
	(0.037)
firmsz_05	0.060+++
	(0.019)
firmsz_09	0.025
	(0.020)
firmsz_19	-0.027
	(0.019)
firmsz_49	-0.008
	(0.018)
ab_aborg	-0.030
	(0.058)
migranteng	0.015
	(0.021)
migrnoteng	0.057+++
	(0.018)
urban	0.017
	(0.013)
occtenure	-0.002*
	(0.001)
emptenure	0.001
	(0.001)
union_yes	-0.007
	(0.017)
accom	0.063+
	(0.034)
Constant	0.010
	(0.041)

Standard errors in parentheses
+ significant at 10%; ++ significant at 5%; +++ significant at 1% (positive)
* significant at 10%; ** significant at 5%; *** significant at 1% (negative)
Model includes controls for industry%

Table 5: General low waged model, estimated probit models (marginal effects)

	(1)	(2)	(3)
pt_casual	0.092+++	0.079+++	0.051+++
	(0.009)	(0.009)	(0.008)
ft_casual	0.074+++	0.065+++	0.046+++
	(0.012)	(0.012)	(0.012)
LTsick	0.043+++	0.042+++	0.036+++
	(0.009)	(0.009)	(0.008)
female	0.031+++	0.031+++	0.017++
	(0.008)	(0.007)	(0.007)
marital_sgl	0.035+++	0.035+++	0.028+++
	(0.008)	(0.008)	(0.007)
edu_yr1012	-0.045***	-0.041***	-0.041***
	(0.015)	(0.014)	(0.013)
cert_dip	-0.070***	-0.067***	-0.065***
	(0.015)	(0.015)	(0.013)
thirdlevel -	0.130+++	-0.120+++	-0.111+++
	(0.016)	(0.016)	(0.015)
Reference below year 10			
dad_prof	-0.026**	-0.025**	-0.023**
	(0.012)	(0.012)	(0.011)
aage_3040	-0.033***	-0.032***	-0.019**
	(0.010)	(0.010)	(0.009)
aage_4050	-0.033***	-0.032***	-0.012
	(0.010)	(0.010)	(0.010)
aage_5060	-0.036***	-0.033***	-0.003
	(0.012)	(0.011)	(0.011)
aage_60p	-0.002	-0.004	0.022
	(0.020)	(0.020)	(0.019)
Reference age_2130			
firmsz_05		0.076+++	0.063+++
		(0.011)	(0.010)
firmsz_09		0.028++	0.022++
		(0.012)	(0.011)
firmsz_19		0.031+++	0.022++
		(0.011)	(0.010)
firmsz_49		0.034+++	0.030+++
		(0.010)	(0.009)
Reference firmsz_50+			
ab_aborg			-0.010
			(0.030)
migranteng			-0.005
			(0.011)
migrnoteng			0.041+++
			(0.009)
Reference non-migrant			
urban			-0.017**
			(0.007)
occtenure			-0.003***
			(0.001)
emptenure			0.001
			(0.001)
union_yes			-0.032***
			(0.009)
indcat_const			-0.060***
			(0.023)
indcat_comm			-0.095***
			(0.033)
indcat_finc			-0.102***
			(0.030)
indcat_def			-0.063***
			(0.024)
indcat_cult			0.058+++
			(0.022)
Reference cases – Mining and Electricity, Gas & Water			
Constant	-0.159***	-0.180***	-0.109***
	(0.017)	(0.017)	(0.022)
Observations	5487	5487	5487
Pseudo R^2	0.1033	0.1175	0.1641
Chi2(39)	379.77	425.53	545.39

Standard errors in parentheses
+ significant at 10%; ++ significant at 5%; +++ significant at 1% (positive)
* significant at 10%; ** significant at 5%; *** significant at 1% (negative)
Model includes controls for industry.

