

Low Paid Employment Amongst Australian Women

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1. Introduction

The issue of low paid employment has been the subject of increased attention in recent years. The growth in earnings inequality around the globe has been driven partly by an increase in the number of low paid workers (Richardson and Harding, 1999, Webb, Kemp and Millar, 1996) and, increasingly, concerns are being expressed about the number of workers in low paid jobs and their apparent exclusion from the benefits of recent periods of economic growth. Proposals to deregulate the labour market and reduce minimum wage rates have added to these concerns.

To date, most Australian studies of low paid employment have focused on describing the general characteristics of low paid workers and their position in the distribution of income. These studies have highlighted, amongst other things, the prevalence of low paid jobs in the 'female labour market'. They have also noted a higher incidence of low paid employment amongst migrants, the young, and workers with

relatively low levels of education. Industry, occupational and firm-size effects on the incidence of low paid employment have also been alluded to. (see Richardson and Harding, 1999, and Watson and Buchanan, 1999)

An important, but as yet unpublished, detailed statistical study of the role played by individual and firm-based characteristics in determining the probability of low paid employment was conducted by Yvonne Dunlop in 2000. This study also highlighted the importance of factors such as gender in determining the likelihood that an individual worker will receive a low wage rate. These effects were shown to hold even once other personal and job characteristics affecting low paid employment (such as education and industry of employment) were taken into account.

The purpose of this paper is to explore in greater detail the nature of the gender differences in the incidence of low paid employment. That is, rather than leaving the issue of gender differences at the point where it is noted that men have a lower likelihood than women of being in a low paid job, this paper explores questions such as: whether education plays an equal role in reducing the probability of low paid employment amongst women as it does amongst men; and whether the industry-by-industry pattern of low paid employment is similar for men and women. This analysis adds a new perspective on the issue of gender pay equity in the Australian labour market.

The paper also examines the importance, across the Australian population as a whole, of other individual characteristics, such as age, occupation, ethnicity and marital status in determining the probability that an individual will be employed in a low paid

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job. The role of firm-based factors, such as firm size and industry of employment, in determining the chances of low paid employment are also examined.

The study also surveys the levels of job and life satisfaction among low paid workers. This analysis is an important complement to the information on the growth in low paid employment and its apparent unequal distribution across the male and female labour workforces. Low wages are likely to imply poor social and economic outcomes for their recipients. Furthermore, being in a low paid job may directly impact on a person's sense of well being as "the message which low paid work sends to the worker is that they are not worth much in the eyes of society". (Watson and Buchanan, 1999) These effects may, in turn, impact on levels of productivity and economic performance.

The organisation of the paper reflects this outline. Section 2 discusses the definition of low paid work, highlighting the difficulties involved in linking low pay directly to the provision of an adequate living standard. Section 3 provides a description of the data used in this study of low paid employment. It also outlines the methodology used in the analysis of the determinants of low paid employment. The results of the data analysis are presented in Section 4, where particular attention is focused on the different relationships between individual and firm-based characteristics and low paid employment amongst men and women. Section 5 turns attention to evidence on the link between low pay and reduced job and life satisfaction. A summary of the paper's findings is provided in Section 6.

2. What is Low Pay?

The standard of low pay that has been utilised in most recent studies of the issue (see, for example, Dunlop 2000, Richardson and Harding, 1999, Watson and Buchanan, 1999, Mitchell, 1999), and the one employed in this study, is a gross hourly wage rate of \$10 per hour. For workers employed on a full time basis this wage rate equates to a weekly income of close to \$400 per week.

The use of this standard has several advantages. First, \$10 per week was a wage rate close to the lowest adult award wage available in the mid 1990s (the time period of the data used in this study). Second, in the mid 1990s, a substantial proportion of workers at the lower end of the wage distribution received such a wage rate. Thus, the sample of low paid workers in this study is sufficiently large to allow meaningful analysis of their distinct characteristics. Third, the standard also permits comparisons to be easily drawn between the results of this study and earlier investigations.

However, it should also be noted that concerns have been raised about the reliability of using a gross wage rate, such as \$10 per hour, to identify workers with low economic and social outcomes. For example, the Australian Industrial Relations Commission (AIRC) commented in its 1997 'Living Wage Case' (AIRC, 1997), that wages and living standards are imperfectly correlated. Richardson (1998) does show that factors such as the worker's family size and transfer payments are likely to influence the adequacy of a particular wage rate. However, given that the focus of this paper is on the distribution of earnings, rather than the distribution of income or economic well being,

and that wages are a key determinant of both these other measures of economic outcomes, the use of the wage standard is still valid.

3. Data and Methodology to Assess the Chances of Low Paid Employment

This study of low paid employment utilises data from the Australian Bureau of Statistics' longitudinal Survey of Employment and Unemployment Patterns (SEUP), conducted between 1995 and 1997, to assess the range of factors that may influence the probability of low paid employment.

The SEUP data set provides a broad coverage of the Australian workforce (2232 useable observations), together with some important measures of personal and economic characteristics that are likely to affect the chances of low paid employment (such as education, occupation and industry). Respondents to the survey were aged 15-59 years and were initially recruited in May 1995. The survey was repeated in September to October 1995 and then at 12 monthly intervals over the following two years.

