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Poverty Rates among Part-Time and Casual Workers*

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Abstract

The proportion of Australian workers who are employed on either a part-time or a casual basis has been increasing for the past several decades. By the beginning of the 21st century, 30 percent of employment is of this type. The common perception seems to be that part-time and casual jobs are undesirable. For example, Sharan Burrow, President of the ACTU, in her 14 February 2001 address to the Committee for Economic Development asserted that "60% of all casual workers require more hours to ensure a living wage." But economic status depends not only upon the worker's own earnings but also on his or her living arrangements and the earnings of other members of his or her family. This paper uses unit-record data from the ABS' latest Income and Housing Cost Survey and Forms of Employment Survey to compare the poverty rates of part-time and casual workers with those of full-time workers, permanent workers, the unemployed and people not in the labour force.

* This study uses two Confidentialised Unit-Record Files (CURFs) that were provided on CD-ROM by the Australian Bureau of Statistics. The results and views expressed in this paper are those of the author and are not necessarily those of the Australian Bureau of Statistics.

1. Introduction

The growth of part-time employment in Australia, and elsewhere, in the last few decades has been well documented both in official statistics and in the academic literature. In Australia, the percentage of employed persons who work part-time has increased by approximately five percentage points per decade, from 10 percent in 1970 to 25 percent by 2000 (ABS, *Labour Force, Australia*, Cat. No. 6203.0). The proportion of Australian employees who are employed on casual contracts also rose by approximately five percentage points per decade from 17.4 percent in 1988 to 23.6 percent in 1999 (Murtough and Waite, 2000b, p.4). Although many casual employees work part-time and many part-time employees are on casual contracts, the proportion of full-time employees on casual contracts almost doubled from 4.4 percent in 1988 to 8.4 percent in 1999 (Murtough and Waite, 2000b, p.4).¹

The increasing prominence of 'nontraditional' employment has raised concern both in the population at large and among economists. It has been suggested that part-time work is undesirable and that part-time jobs are of low quality (Robertson, 1989, p. 397; Sharpe, 1987). Part-time employment has been seen as an indication that the economy cannot provide enough full-time jobs (Robertson, 1989, p. 395). It is claimed that casual employees have low and variable earnings and that their work schedules - which often involve evenings, weekends and public holidays - conflict with family life and responsibilities

¹ Murtough and Waite's source is DEWRSB (2000), which uses unpublished ABS data. ABS official data indicates a more rapid increase in casual employment. The extent to which ABS official statistics overstate the pervasiveness of casual employment in the Australian labour force is discussed in Section 3 below.

(Campbell, 1996, p. 574). Trade unions are depicted as regarding part-time and casual employment “as a symptom of employer greed and as a threat to both the numbers and conditions of full-time permanent jobs” (Campbell, 1996, p. 590).

Although hours of work obviously affect earnings, an individual’s economic status depends not only upon his or her own earnings, but also upon his or her living arrangements and the earnings of others with whom income is pooled. This study investigates an aspect of part-time and casual employment that has been neglected in the academic literature, namely, whether part-time and casual workers are poor. Sections 2 and 3 of this paper clarify some terminology and discuss the available data with which to address the issue of poverty among part-time and casual workers. The characteristics of part-time workers are examined in Section 4 by focusing upon six demographic groups that are defined in terms of age, student status, gender and family composition. Each group is likely to have its own specific attitude towards desired hours of work. Poverty rates of part-time workers in each of these demographic groups are presented in Section 5 and compared with poverty rates of full-time workers, the unemployed and persons not in the labour force. The effect of living arrangements, in particular the presence of another full-time worker in the household, on poverty rates is investigated. Section 6, estimates the poverty rate of casual employees and compares it with the estimated poverty rate of permanent employees. The main conclusions of the study are summarized in Section 7.

2. Definitions, Data and Incidence of Part-Time Employment

The Australian Bureau of Statistics (ABS) defines a part-time worker as an employed person who usually works less than 35 hours per week in all jobs and who worked less than 35 hours during the reference week of the survey in which data were collected. A full-time worker is an employed person who usually works 35 hours or more per week in all jobs or someone who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week. These definitions are used by the ABS in its monthly Labour Force Survey, which is the major survey of the Australian labour market.