Table 6: Low wage to unemployed, estimated probit models (marginal effects)

	(1) ptlow	(2) ftlow	(3) lowwage
female	0.239+++	-0.153***	0.021
	(0.042)	(0.042)	(0.035)
ab_aborg	-0.253*	-0.247*	-0.312***
	(0.141)	(0.137)	(0.118)
LTsick	-0.088+	-0.033	-0.049
	(0.049)	(0.048)	(0.041)
migranteng	-0.071	-0.082	-0.080
	(0.069)	(0.072)	(0.059)
migrnoteng	-0.112+	0.081	-0.007
	(0.061)	(0.056)	(0.049)
Reference non-migrant			
edu_yr1012	0.188***	-0.006	0.079
	(0.072)	(0.064)	(0.057)
cert_dip	0.194++	0.147++	0.196+++
	(0.079)	(0.069)	(0.062)
Thirdleve l	0.211**	-0.023	0.115
	(0.089)	(0.088)	(0.074)
Reference below year 10			
dad_prof	0.054	0.061	-0.014
	(0.067)	(0.073)	(0.059)
aage_3040	0.210+++	0.115++	0.152+++
	(0.057)	(0.057)	(0.048)
aage_4050	0.289+++	0.159+++	0.217+++
	(0.058)	(0.058)	(0.049)
aage_5060	0.398+++	0.186+++	0.282+++
	(0.068)	(0.071)	(0.059)
aage_60 p	0.436***	-0.018	0.226**
	(0.100)	(0.132)	(0.093)
Reference age_2130			
urban	-0.002	0.104**	0.058
	(0.042)	(0.044)	(0.037)
marital_sgl	-0.120***	-0.186***	-0.157***
	(0.045)	(0.045)	(0.038)
Constant	-0.478***	-0.070	-0.071
	(0.089)	(0.078)	(0.070)
Observations	678	653	921
Pseudo R^2	0.1611	0.0957	0.0889
Chi2(15)	128.95***	79.19***	104.14

Standard errors in parentheses
+ significant at 10%; ** significant at 5%; *** significant at 1%

6.   The household composition of low waged workers

In this section we examine the extent to which the incidence of low waged employment (and unemployment) varies by household type.

Individuals belonging to couples make up over two-thirds of both the FT and PT distributions. However, it should be noted that the proportion of workers belonging to couple households will exceed this due to situations where, for instance, single adults still live with their parents. With respect to both distributions, employees from lone parent households are more likely to be in receipt of a low wage (Table 7). This is likely to reflect the fact that income support rules allow lone parents greater scope to combine working with social security benefits. Within both FT and PT distributions, employees from households classified as Other also appear to have a substantially

higher than average incidence of low wages, however, this grouping accounts for a relatively small share of the FT and PT distributions (Table 7). Single person households have higher than average incidences of low wages within both the FT and PT context. Finally, there is no sense that, relative to the average, the existence of dependents in couple households substantially increases the likelihood of experiencing a low wage relative to the average.

Table 7: Incidence of low pay by Household type (% of employees)				
	Low waged	Non low waged	% FT	% Unemp
Full-time				
Couple no dependants	6.4	93.6	35.2	22.6
Couple with dependents	5.3	94.7	36.6	30.6
Lone parent	11.0	89.0	8.4	19.4
Single	8.8	91.2	15.7	16.8
Other	16.3	83.7	4.1	10.5
Total	7.2	92.8	100	100
Part-time			% PT	
Couple no dependants	20.1	79.9	31.7	22.6
Couple with dependents	12.7	87.3	43.1	30.6
Lone parent	24.1	75.9	11.1	19.4
Single	20.2	79.8	10.5	16.8
Other	28.3	71.7	3.6	10.5
Total	17.7	83.3	100	100

Source: HILDA (2004)

In relation to household income, previous evidence from the UK demonstrated that minimum wage workers tended not to be heavily concentrated within the lowest income households (NIEC, (1998), Bryan & Taylor (2004)). Similarly, for Australia, the fact that low wage earners are not over-represented in the most socially disadvantaged households has been relatively well established and discussed within the recent literature (Harding & Richardson (1999), Tsumori (2004)). To investigate the issue further, the distribution of low wage earners by household income decile is given in Figures 2 and 3[6]. For purposes of comparison, the distribution of the unemployed by household income is also included.

As we might expect, by virtue of the fact that the unemployed have a greater tendency to belong to households where no one works, unemployed individuals are heavily

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[6] Household incomes are equivalised by dividing original household income by the square root of the number of persons in the household.

concentrated in the lowest income households. Over 50 per cent of unemployed persons are located in the poorest 30 per cent of households. By contrast, FT employees earning a low wage are more likely to belong to the two highest household income deciles than they are to belong to the bottom two. However, such workers are slightly over-represented in the 3rd and 4th deciles of the income distribution (Figure 2). However, with respect to FT employees, the overall pattern is consistent with earlier research which suggests that such individuals are relatively evenly dispersed throughout the household income distribution.