The SEUP comprises three sub-samples; a jobseeker group, a group of labour market program participants and a population reference group. This study utilises only the data from the latter group, as they were most closely involved with paid work over the survey period. The total number of participants in this group was 2,311.

The SEUP collected two types of information at the various interviews. First, details of the participants' demographic and social characteristics were recorded, together with information about their current job characteristics. Second, information was collected on each of the 'episodes' of employment experienced by the participants during

the previous 12 months. This ‘episodal’ information included details such as the industry, occupation and status (permanent or casual) of the job that was held, the level of earnings and the hours of work. A new episode occurs when, for example, the participant is promoted to a new job or moves to another company. This study of low paid employment utilises this data relating to the episodes of employment and, thus, includes, in some cases, multiple observations from some of the participants.

i) Exclusions

This study of low paid employment focuses on the distribution of this type of work across the adult workforce and, as such, teenagers with jobs have been excluded from the data analysis. This exclusion was made for two main reasons. First, the economic and social significance of the low wages earned by teenagers is smaller, given that, for many of them, the jobs associated with low wages are often ‘transitory’, taken on to provide a supplementary income whilst they are studying, and not reflective of their ability to achieve long-term economic and social goals (see OECD, 1998). Second, excluding young people from the analysis allows a more accurate measurement of the relationships between such factors as age, education and the incidence of low paid employment. Previous studies of low paid employment have highlighted the very high incidence of low paid employment amongst teenagers; reflecting both the lower Award wage entitlements of young Australian workers and the involvement of many students in this part of the labour market. (see Richardson and Harding, 1999, and Watson and Buchanan, 1999)

It should also be noted that this study does not utilise the longitudinal features of the SEUP data. Rather, it focuses on the differences in the demographic, social and job characteristics of individuals who experienced episodes of low paid employment over the 1995-1997 period².

ii) Variable Definitions

The data from the SEUP were used, first, to create a measure of low paid employment. The respondents to the SEUP were asked to report their usual gross weekly earnings. They were also asked to nominate the number of hours of paid work usually performed each week. These two items of data were used to create a measure of hourly earnings for each episode of employment and, from this, the episodes of low paid employment in the sample were identified.

A variable relating to earnings was created that identified those work episodes associated with a wage of less than \$10 per hour in 1995. Following Dunlop (2000), the low wage benchmark was inflated to \$10.75 for episodes of employment recorded in 1996 and 1997. The main focus of the analysis in the subsequent sections of this paper is on the factors that affect the probability that a worker will fall into the ‘low wage’ earnings category in either of the three years covered by the SEUP.

The SEUP provides information on several aspects of the background and demographic characteristics of the participants that are potentially relevant to chances of low paid employment. It includes information on their occupation, industry of

² Dunlop (2000) uses the longitudinal aspects of SEUP to explore the factors affecting the probability that

employment, country of origin, gender, age, whether they are working in a full time or part time job and their level of education. Many of these factors have been identified in previous studies as potentially relevant to the distribution of low paid employment (Richardson and Harding, 1999, and Watson and Buchanan, 1999, Fernie and Metcalf, 1996). Many of the variables also relate to the widely accepted human capital determinants of individual earnings (see Preston, 2001).

The details of the variables that created from the SEUP data and subsequently used in the initial analysis of the probability of low paid employment are shown in Table 1.

an individual will move into or out of a low paid job.

Table 1: Variable Definitions, Sample Means and Distributions, Survey of Employment and Unemployment Patterns (SEUP) Data, 1995-1997

		MALE		FEMALE	
		Low wage	Other worker	Low wage	Other worker
Variable	Definition	Sample mean			
Earnings (full time)	Gross weekly income from wages and salary	\$333	\$753	\$340	\$624
Earnings (total sample)	Gross weekly income from wages and salary	\$261	\$675	\$182	\$340
Hours (full time)	Hours usually worked each week	42.2	43.3	41.2	40.4
Hours (total sample)	Hours usually worked each week	33.2	38.6	23.0	27.8
Hourly wage (total sample)	Earnings/Hours	\$7.90	\$17.30	\$7.80	\$18.40
Experience ratio	% of time since leaving school spent in the paid workforce	83	89	68	75
Tenure	Number of years spent in current job	3.4	4.4	2.2	2.8
		% of sample population			
Industry					
Manufacturing	Includes manufacturing, agriculture, mining, construction and transport and storage	47.5	41.7	22.7	16.3
Trade	Includes wholesale and retail trade	16.8	16.9	21.3	14.7
Service	Includes accommodation, community, property, business, personal and other services	29.0	25.0	33.8	32.8
Government, health and education	Includes education, health and community work, government administration and defence	6.7	16.4	22.2	36.2
Workplace size	Number of employees in current workplace				
Less than 10		73.5	34.3	52.1	31.1
11-50		11.2	13.8	16.3	15.9
50+		15.3	51.9	31.6	53.0
Age:	Age group of respondent				
Twenties		32.4	25.9	28.9	28.1
Thirties		25.2	33.2	38.0	38.0
Forties		26.3	26.5	18.8	23.3
Fifties		16.1	14.4	14.3	10.6
Casual	Employment status is casual	60.6	28.1	69.7	42.5
Occupation					
Manager	Includes managers, administrators and professionals	19.7	26.1	13.0	25.3
Associate Professional	Includes associate professionals, trades and advanced clerical workers	33.2	33.9	21.8	21.9
Intermediate Production	Includes intermediate productions and clerical workers	20.0	22.9	32.5	34.4
Elementary Clerical and Labouring	Includes elementary clerical workers and labourers	27.1	17.1	32.7	18.4