The ABS' official definitions lead to a conservative estimate of the prevalence of part-time work because someone who usually works less than 35 hours per week in each of two or more jobs, but at least 35 hours per week in all jobs, is classified as a full-time worker even though the jobs are part-time. An alternative definition of a part-time worker, which avoids this bias, is someone who usually works less than 35 hours per week in the main job (the job with most hours) and who did so during the reference week. The latter definition is used by the ABS in a survey of employees (see *Employee Earnings, Benefits and Trade Union Membership*, Cat. No. 6310). People who usually work less than 35 hours per week but worked more than 35 hours in the reference week and people who usually work at least 35 hours per week but worked less than 35 hours in the reference week are classified as full-times worker in both ABS 6203.0 and ABS 6310.0.

The data set used in this study, the 1997-98 Income and Housing Costs Survey, Australia (SIHC), consists of unit-record data on 13,931 persons aged 15 years and older, who were living in private dwellings and were interviewed between July 1997 and June 1998. All workers are identified as part-time or full-time according to hours worked in all jobs but only employees are identified as part-time or full-time according to hours worked on the main job. The objective of the study is to evaluate poverty among all part-time workers so the definition of part-time used in this paper is that based on aggregate hours worked in all jobs. At most, an additional $(6.5 \times 0.697) = 4.59$ percent of employed people would be classified as part-time according to the definition based on hours worked in the main job. This estimate is based on the fact that 6.5 percent of employed people in the 1997-98 SIHC held more than one job and 69.7 percent of these people were full-time workers according to the definition based on hours worked in all jobs.

In the 1997-98 SIHC, 22.80 percent of all people in the labour force were working part-time and another 1.6 percent were looking for part-time work. Of all employed persons 24.8 were part-time workers. 23.9 percent of employees and 29.9 percent of other employed people (employers, own-account workers, contributing family members and persons working only for payment in kind) were part-time workers.²

The SIHC has four major advantages for this study. First, the SIHC is a unit-record data set. Second, the SIHC reports annual income tax paid by the

² The SIHC is a complex sample (rather than a simple random sample) and the weights supplied by ABS have been used in the computation of statistics that appear in this paper. Excluded from all calculations reported in this paper are the 3.6 percent of people in the 1997-98 SIHC who do not have valid financial data.

income unit.³ Third, the SIHC reports the income unit's annual income and taxation as continuous, rather than categorical, variables. These features allow the computation of annual disposable income of the income unit as a continuous variable that can be compared with the official poverty line in the computation of poverty rates. The fourth advantage of the SIHC is that it records detailed data on demographic and labour-market related attributes of both individuals and income units, including the full-time or part-time status of employed persons. The major disadvantage of the SIHC, from the point of view of this study, is that it does not identify casual and permanent workers.

3. Definitions, Data and Incidence of Casual Employment

The common image of a casual worker is someone whose employment is "occasional, irregular or short-term" (Murtough and Waite, 2000a, p.8).⁴ This view is consistent with the common law definition of a casual worker as someone with a very short-term contract of employment (Campbell, 1996, p. 573). A very short-term employment contract implies no entitlement to benefits that are tied to continuous service, such as annual leave, sick leave, long-service leave and severance pay. Nor does a very short-term contract provide protection against unfair dismissal because the employer can simply opt not to renew the contract. In the Australian industrial relations system there is no clear definition of a casual

³ An "income unit" is a person or a group of related persons within a household, whose command over income is assumed to be shared (ABS, *Survey of Income and Housing Costs Technical Paper 1997-98*, 6541.0.30.001, p.16).

⁴ The discussion of casual employment in this section draws heavily upon two papers by Murtough and Waite (2000a and 2000b).

worker or of casual employment. Consequently, casual-employment contracts differ considerably although awards generally refer back to the common law definition (Dawkins and Norris, 1995, p.4) and exclude casual workers from paid holiday leave and paid sick leave. To compensate for lack of standard entitlements a 'casual loading' is specified on the hourly rate of pay. The loading has ranged from 10% to 50% but in federal awards in the mid-1980s it was most commonly 20% (Campbell, 1996, pp. 578-582). The loading is also intended to be a disincentive to employers to replace permanent workers with casual workers.