The situation with respect to PT employees is somewhat different. Low waged workers are marginally over-represented in the poorest households (Figure 3). Over 40 per cent of PT low wage earners were in the bottom thirty per cent of households. The higher incidence of PT low waged employment among workers from low income households is again likely to reflect the ability of individuals to undertake some PT employment without adversely affecting any social security benefits at the household level. Nevertheless, despite this higher concentration of low waged PT workers in the lower regions of the household income distribution, over 15 per cent of PT low wage earners are located in the top three household income deciles (Figure 3).

These data on the distribution of the low waged and the unemployed by household income highlight the bluntness of minimum wages as a redistributive instrument. Those who are unemployed gain nothing, and arguably they lose from lower employment opportunities, and those who are PT employed gain little from a minimum wage increase. At the same time, many low waged employees who maintain their job and receive a higher minimum wage already are members of middle and high income households. Changes to the tax and social security systems offer more direct and targeted instruments of redistribution.

Figure 2: Household income deciles for full time employees 2004

Source: HILDA (2004)
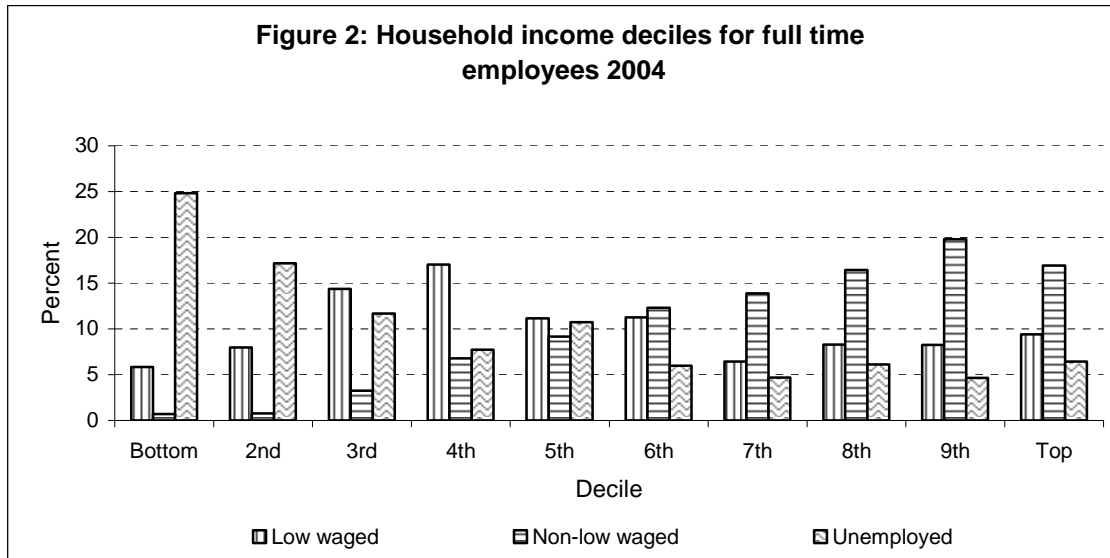
Figure 3: Household income deciles for part time employees 2004
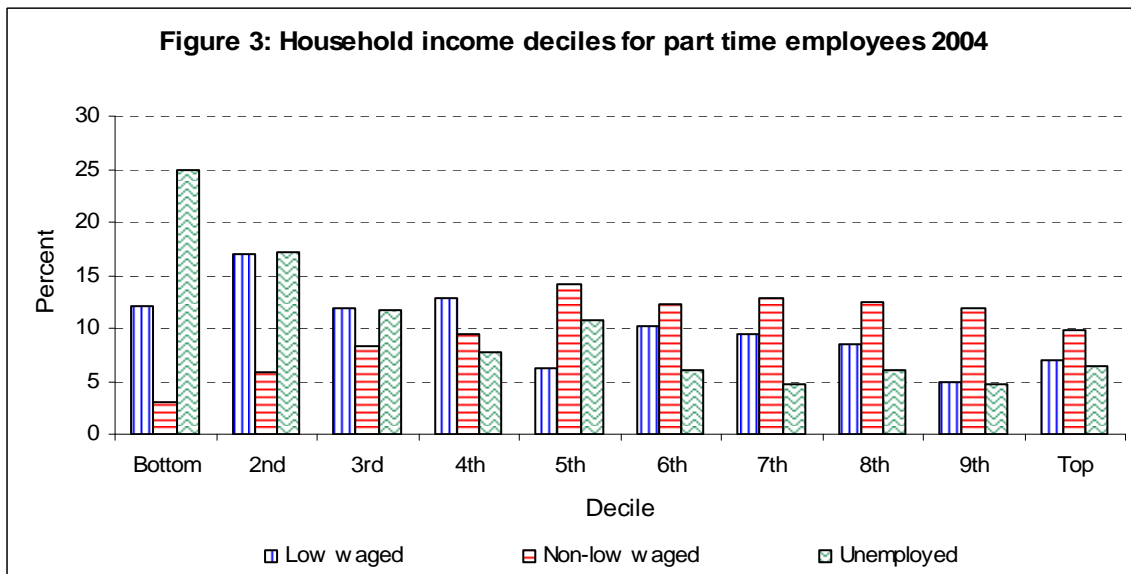
7   Transitions In and Out of Low waged Employment