Table 1 continued:

Variable	Definition	% of Sample Population			
Marital Status					
Never married		28.7	25.3	23.7	22.3
Separated, widowed or divorced		13.5	11.3	18.4	18.8
Married		57.8	63.4	57.9	58.9
Urban	Lives in a major urban centre	56.9	62.0	56.4	64.9
NESB	English language skills classified as 'less than good'.	4.2	2.2	3.0	1.4
Dependent kids	Has dependent children, including students	40.0	44.2	56.9	50.8
Education	Highest qualification attained				
Secondary school	Completed the highest level of secondary school	18.3	13.9	18.6	15.0
Left school at 15 years	Left school before the age of 17 or didn't attend school	23.2	19.2	31.7	26.2
Left school at 17 years	Left school between the ages of 17 and 18	4.4	3.9	8.7	7.6
Vocational qualifications	Holds a post-school vocational qualification	32.5	31.9	23.7	21.2
Tertiary qualifications	Has a tertiary qualification	21.6	31.1	17.3	30.0
Family Background					
Mother's occupation unskilled	'Unskilled' includes labouring, elementary clerical work and not in the labour force	62.7	62.5	61.3	62.3
Father's occupation unskilled	'Unskilled' includes labouring, elementary and not in the labour force	16.1	17.0	21.5	15.1
Time Period					
1995	Episode of employment occurred before September 1995	23.1	18.9	24.0	16.8
1996	Episode of employment occurred between September 1995 and September 1996	23.5	17.6	24.2	19.6
1997	Episode of employment occurred after September 1996	53.4	63.5	51.8	63.6
Full time	Job is fulltime	69.1	82.8	31.3	47.4
Young Kids	Has a child aged under 5 years	16.6	20.6	20.6	22.2
Multi Episodes	Had more than one episode of employment in the survey period	3.7	7.0	3.8	6.4

iii) Methodology employed to assess the determinants of the chances of low paid employment

A binomial probit regression procedure provides a convenient way of testing the importance of individual and firm-based characteristics in the determination of the probability of low paid employment. Briefly, the binomial probit procedure examines the impact a change in the value of the independent variables has on the probability that the response category relating to low paid employment will be observed (see Greene, 1997 for a full account of the procedure). The approach works with the concept of an index function. The likelihood that an individual will have a particular outcome regarding low paid employment is seen to depend, first, on the influence of the various measured characteristics of the individual and his or her environment, denoted by $\beta'x$ [this is the index function]; and, second, on the influence of certain unmeasured factors, represented by ε . The combined influence of the measured factors and unmeasured factors is represented by:

$$y_i^* = \beta'x_i + \varepsilon_i \quad (1)$$

This model assumes that ε is distributed normally with unit variance. Hence, the probability that an individual will be a low paid worker (denoted by $Y = 1$) can be expressed as

$$\begin{aligned} \text{Prob}[Y_i = 0] &= \int_{\beta'x}^{\infty} \phi(t) dt \\ &= 1 - \Phi(\beta'x), \text{ and} \end{aligned}$$

$$\text{Prob}[Y_i = 1] = \int_{-\infty}^{\beta'x} \phi(t) dt$$

$$= \phi(\beta' x) \quad (2)$$

where $\phi(\cdot)$ indicates the standard normal cumulative distribution function and μ_{ij} is a threshold parameter which represents the value of $\beta'x_i$ that creates a boundary between one category of Y and another.

The coefficients (the β 's), together with the threshold parameters are estimated using maximum likelihood. The coefficients provide information about the direction and significance of each relationship. However, it is necessary to calculate marginal effects to see the extent to which changes in the value of each explanatory affect the probability that a low pay outcome will be recorded.

4. Findings on the Determinants of the Chances of Low Paid Employment

The results that were derived from a binomial regression of the SEUP data, with weights applied to the observations to reflect the estimated importance of individuals with certain characteristics in the Australian population as a whole, are shown in Tables 2 and 3 below.

i) Model Performance

Before the nature of the results contained in Table 2 are discussed, it is important to note that variables included in the regression models are jointly significant (at the one per cent level, as evidenced by the Restricted Log-L statistics) in determining the chances of low paid employment.

Furthermore, Table 3 presents information indicating that the models generate correct prediction rates that are relatively high. Almost 80 per cent of all the observations were correctly assigned to their pay group by the model for the labour market as a whole. Furthermore, although the figures in the Table 3 show that only 51 per cent of low paid workers were correctly classified by the model, it must be kept in mind that the binomial probit procedure will predict that a case falls into one or other category when the calculated value of the index function is above or below a certain critical value. It is possible, therefore, for a case to fall into one category (say $Y=0$) when, in fact, only a small change in the value of the index function would have placed it into the other category.

However, this having been said, the difference between actual and predicted values does reflect, at least in part, the importance of factors that were not included in the models in explaining the observed variation in wage outcomes. For example, the specific details of job assignments, as well as union membership, are also likely to play a role in determining the chances of low paid employment.