Measuring the growth of casual employment in Australia is controversial. The standard ABS definition of a 'casual' employee is someone who receives neither paid holiday leave nor paid sick leave; a 'permanent' employee is someone who is entitled to paid holiday leave or paid sick leave or both (ABS, *Employee Earnings, Benefits and Trade Union Membership*, Cat. No. 6310.0). The proportion of Australian employees without paid holiday and paid sick leave in their main job rose from approximately 11 percent in 1982 to 27 percent in 2000. The proportion of full-time employees without paid holiday and paid sick leave – 'full-time casuals' – almost doubled in the last decade to reach 12 percent in 2000.

The standard ABS definition of 'casual' is intended to identify employees who have casual-employment contracts. In practice it fails to do so because the ABS classifies as an 'employee', not only people who work for wages or salary in someone else's business but also people who work in their own incorporated business (Wooden and Hawke, 1998). Technically, these 'owner managers of incorporated businesses' are employees because the business is a separate legal

entity. Many of these people do not pay themselves holiday or sick leave so they are classified by the ABS as 'casual' employees. Furthermore, many of these same people work full-time and consequently fall into the anomalous category: 'full-time casuals'.

Over time, some casual-employment contracts have emerged with conditions more consistent with regular, ongoing employment than with occasional, irregular or short-term employment. In 1936, the High Court drew a distinction between 'true casuals' (with the latter type of contract) and 'permanent casuals' (with the former type of contract). People classified as casual employees in standard ABS surveys, even if owners of incorporated businesses were to be excluded, consist of both 'true' and 'permanent' casuals. Casual employees include people who receive neither paid holiday leave nor paid sick leave but work for the same employer for long periods of time and have regular work hours and earnings. Also included are people who have an ongoing contract but trade their leave entitlements for higher wages. On the other hand, people classified as permanent employees in standard ABS surveys, excluding owners of incorporated businesses, include a small but growing number of people who consider themselves to have a casual-employment contract but receive either paid holiday leave or paid sick leave (but not both).

The ABS is aware of these issues and has begun a new survey, the Forms of Employment Survey (FOES), Cat. No. 6359.0, which classifies employed people into more homogeneous groups and thereby avoids some of the problems

identified above.⁵ The FOES classifies employed persons into five categories: employees with leave entitlements; self-identified casuals; other employed persons; owner managers of unincorporated enterprises; owner managers of incorporated enterprises. The population is narrower than that of the Labour Force Survey. Three of the LFS' categories comprise the FOES' population: employees (people who work for wages or salary in someone else's business and owner operators of incorporated businesses), employers (owner operators of unincorporated businesses, or people who engage independently in a profession or trade, who hire employees) and own account operators (owner operators of unincorporated businesses, or people who engage independently in a profession or trade, who do not hire employees). Contributing family workers and persons working only for payment in kind are included in standard ABS surveys but are omitted from the FOES.

Self-identified casuals in the FOES correspond more closely to employees with casual-employment contracts than do those classified as 'casuals' by the ABS in Cat. No. 6310.0. This is primarily because people who work for wages or salary in someone else's business, 'FOES-employees', and owner managers of incorporated businesses are identified separately in the FOES. In addition, FOES-employees who receive either paid holiday leave or paid sick leave (but not both) are classified as self-identified casuals provided they consider their jobs to be casual. The category, 'other employed persons', is a small but heterogeneous

⁵ The first FOES was conducted in August 1998. The second FOES is to be conducted in late 2001. Another new survey with similar advantages, the Survey of Employment Arrangements and Superannuation, was conducted in June 2000 but at the time of writing there was no scheduled date at which unit-record data would be made available.

residual group including people who do not receive both paid holiday leave and paid sick leave, but do not consider themselves to be casuals. Many of these people work for the same employer for long periods of time, have regular work hours and earnings. Others have an ongoing contract but 'cash out' their leave entitlements. Whether 'other employed persons' should be classified as 'casuals' is debatable. Burgess and Mitchell (2001) argue that jobs that do not have the rights and protection associated with ongoing employment should be classified as casual even if those who hold the jobs believe their employment job is ongoing. After all, the employee could be wrong! These authors argue that the concept of casual employment in Australia is closely associated with the regulation of employment and its measurement should be consistent with its regulatory base.