So far the paper has provided a static snapshot picture of the low waged. This section examines the labour market histories of low wage employees from 2001 to 2004 to indicate some of the dynamics of low waged, and in particular the extent to which low pay in one year is a transition to higher pay in future years as on-the-job training and

other human capital skills are gained. On average, we have full longitudinal information on approximately 80 per cent of each low wage subgroup enabling us to draw relatively strong inferences with respect to any differential patterns for FT and PT labour market transitions.

Consider first in Table 8 the transitions of those in low waged employment in 2001 to different labour market states in 2004. For every 100 people in FT low pay in 2001, by 2001 43 had moved to higher FT pay in 2004 and 14 to higher PT pay, 31 remained in low FT or PT pay, and 11 had become unemployed or moved out of the labour force. The transition story is less rosy for the low pay PT employees of 2001. By 2004, 13 and 31 per cent had moved to higher pay FT and PT jobs, respectively, but 30 per cent had become unemployed or left the labour force. Although 30 and 25 per cent of low waged FT and PT employees, respectively, in 2001 remained low waged employees in 2004, the majority shifted to higher pay jobs, and some became unemployed or left the labour force.

Table 8: Labour Market Progress of Low waged Part-time Workers in 2001(% of employees)		
	2001	2004
FT low waged in 2001	100	
Employed FT – low waged		25.6
Employed FT – non low waged		43.2
Employed PT – low waged		5.6
Employed PT – non low waged		14.4
Unemployed / inactive		11.2
Unknown		0
Total		100
	2001	2004
PT low waged in 2001	100	
Employed FT – low waged		9.4
Employed FT – non low waged		12.9
Employed PT – low waged		15.4
Employed PT – non low waged		30.8
Unemployed / inactive (24.3 inactive)		30.3
Unknown		1.2
Total		100

Source: HILDA (2004)

Tables 9 presents data on low pay labour market transitions from the perspective of the source labour market states leading to low pay employment in 2004. Dealing

firstly with FT workers, the majority of these workers tend to have been consistently active in the labour market on a FT basis. For instance, 70 per cent of those FT employees paid a low wage in 2004, were employed in each of the previous three waves. However, in relation to movements into FT low wage employment, the data suggests that new entrants are more likely to come from the stock of PT workers, rather than from the unemployed or economically inactive.

The picture with respect to the PT worker in Table 9 is somewhat different. Approximately 26 per cent of low waged PT employees in 2004 had been economically inactive in 2001. A further 8 per cent of 2004 low wage earners had been unemployed in 2001. In contrast to the situation for FT workers, just over 50 per cent of those PT workers earning less than a minimum wage in 2004 were employed in all 4 waves. Thus, it would appear that the majority of movements into PT low wage employment come principally from the economically inactive followed by the unemployed.

Overall, a static snapshot picture of who are the low waged hides a more complicated dynamic picture of movements over time between the different labour market states of not in the labour force, unemployment, low wages, and higher wages. Whilst there is evidence to support the view that low wage employment acts as a stepping stone within the labour market for a slight majority of employees, and this is more so the case with respect to FT employees than for PT employees, for many low waged employees their fate is either further years of low pay or inactivity.