Table 2: Maximum Likelihood Estimates of Low Paid Employment

<i>Variable</i>	Coefficient			Marginal Effect		
	<i>Male</i>	<i>Female</i>	<i>All</i>	<i>Male</i>	<i>Female</i>	<i>All</i>
Constant	.759 (1.874)	.722** (2.201)	.605** (2.519)	.122	.209	.142
Male			-.184** (2.338)			-.043
Industry						
Trade	.055 (0.337)	-.096 (0.602)	.037 (0.344)	.009	-.028	.009
Service	.221 (1.453)	-.255 (1.879)	-.021 (0.218)	.035 ^a	-.074	-.005
Government, health and education	.513*** (2.612)	-.249 (1.707)	.034 (0.318)	.082 ^a	-.072	.008
Workplace size						
11-50	-.249 (1.645)	-.412*** (2.996)	-.268*** (2.723)	-.040	-.119	-.063
50+	-.839*** (5.890)	-.435*** (3.811)	-.504*** (5.922)	-.134 ^a	-.126	-.118
Tenure	-.030 (0.768)	-.022 (0.567)	-.024 (0.943)	-.005	-.006	-.006
Tenure squared	.000 (0.326)	-.000 (0.192)	.000 (0.227)	.000	-.000	.000
Experience ratio	-.518 (0.667)	-.066 (0.103)	.110 (0.234)	-.083	-.019	.026
Experience ratio squared	-.213 (0.314)	-.300 (0.572)	-.643 (1.658)	-.034	-.086	-.151
Age:						
Thirties	-.218 (1.445)	.137 (1.086)	-.030 (0.322)	-.035	.040	.007
Forties	-.110 (0.623)	-.130 (0.836)	-.176 (1.581)	-.018	-.038	-.041
Fifties	-.686*** (2.685)	.631*** (3.173)	.253 (0.176)	-.110 ^a	.183	.006
Casual	.306** (2.249)	.190 (1.686)	.267*** (3.190)	.049	.055	.063
Occupation in main job						
Manager	-.357 (1.699)	-.717*** (3.817)	-.514*** (3.843)	-.057	-.207	-.120
Associate Professional	-.122 (0.742)	-.321** (2.176)	-.223** (2.138)	-.020	-.093	-.052
Intermediate Production	.023 (0.145)	-.211 (1.779)	-.101 (1.118)	.004	-.061	.024
Never married	-.037 (0.192)	.371** (2.255)	.178 (1.509)	-.006	.107	.042
Married	-.095 (0.502)	-.047 (0.367)	-.695 (0.675)	-.015	-.014	-.016
Urban	-.227 (1.867)	-.033 (0.329)	-.763 (1.031)	-.036	-.010	-.018
NESB	.679** (2.413)	.835** (2.529)	.674*** (3.357)	.109 ^a	.242	.158

Table 2 Continued						
<i>Variable</i>	Coefficient			Marginal Effect		
	<i>Male</i>	<i>Female</i>	<i>All</i>	<i>Male</i>	<i>Female</i>	<i>All</i>
Dependent kids	.020 (0.134)	.430*** (3.659)	.196** (2.284)	.003 ^a	.124	.046
Education (highest qualification)						
Secondary school	-.324 (1.693)	-.175 (1.165)	-.149 (1.314)	-.052	-.051	-.035
Left school at 17years	-.040 (0.160)	-.051 (0.279)	-.029 (0.203)	-.006	-.015	-.007
Vocational qualifications	-.317 (1.885)	.129 (0.999)	-.046 (0.461)	-.051 ^a	.037	-.011
Tertiary qualifications	-.578*** (2.980)	-.232 (1.527)	-.329*** (2.885)	-.093	-.067	-.077
Mother's occupation unskilled	-.007 (0.056)	-.261** (2.536)	-.110 (1.500)	-.001	-.076	-.026
Father's occupation unskilled	-.287 (1.800)	.587*** (4.992)	.203** (2.267)	-.046 ^a	.170	.048
1996	.247 (1.463)	-.241 (1.659)	.025 (0.232)	.040 ^a	-.070	.006
1997	-.161 (1.070)	-.568*** (4.344)	-.320*** (3.412)	-.026 ^a	-.164	-.075
Full time	-.087 (0.564)	-.422*** (3.716)	-.306*** (3.515)	-.014	-.122	-.072
Young Kids	-.384** (2.000)	-.377*** (2.812)	-.365*** (3.478)	-.062	-.109	-.086
Multi Episodes	-.077 (0.563)	-.074 (0.647)	-.050 (1.127)	-.012	-.021	-.022

Notes:

***significant at the 1 per cent level; ** significant at the 5 per cent level; a)significantly different from the corresponding 'female' effect

1) The results reported in this table are based on a weighted regression procedure, utilising the population weights supplied by the SEUP; Number of observations: male = 1102; female = 1130; all = 2232; Absolute value of t statistics shown in brackets; Restricted Log-L: male = -422.80 ; female = -677.60; all = -1134.20

Table 3: Predicted and Actual Outcomes

Actual	Predicted								
	Other worker (Y=0)			Low paid worker (Y=1)			Total		
	<i>Male</i>	<i>Female</i>	<i>All</i>	<i>Male</i>	<i>Female</i>	<i>All</i>	<i>Male</i>	<i>Female</i>	<i>All</i>
Other worker (Y=0)	892 (86.0%)	732 (77.9%)	1639 (81.1%)	31	82	98	923	814	1737
Low paid worker (Y=1)	145	205	382	34 (52.3%)	108 (56.8%)	113 (51.3%)	179	316	495
Total	1037	940	2021	65	190	221	1102 (84.0%)	1130 (74.3%)	2232 (78.5%)

ii) The role of personal and job characteristics in determining the chances of low paid employment.