In the 1998 FOES, 17.7 percent of employed persons and 22.1 percent of employees were 'self-identified casuals'.⁶ Another 3.6 percent of employed persons and 4.5 percent of employees were 'other employed persons'. If the latter are treated as casuals then 21.3 percent of employed persons and 26.6 percent of employees are casuals. This is approximately the same as the ABS' incidence of casual employment reported in 6310.0. Although the exclusion of owner managers of incorporated business from the FOES categories that comprise employees reduces the measured incidence of casual employment among employees, the inclusion of people receiving exactly one form of leave entitlement increases it.⁷

⁶ Like the SIHC, the FOES is a complex sample, rather than a simple random sample. The weights supplied by ABS have been used in the computation of statistics that appear in this paper.

⁷ FOES data indicate that the percentage of employees, including owner managers of incorporated business, who received neither paid sick leave nor paid holiday leave was 26.6. The percentage of employees, excluding owner managers of incorporated business, who received neither paid sick leave nor paid holiday leave was 24.3. The percentage of employees, excluding owner managers of incorporated business, who did

With contributing family members and unpaid voluntary workers excluded from the FOES, the percentage of all employed persons who were part-time workers, 25.6, is slightly higher than the 24.8 percent given by the SIHC. Part-time workers comprised 12.1 percent of employees with leave entitlements, 71.9 percent of self-identified casuals, 32.3 percent of other employed persons, 17.5 percent of owner managers of incorporated enterprises, and 25.9 percent of owner managers of unincorporated enterprises. Self-identified casuals account for 49.8 percent of part-time employed persons, 60.6 percent of part-time employees, 6.7 percent of full-time employed persons, and 8.4 percent of full-time employees.

This study uses unit-record data from the 1998 FOES. The sample consists of 28,518 employed persons aged 15 years and older. The FOES records detailed data on employees' labour-market related characteristics, including weekly earnings from wages and salary in the main job. Unfortunately, the 1998 FOES does not provide data with which to compute the gross or net annual income of the employee's income unit and consequently does not provide enough data with which to compute the employee's poverty status. In Section 6 below data from the SIHC and the FOES are combined to produce estimates of the incidence of poverty among self-identified casual employees, other employed persons and employees with leave entitlements.

not receive both paid sick leave nor paid holiday leave was 25.3. All of the above calculations exclude individuals who did not know whether they received paid sick leave or did not know whether they received paid holiday leave. (See Appendix B for detailed calculations.)

4. Who are Part-Time Workers?

Some characteristics of part-time workers and unemployed persons seeking part-time employment are displayed in Table 1. Workers are classified into six mutually exclusive and collectively exhaustive demographic groups based upon age, gender, student status and family structure. The groups' characteristics are likely to affect preferences for hours of work. For comparison purposes full-time workers and unemployed persons seeking full-time work are classified in the same way. The proportions of part-time and full-time workers and job seekers in the six demographic groups appear without brackets or parentheses in Table 1. For example, 6.59 percent of part-time workers are elderly people; 27.96 percent of part-time workers are students. The numbers in square brackets give the number of part-time or full-time workers in each group as a percentage of employed persons. For example, part-time workers who are elderly make up 1.63 percent of employed persons, full-time workers who elderly make up 2.62 percent of employed persons, part-time and full-time elderly workers constitute 4.26 percent of all employed persons. Notably, all part-time workers constitute 24.79 percent of all employed persons. The numbers in parentheses give the number of part-time or full-time workers or job seekers in each group as a percentage of the labour force. For example, part-time workers who are students make up 6.37 percent of the labour force, all students comprise 14.60 percent of the labour force, and so on. The last line of Table 1 shows that all part-time workers constitute 22.80 percent of the labour force; unemployed people seeking part-time work make up another 1.61 percent of the labour force.

Table 1 reveals that more than two thirds of part-time workers are people for whom part-time work is likely to be a choice rather than a constraint because of their actual or potential engagement in non-market activities such as study, child care or leisure.⁸ This subset of part-time workers contains the 29.57 percent of part-time workers who are wives (legal or defacto) with dependent children, the 27.96 percent of part-time workers who are students (full-time, part-time or still at school), the 6.59 percent who are people over 60 years old and the 4.14 percent who are single parents. An even larger percentage (79 percent) of people seeking part-time work fall into these categories: students comprise 51.12 percent, 'wives' with dependent children 16.83 percent, elderly people 2.89 percent and single parents 8.12 percent of unemployed people seeking part-time work. This is a very different breakdown to that of full-time workers, only 23 percent of whom fall into these four categories and most of whom are 'other' males (57.65 percent) or 'other' females (19.27 percent). The breakdown of unemployed persons who are looking for full-time work closely resembles that of full-time workers.