Table 9: Labour Market Histories of Low Waged Workers in 2004 (% of employees)				
Full-time Low wage min 2004	2001	2002	2003	2004
Employed FT	52.6	59.2	67.1	100
Employed PT	29.0	27.6	23.7	0
Unemp - looking for work PT	2.6	0.0	1.3	0
Unemp - looking for work FT	6.6	6.6	1.3	0
Not in LF, Marg attached	5.3	4.0	1.3	0
Not in LF, Not marg attached	3.9	2.6	5.3	0
Total	100	100	100	100
Part-time Low waged in 2004	2001	2002	2003	2004
Employed FT	11.2	9.4	10.0	0
Employed PT	54.4	62.5	70.6	100
Unemp - looking for work PT	5.0	2.5	2.5	0
Unemp - looking for work FT	3.1	1.9	0.6	0
Not in LF, Marg attached	12.5	13.1	5.7	0
Not in LF, Not marg attached	13.8	10.6	10.6	0
Total	100	100	100	100

Source: HILDA (2004)

7 Summary and Conclusions

About 13 per cent of the Australian employed adult workforce was estimated to be low waged in 2004 with just under 5 per cent assessed to have been earning below the FMW in 2004. To be more precise, we estimate that 155,000 FT workers were paid a rate that lay below the minimum wage with a further 248,800 receiving a weekly wage that was around the minimum. With respect to PT employees, an estimated 191,000 were paid an hourly rate that was below the minimum, with a further 303,800 paid around the minimum. Of these below FMW employees, just under 70 per cent receive less than 90 per cent of the FMW, leading us to conclude that non-award coverage, non-compliance, non-wage compensation and measurement error will account for the vast majority of below FMW pay. Furthermore, these estimates of the number of low waged employees are likely to be somewhat conservative given that the wage rates of casual employees were not adjusted for any loadings.

A multivariate framework was used to identify the principal personal characteristics of low wage workers. It was found that low waged employees have casual status, single marital status, educational attainment at below year 10, aged 21 to 30 or 60 plus, small firm employment, and lower occupational tenure. In particular, the results relating to the casual employment and 60 plus effects raise important questions for

policy, for example, the extent to which many casuals are being effectively compensated for their loss of entitlements, and the degree to which the higher level of low wage employment amongst older workers is being driven by lifestyle choices as opposed to poverty. Finally, the empirical models provided little support for the notion that females were consistently more likely to earn low wages within both the part-time and full-time labour markets.

As has been found in earlier studies for Australia, and for the UK, low waged employees are fairly evenly spread across households with low, middle and high incomes, whereas the unemployed are heavily over-represented in low income households. These facts, along with the high effective marginal tax rates facing many low wage employees (Harding, et al., 2006) and a downward sloping demand curve for low skilled labour, indicate that raising low wage rates to achieve distributional equity is a blunt instrument.

Over the four year period 2001 through 2004 there was considerable dynamics in the low waged labour market. For many of the low waged, particularly those in FT employment, a low waged job was a stepping stone for a higher paying job in the future. However, for an important proportion, low pay employment was a continuing state and for others the future move was to unemployment or out of the labour force.

Appendix 1: Variable descriptions	
Variable name	Description
Casual	No entitlement to paid holiday or sick pay
LT Sick	Respondent suffers from a long-term illness or disability
Female	Gender control
Marital_sgl	Single marital status
Edu_yr1012	Educational attainment between year 10 and 12
Cert_dip	Educated to certificate or diploma level
Thirdlevel	Has a third level qualification
Dad_prof	Father professional
Age_3040	Aged between 30 and 39
Age_4050	Aged between 40 and 49
Age_5060	Aged between 50 and 59
Age_60p	Aged 60 or over
Firmsz_05	Employed in a firm with between 1 and 4 employees
Firmsz_09	Employed in a firm with between 5 and 9 employees
Firmsz_19	Employed in a firm with between 10 and 19 employees
Firmsz_49	Employed in a firm with between 20 and 49 employees
Migranteng	Migrant from a country where English is the first language
Migrnoteng	Migrant from a country where English is not the first language
Ab_aborg	Aboriginal background
Urban	Lives in an urban location
Occtenure	Occupational tenure
Emptenure	Employment tenure
Union_yes	Member of a trade union
Indcat_manf	Manufacturing
Indcat_elec	Electricity, gas and water
Indcat_const	Construction
Indcat_whs	Wholesale
Indcat_retail	Retail
Indcat_accom	Accommodation, cafes and restaurants
Indcat_trans	Transport and storage
Indcat_comm	Communication
Indcat_finc	Finance and insurance
Indcat_prop	Property and business services
Indcat_def	Government administration and defence
Indcat_edu	Education
Indcat_hlth	Health
Indcat_cult	Cultural and recreation
Indcat_pers	Personal and other

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