The results in Table 2 indicate that a range of personal and job characteristics affect the chances of low paid employment. The personal characteristics that significantly increase the probability of low paid employment include being female, having dependent children and being from a non-English speaking background. The job characteristics that significantly increase the chances of low paid employment include part time and casual employment, and working in a low status occupation and/or small workplace.

The combined effects of these factors can be illustrated simply by contrasting the incidence of low paid work for the SEUP sample as a whole (20.3 per cent) with the estimated probabilities of low paid work derived from the model for two archetypical individuals in 1995. The first of these individuals is a married, migrant woman, in her fifties, with dependent children. Her family background is one where both parents worked in unskilled jobs. She is employed part time in a casual, elementary clerical job in a small, non-urban manufacturing firm. She has only a high-school qualification and two years of tenure in her current job. Since leaving school she has spent only 30 per cent of her time in the paid workforce.

The second archetype is a married, Australian born man, aged in his forties, with young children. Neither of his parents were employed in unskilled jobs. He works full time in a permanent managerial job in a large manufacturing firm. He has tertiary qualifications and ten years of tenure in his current job. Since leaving university he has had no absences from paid employment.

The coefficients in Table 2, together with the characteristics of the two archetypes, when fitted to Equation 2, generate the following estimates of the risk of low paid employment for the individuals. The woman with few measured labour market skills faces a 99.7 per cent chance of being in low paid job; the professional man, on the other hand, faces a chance of low paid work that is only 0.2 per cent.

This large difference in the risk of low paid employment is derived from the influence of various individual and job characteristics. The particular role of these characteristics in determining the probability of low paid employment is reported in the following sub sections.

a) Job characteristics and low paid employment

The data in Table 2 indicates that the probability of low paid employment is, in part, a function of the job in which the individual is employed and the nature of his or her employment history.

Part time work appears to be particularly susceptible to low pay. Across the entire sample, part time work was associated with a 7.2 per cent higher chance of low paid employment than was full time work. These effects were particularly large for women. Part time employment increased the chances of low pay for women by 12.2 per cent, whilst for men the corresponding increase in probability was only 1.4 per cent. Given that some 42.6 per cent of women in the Australian workforce are employed on a part time basis (Austen, Preston and Crockett, 1999), this association has particular significance for their wage outcomes.

Casual employment (which is strongly associated with part time employment) has a separate, positive impact on the probability of low wage employment. In the labour market as a whole, workers employed on a casual basis (that is, excluded from standard sick and holiday leave entitlements) had a 6.3 per cent higher chance of low paid employment than did other workers. In the 'female' workforce this effect was 5.5 per cent and in the 'male' workforce it was 4.7 per cent. Although these particular effects weren't statistically significant, it should be kept in mind that the analysis conducted here has made no adjustment to the wages of casual workers to account for their lack of access to standard leave provisions. If such an adjustment was made it is likely that more casual workers would be classified as low paid.

The results in Table 2 also emphasise the importance of workplace size in determining the chances of low paid employment. Across the sample population as a whole, workers employed in small workplaces (those with less than 11 employees) faced a 6.3 per cent higher chance of being low paid than did their counterparts in medium-sized workplaces (with 11-50 employees). Workers in large workplaces (more than 50 employees) benefited from a further 5.5 percentage point reduction in the chances of low paid employment. This result concurs with the findings of Watson and Buchanan (1999), who also reported substantial differences in the incidence of low paid employment between small, medium and large firms.

The role of workplace size in determining the chances of low paid employment appears to be particularly important in the female workforce. For women, small workplaces were associated with a 11.9 per cent greater risk of low paid employment than medium sized workplaces, and a 12.6 per cent greater chance of low paid

employment than large workplaces. The equivalent effects in the male workforce were 4.0 and 13.4 per cent respectively.

Occupation also appears to be a significant determinant of the probability of low paid employment. Across the sample as a whole, high status occupational groups (managers and associate professionals) had significantly lower chances of low paid employment than did elementary clerical or labouring workers. As could be expected, the smallest chance of low paid employment was associated with managerial/professional work.

The relationship between occupational status and the chances of low pay were especially strong in the female workforce and low skill work appears to carry a particularly large risk of low pay for women. The figures in Table 2 indicate that women employed in elementary clerical and labouring jobs faced a 20.7 per cent higher chance of being low paid than did women engaged in managerial work. This occupational effect was only 5.7 per cent in the male workforce and this particular relationship was not statistically significant. Similarly, women working in elementary jobs faced, on average, a 9.3 per cent greater risk of being in low paid work than did their counterparts in the associate professional occupations (for example nurses). For men this occupational difference was only 2.0 per cent and not statistically significant.