5. Are Part-Time Workers Poor?

A worker's economic well-being depends not only upon his or her own earnings but also upon the incomes of other people with whom he or she pools income. The SIHC 1997-98 groups individuals into 'income-units' and reports their 1996-97 gross income and income tax. Each income unit can be identified as poor

⁸ The SIHC does not ask part-time workers whether or not they would like to work full-time. However, Table 1 is consistent with ABS, Labour Force, Australia, May 2001 (Table 33), which indicates that almost 75 percent of all part-time workers prefer not to work more hours and only 6.84 percent of all part-time workers want to work full-time.

by comparing its income net of tax with the 1996-97 value of the Henderson poverty line for an income-unit of its size and composition. Table 2 gives the proportion of people aged 15 years and older, classified by labour-force status and demographic group, who are poor.⁹

Table 2 indicates that 11.70 percent of part-time workers are poor. This is higher than the poverty rate of full-time workers (7.55 percent), about the same as the poverty rate of people not in the labour force (11.83 percent), but much smaller than the poverty rate of the unemployed (37.56 percent). The poverty rate of part-time workers is higher than that of full-time workers mostly because the poverty rate of 'other' males who work part-time (23.66 percent) is more than three times that of 'other' males who work full-time (6.86 percent) and the poverty rate of 'other' females who work part-time (16.73 percent) is more than twice as large as poverty rate of 'other' females who work full-time (7.86 percent). These two groups constitute almost 32 percent of part-time workers and are the groups for whom part-time work is least likely to be preferred to full-time work.

Although part-time workers and people not in the labour force have similar poverty rates there are two major differences in the poverty rates of different demographic groups of people within these two categories of labour-force status. The poverty rate of single parents with dependents is much smaller for part-time workers (14.53 percent) than for people not in the labour force (25.64 percent). For 'other' males the reverse is true: the poverty rate of part-time 'other' male workers is much larger (23.66 percent) than that of 'other' males not in the labour force

⁹ Unfortunately, in the SIHC disposable income is reported for the year prior to that in which labour-force status is observed. Perhaps this section should be headed "Were Part-Time Workers Poor?" ©

(15.44 percent). All demographic groups of part-time workers have much lower poverty rates than the corresponding demographic group of unemployed persons, with the exception of people of 60 years and older where 12.08 percent of part-time workers are poor and 6.30 percent of the unemployed are poor.

In summary, one group of part-time workers has a high poverty rate compared with other segments of the population: males who are younger than 60, and are neither students nor single parents. They comprise 13 percent of part-time workers and three percent of employed persons. This group has the highest concentration of people who could reasonably be called 'working poor'.

Living with someone who works full-time would appear to be an effective way of avoiding poverty, particularly for those who do not work full-time themselves. Table 3 reveals that 61.28 percent of part-time workers in the 1997-98 SIHC lived and pooled income with a full-time worker. By comparison, 34.13 percent of full-time workers, 20.72 percent of unemployed persons and 24.43 percent of people not in the labour force lived with a full-time worker. In those demographic groups where part-time workers are concentrated large proportions live with a full-time worker: 72.43 percent of part-time workers who are students, 91.08 percent of part-time workers who are 'wives' with dependent children and 54.48 percent of 'other' female part-time workers live with someone who works full-time. With few exceptions (notably, 'other' males) part-time workers are more likely to live with a full-time worker than are full-time workers. Without exception part-time workers are more likely to live with a full-time worker than both unemployed persons and persons not in the labour force.

Does cohabitation with a full-time worker rescue part-time workers, or others, from poverty? For each combination of labour-force status and demographic group, Table 4 shows poverty rates of those who live with a full-time worker and those who do not. The presence of another full-time worker in the income unit is indeed an effective mechanism for reducing the probability of being poor. Of those part-time workers who live with a full-time worker, 2.96 percent have a net income below the poverty line, whereas the poverty rate of part-time workers who do not live with a full-time worker is 25.53 percent. The same is true for full-time workers; the poverty rate is 3.71 percent when another full-time worker is present in the income unit and 9.54 percent when no other full-time worker is present. For people not in the labour force the poverty rate is 5.12 percent when a full-time worker is present in the income unit, otherwise 14.00 percent. The proportion of the unemployed who are poor is 5.56 percent when a full-time worker is present in the income unit, otherwise 45.92 percent. For each of the six demographic groups of people, be they part-time workers, full-time workers, unemployed persons or persons not in the labour force, the poverty rate is substantially lower when a full-time worker is present in the income unit. For example, the 91.08 percent of part-time-working 'wives' who live with a full-time worker have a poverty rate of 3.28 percent; the 8.92 percent who do not live with a full-time worker have a poverty rate of 15.31 percent. The sole exception is that of elderly people who are not in the labour force: 11.25 percent of those who live with a full-time worker are poor, 10.58 percent of those who do not live with a full-time worker are poor.