This difference between men and women in the effects of occupation on the chances of low pay may reflect the increased ability of men in low status occupations to supplement low hourly ordinary-time earnings with overtime work, paid at a premium rate. It may also reflect the different rates of unionisation of men and women in these low skilled occupations, and the role that unions can play in improving wage outcomes.

The relationship between industry of employment and the chances of low paid employment was, generally, of a lower level of significance, especially in the female subsample. Across the whole sample population, the service industry group was associated with a marginally lower probability of low paid employment than the manufacturing sector. The trade and government, health and education ‘industries’ were associated with slightly higher (but not statistically significant differences in the) probabilities of low paid work.

It should be kept in mind that the analysis of industry effects on the chances of low paid employment in this report is, by virtue of the characteristics of the data set, necessarily broad scale. As Watson and Buchanan (1999) comment, such an analysis may leave some ‘black spots’ in terms of the incidence of low paid work unidentified. For example, using a more disaggregated set of data, they identify particular combinations of industries and occupations, such as cleaners and factory hands working outside manufacturing, as being particularly susceptible to low paid work.

The results in Table 2 indicate that both the length of time spent in the workforce and the time spent in a particular job reduce the likelihood of low paid employment. Although neither effect was statistically significant, one additional year of job tenure reduced the probability of low paid employment by 0.6 per cent (the effects were similar for men and women). A one percentage point increase in the ‘experience ratio’ (the proportion of time since finishing education that has been spent in the workforce) reduced the probability of low paid employment by 7.2 per cent in the female workforce and 8.7 per cent in the male workforce³.

³ calculated at the mean level of the experience ratio in each sample.

Those workers in the SEUP sample that recorded more than one episode of employment due, for example, to a job move, did not record a significantly different incidence of low paid work than did other workers.

b) Personal characteristics and low paid employment

Workers from a non-English speaking background face substantially higher risks of low paid employment than do workers who are proficient in the English language, *ceteris paribus*. The figures in Table 2 show that, across the sample population as a whole, the probability that a worker would be in low paid employment was 15.8 per cent higher if the worker was classified as non-English speaking.

The difference between non-English speakers and other workers in terms of the chances of low paid employment was particularly high (at 24.2 per cent) in the female workforce. In the male workforce this effect was 10.9 per cent.

These results also concur with the findings of many other studies of wage outcomes for migrant workers. For example, Miller and Yeo (1999) identified a significant wage penalty incurred by recent migrants to Australia. The results presented here add to that finding by showing, first, that the difference in average wages between native-born and immigrant workers is the product, at least in part, of many immigrant workers being employed in the lowest paid jobs in the Australian workforce. The figures also demonstrate that female immigrants are also most likely to suffer this wage penalty.

Education also appears to play an important role in reducing the chances of low paid employment. The figures in Table 2 show that, across the sample population as a whole, the risk of low paid employment fell progressively as the individuals'

qualification level increased. Degree holders faced a 7.7 per cent lower chance of low paid work than did those workers who left school at the age of 15. Completing the highest level of high school also reduced the chances of low paid employment, as compared to leaving school at 15, by approximately 3.5 per cent, *ceteris paribus*.

The relationship between each of the levels of education and the chances of low paid employment varied somewhat between the male and female samples. Most importantly, whilst vocational qualifications, on average, reduced the chances that a male worker would be in low paid work by 5.1 per cent, possessing such qualifications *increased* the chances of low paid work for women by 3.7 per cent, *ceteris paribus*. The most likely explanation for this feature of the results is the very low rates of pay in the trades that are traditionally female, such as hairdressing and garment making (see Dockery and Norris, 1996).

The widely recognised relationship between age and earnings outcomes is also reflected in the data in Table 2. In the labour market as a whole, individuals aged in their thirties had, on average, a 0.7 per cent lower chance of low paid employment than did individuals in their twenties. The chances of low paid employment fell by a further 3.4 percentage points amongst workers aged 40-50 years.

This feature of the results points to the possibility that, in many cases, low paid employment is a temporary phenomenon. However, this general conclusion must be tempered by consideration of another feature of the results relating to age and low paid employment. The figures in the table show that there are some important differences in the effects of age on the risk of low paid employment between men and women. Most importantly the figures indicate that older women (in the 50-60 year age group) faced

substantially (18.3 per cent) higher chances of low paid employment than did women in their twenties. By way of contrast, men in the older age group faced much (11.0 per cent) smaller chances of low paid work than did their younger counterparts.

These differences in wage outcomes for older women and men are measured after the effects of, for example, differences in levels of labour market experience, qualifications and occupation have been taken into account. Thus, they must be the product of factors outside the particular model utilised in this study. Possible candidates for explaining the relatively high incidence of low paid employment amongst older Australian women include 'generational' factors that have affected the ability of women in this age cohort to take up higher paying jobs within their chosen occupation. The fact figures presented here show such large differences in earnings outcomes for older Australian women and men suggests that the issue needs further research.

The role of family circumstances in determining the chances of low paid employment can also be gauged from the figures in Table 2. Being married, as opposed to separated, widowed or divorced tended to decrease the chance of being low paid, although these effects were not statistically significant in any of the sample populations. Women who had never married had a significantly (10.7 per cent) higher chance of low paid employment than did their separated, widowed or divorced counterparts.

Having dependent children is shown to increase the chances of low paid employment by 4.6 per cent across the workforce as a whole. It is interesting to note that these effects were particularly strong in the female workforce, where the presence of dependent children raised the chance of low paid employment by 12.4 per cent. The equivalent effects for men were small (0.3 per cent) and not statistically significant.

The presence of young children in the family, on the other hand, is shown to decrease the probability of low paid employment. This effect was true for both women and men. In the female workforce, the presence of young children decreased the probability of low paid work by 10.9 per cent. In the male workforce this reduction was 6.2 per cent.

The difference in these two sets of effects relating to children can probably be explained by reference to the work incentives confronting mothers. The demands of caring for young children, together with high child care costs, creates a strong disincentive to participate in the paid workforce. For this reason, it is expected that many women, *unless they have access to a relatively well paid job*, will choose not to work. In other words, those women with young children who are in the paid workforce can be expected *not* to be in low paid jobs. However, in the case of women with older children, a strong incentive exists to take up paid work that ‘fits in’ with family responsibilities. These jobs can be low paid, and the fact that they are taken up predominately by women serves to highlight the effect women’s family responsibilities have on their wage outcomes.

As has been shown in many other studies of the determinants of income (see Kelley 1975), the occupational characteristics of parents appears to be an important factor affecting the probability of low paid employment. For women, these effects are particularly strong. Having a father who worked in a low skill occupation increased the chances of low paid employment by 17.0 per cent, perhaps reflecting the effects of fathers’ education on their daughters’ opportunities and aspirations. However, having a mother who either worked in an unskilled job or, more likely, was not in the labour force,

reduced the chances of low paid employment by 7.6 per cent. Parents' occupation was not a significant source of differences in the probability of low paid employment in the male workforce.

c) Low paid employment over the mid to late 1990s

The figures in Table 2 indicate that, as could be expected, the chances of being in a job that paid less than \$10 per hour decreased over the survey period (1995-1997). This change was particularly strong in the female workforce where, by 1997, the probability of being low paid was 16.4 per cent lower than it had been in 1995, *ceteris paribus*. In the male workforce the equivalent change was only 2.6 per cent and not statistically significant. These results may reflect the strong growth in women's employment over the reference period (see Pocock 1998) and the benefits women gained from this in terms of rising average earnings, albeit from a relatively low base.

d) Gender and low paid employment: remaining differences

The figures in Table 2 indicate that, in the mid to late 1990s, Australian women faced a 4.3 per cent higher chance of low paid employment than did men, once differences between the genders in terms of factors such as age, education and type of employment were taken into account. This result has additional importance given that women who were in low paid jobs also had, on average, lower earnings than men in such jobs (for example, the data in Table 1 show that, in the 1995-1997 period, low paid women

workers had average earnings of \$182 per week, whereas the average earnings of low paid male workers was \$261). However, the relatively small magnitude of this effect (as compared to the measured difference in the incidence of low paid work) suggests that the gender-based difference in the incidence of low-paid employment is largely the result of both the different characteristics of the male and female workforces and the different labour market rewards given to these characteristics. That is, factors such as the high rate of part time work among women, together with the larger impact of this type of work on women's chances of low paid work, are the main driving forces behind the different rates of low paid work for men and women.

The fact that there is a gender-based wage difference in the incidence of low paid work that cannot be explained by the characteristics of the individual workers or their jobs accords with the findings of many other studies of wage differences (see, for example, Preston 2000). These studies typically attribute the unexplained difference in the constant term and the rewarding of labour market characteristics to discrimination against women in the labour market. To the extent that such discrimination may leave women in low paid jobs, which are often also associated with lower opportunities for training and poor working conditions, should be of particular concern to policy makers.

5. Job Satisfaction, Life Satisfaction and Low Paid Work

In this part of the report, the implications of the above findings on the incidence of low paid employment for levels of job, pay and life satisfaction are explored. This analysis draws on data from the 1994/95 International Survey of Economic Attitudes (ISEA), which was based on a random sample of citizens on the electoral roll. The survey data includes information on the background and demographic characteristics of the respondents, (such as their earnings, hours of work and gender), which permits the identification of low paid male and female workers. The survey data also includes information on the respondents' levels of satisfaction with their jobs, pay and life.

The questions in the ISEA that probed levels of satisfaction all have a similar format. For example, the question on job satisfaction asked “ Are you satisfied with the importance of your work and the feeling of accomplishment it gives you?” The eight response categories ranged from “delighted” to “terrible”. For the purposes of this report, the number of categories was reduced to two, namely, “mostly satisfied or better”, and mixed feeling or worse”. As is shown in Table 4, the distribution of these results was then compared across the respondents who were in low paid jobs at the time of the survey and other workers.

The ISEA also questioned the respondents' perceptions of the fairness of their pay. Specifically, the respondents were asked to assess whether the wage they received was ‘morally right’, given their skills, the complexity of the tasks they performed, the danger of their work and so on. Five response categories were available, ranging from ‘the fairness of my pay is low!!’, to ‘the fairness of my pay is high!!’ The results on this

question and how they varied between low paid and other workers are reported in Table 5.