6. Are Casual Workers Poor?

As explained earlier in this paper, the SIHC does not report whether a worker is employed on a casual basis. The FOES, which does identify 'casuals', does not contain the data necessary to compute gross or net annual income of the income unit to which each individual belongs and therefore does not permit the direct computation of the poverty status of 'casual' workers and others in the data set. Nor is there any other data set currently available with which to calculate poverty rates of 'casual' workers. Therefore, an indirect method was used to estimate the poverty rates of individuals in the 1998 FOES. This method consists of three steps:

(i) Data in the 1997-98 SIHC were used to estimate a probit model:

$$Y^*_i = \beta'X_i + \varepsilon_i \quad (1)$$

where Y^*_i is individual i 's propensity to be poor; X_i is a vector of poverty covariates and ε_i are individuals' stochastic error terms that are assumed to be independently and identically normally distributed, with mean zero and constant variance. Y^*_i is unobservable but a dummy variable, Y_i , is observable and $Y_i = 1$ if $Y^*_i > 0$, that is, individual i is poor; $Y_i = 0$ otherwise. Therefore, it follows from Equation (1) that:

$$P(Y_i = 1) = P(\varepsilon_i > -\beta'X_i) = P(\varepsilon_i < \beta'X_i) = \Phi(\beta'X_i) \quad (2)$$

The parameters of the probit model, β , are estimated by maximizing the likelihood function based on Equation (2):

$$L = \prod_{Y_i=1} \Phi(\beta'X_i) \prod_{Y_i=0} [1 - \Phi(\beta'X_i)] \quad (3)$$

The poverty status of each individual in the SIHC is determined by the annual disposable income of the income unit to which he or she belongs and the poverty line for an income unit of the same size and composition as the person's own

income unit. All poverty covariates in X_i are variables that are recorded compatibly in the 1997-98 SIHC and the 1998 FOES.

(ii) Given estimates of β , the probability of being poor was estimated for each individual in the 1998 FOES by substituting his or her poverty covariates, X_i , into the right-hand-side of the estimated probit equation, Equation (2).

(iii) The estimated probabilities of being poor were averaged across individuals in the various categories of labour-force status identified in the FOES to obtain the estimated poverty rates of those categories.

Poverty covariates are gender, age, marital status, position in the family unit, student status, immigrant status, geographic location, weekly hours worked in the main job and, most importantly, weekly income. The SIHC records 'total current usual weekly income from wages and salary in the main and second jobs'. The FOES records 'weekly earnings in the main job'. The variable was made compatible across the two data sets by excluding multiple-job holders from the SIHC respondents used in the estimation of the probit model. Furthermore, the SIHC records weekly income for employees only; weekly income is coded as zero for other employed persons (employers, current account operators, contributing family members and people working for payment in kind). Therefore, the probit model was estimated using employees in the SIHC with exactly one job. The FOES records weekly income for all its categories of employed persons, although there were 5,536 out of 28,518 people for whom weekly earnings could not be determined.

Maximum likelihood estimates of the parameters of the probit model were produced using Limdep (Greene, 1998) and are listed in Table 5. In general, the

coefficients have the expected signs. The following *ceteris paribus* interpretations apply to those coefficients that are different from zero at the ten percent level of significance.

- The larger are weekly earnings the smaller the probability of being poor.
- Females are less likely to be poor than males.
- Compared with 25-29 year olds, 15-19 year olds who are still at school or attending a tertiary institution are less likely to be poor. Those 15-24 year olds who are not still at school and are not attending a tertiary institution are more likely to be poor than 25-29 year olds.
- People working less than 35, or at least 50, hours per week are more likely to be poor than people working 35 through 39 hours per week.
- Immigrants who arrived in Australia since 1981 are more likely to be poor than the Australian born.
- Compared with people living in urban NSW, people living in Victoria, the NT/ACT, or rural areas NSW, Queensland, South Australia or Western Australia are more likely to be poor.