Table 4: Pay, Job and Life Satisfaction Among Low Paid and Other Workers, 1994/95
(Proportion of Respondents Rating Their Pay, Job and Life as “Mostly Satisfying or Better”)

	Male		Female	
	Low Paid Worker	Other Worker	Low Paid Worker	Other Worker
Pay is Mostly Satisfying or Better	37.8	64.0	51.8	68.2
Job is Mostly Satisfying or Better	62.6	71.6	66.7	78.7
Life is Mostly Satisfying or Better	72.5	86.0	79.6	83.0

Notes: i) Sample restricted to workers aged 20 years or more; ii) Number of observations: Male = 696; Female = 531; iii) Low paid workers as a proportion of total: Male = 13.1%; Female = 21.5%

Table 5: Perceived Fairness of the Pay Received by Low Paid and Other Workers, 1994/95 (Proportion of Respondents)

Perceived Fairness of Pay	Male		Female	
	Low Paid Worker	Other Worker	Low Paid Worker	Other Worker
Low!!	21.7	4.5	6.3	7.0
Low	31.3	31.6	36.8	31.3
Fair	45.8	59.2	50.5	57.9
High	1.2	3.6	5.3	3.3
High!!	0.0	1.0	1.1	0.5

See notes on Table 4

The figures in Table 4 indicate that low paid workers generally have substantially lower levels of pay and job satisfaction than do their higher paid counterparts. This is especially the case for the low paid male workers. Almost two thirds of these workers responded that they were dissatisfied with their pay and 27 per cent rated their jobs as dissatisfying. It is interesting to note that, generally, low paid women had reactions to their jobs that were less adverse. Almost half the low paid women in the sample responded that their pay was satisfying and approximately two-thirds were satisfied with their jobs.

The data in Table 5 point to a similar conclusion about the relationships between low pay and job satisfaction. 53.0 per cent of the low paid male workers in the sample

rated their pay as less than fair. Only 36.1 per cent of the other male workers had this response to their pay. Among women the correlation between low pay and perceptions of pay inequity were much weaker: 43.1 per cent of low paid female workers rated their pay as less than fair, whilst 38.3 per cent of the other female workers had this response to their wages.

The responses on the question about life satisfaction (shown in Table 4) are suggestive of a link between pay and life satisfaction. In particular, low paid male workers had substantially lower levels of life satisfaction than did their counterparts in higher paid jobs. Approximately 30 per cent of low paid men rated their lives as mostly dissatisfying or worse. Less than 15 per cent of other men responded to the question in this way. Once again, these differences were not apparent in the female sample.

In total, the data in Tables 4 and 5 provides some limited evidence on the importance of low pay to worker's perceptions of their jobs and their sense of self-worth. This link between low pay and life satisfaction has important welfare implications in its own right. However, it may also have economic significance, given the efficiency wage type link between job satisfaction and perceptions of pay fairness on the one hand and levels of effort and, thus, workforce productivity on the other (see, for example, Akerlof and Yellen, 1986).

The data in the above tables also points to the presence of some gender-based differences in the relationship between low pay and job and life satisfaction. Until further analysis of the correlations apparent in the ISEA is conducted, this evidence must be used cautiously. However, keeping these comments in mind, it is interesting to note that on each of the measures of satisfaction presented here, women appear to be less emotionally

affected by low wages than men. This may be indicative of women having lower expectations from their involvement in the labour market. It may also reflect a propensity among women to accept poor jobs to supplement what they regard as more important activities, such as raising a family. However, it must be emphasised that in neither case can an inference be drawn that low wages are less important to women than they are to men.

6. Conclusion

The extent of low paid work and the particular features of its distribution are important public policy issues. The growth in low paid work in recent decades has been an important contributory factor in the increasing levels of wage inequality in Australia and other industrialised countries. The incidence of low paid work may grow further if proposals to further deregulate the labour market by reducing minimum wage rates are acted upon (Dawkins 1999).

The findings presented in this paper indicate that those workers who are currently at the low end of wage distribution in Australia and, thus, those who would most likely be affected by changes in minimum wage rates are women, immigrants, those workers with low levels of marketable skills (such as educational qualifications) and workers in part time jobs in small firms. These workers face relatively high risks of low paid work and, thus, most likely, would bear most of the economic and social burdens of reductions in wages at the bottom end of the wage distribution.

Another finding presented in this paper was that low paid work is associated with diminished levels of job, pay and life satisfaction. This indicates that reductions in the

wages of the low paid could have adverse consequences for levels of effort in Australian workplaces. This, in turn, could translate into lower levels of labour productivity and, ultimately, reduced rates of profitability.

On another level, the results presented in this paper also serve demonstrate the need for a disaggregated analysis of earnings outcomes, especially in areas where relative disadvantage is an issue. The analysis in this paper has shown that men's and women's earnings outcomes at the lower end of the earnings distribution are clearly different and are affected differently by key economic and demographic circumstances. Women's risk of low paid work is reduced by a substantially smaller amount when they achieve higher levels of experience and move into more skilled occupations. Age doesn't appear to offer the same protection against low wage work as it does men. Finally, family and community responsibilities appear to come at the cost of a risk of low paid work for women, whereas these same costs do not apply significantly to men.

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