The estimated model correctly predicted the poverty status of almost 95 percent of the 6,209 individuals in the SIHC whose data were used in its estimation.

The probit model predicts that 'self-identified casuals' have a poverty rate of 12.5 percent and 'employees with leave entitlements' have an estimated poverty rate of 6.9 percent. The poverty rate of other employed people was estimated at 9.1 percent. Of course, these estimates are only as good as the methodology on which they are based. It is possible to identify those individuals in the FOES who would be

classified as employees in the SIHC so the methodology can be assessed in terms of its ability to predict their poverty rates. The poverty rate of all SIHC-employees in the 1998 FOES predicted by the probit model was 8.3 percent whereas the actual poverty rate of all employees in the 1997-98 SIHC was 6.9 percent. The predicted poverty rate of part-time SIHC-employees in the 1998 FOES was 11.4 percent compared with an actual poverty rate of part-time employees in the 1997-98 SIHC of 10.8 percent. The predicted poverty rate of full-time SIHC-employees in the 1998 FOES was 7.2 percent compared with an actual poverty rate of full-time employees in the 1997-98 SIHC of 5.6 percent. All predictions overstate the incidence of poverty, the largest error being approximately 25 percent. This suggests that the predicted poverty rates of casual and permanent employees similarly are likely to be over-estimates of their true values.

7. Conclusions

Part-time and casual work is an important part of today's labour market. In the late 1990s, 24.8 percent of employed persons worked part-time, 22.1 percent of employees were 'self-identified' casual workers, 32.5 percent of employees were employed on either a part-time or a 'self-identified' casual basis. The poverty rate among persons who are employed part-time is 11.7 percent, which is higher than the poverty rate among full-time employed persons (7.6 percent), about the same as the poverty rate of persons who are not in the labour force (11.8 percent), but much lower than the poverty rate of the unemployed (37.6 percent).

Many part-time workers avoid poverty by living with someone who works full-time. Among the 61 percent of part-time workers who live with a full-time worker, the poverty rate is only 3.0 percent, slightly lower than the poverty rate of 3.7 percent among full-time workers who live with another full-time worker. However, among the 39 percent of part-time workers who do not live with a full-time worker, the poverty rate is 25.5 percent, which is more than 2.5 times the poverty rate of 9.5 percent among full-time workers who do not live with another full-time worker. Those part-time workers who are most likely to be poor are males who are not elderly, students or single parents with dependents. Females, other than the elderly, students, wives with dependent children and single parents with dependents, who do not live with a full-time worker are also likely to be poor.

The poverty rates of 'self-identified casuals' and 'employees with leave entitlements' could not be computed directly from the data sets on which this study is based but they were estimated to be 12.6 percent and 6.9 percent, respectively. These rates are similar to the actual poverty rates of 12.1 for part-time employees and 6.2 percent for full-time employees.

In summary, while the majority of part-time and casual workers are not poor their poverty rates are higher than those of full-time workers and employees with leave entitlements. Only a small proportion of part-time workers who live with a full-time worker are poor. However, part-time workers who do not share income with a full-time worker constitute 8.8 percent of the labour force and one quarter of these people are poor.

References

- Australian Bureau of Statistics, *Employee Earnings, Benefits and Trade Union Membership*, various issues (6310.0).
- Australian Bureau of Statistics (August 1998). *Forms of Employment, Australia* (6359.0).
- Australian Bureau of Statistics, *Labour Force, Australia*, various issues (6203.0).
- Australian Bureau of Statistics (2000). *Survey of Income and Housing Costs Technical Paper 1997-98* (6541.0.30.001).
- Burgess, John and Mitchell, William (2001). "The Australian Labour Market." *Journal of Industrial Relations*, 43(2): 124-147.
- Campbell, Iain (1996). "Casual Employment, Labour Regulation and Australian Trade Unions." *Journal of Industrial Relations*, 38(4): 571-599.
- Dawkins, Peter and Norris, Keith (1995). "The Growth of Part-Time Employment in Australia and the United Kingdom, 1878-93." *Labour Economics and Productivity*, 7(1):1-27.
- DEWRSB (Department of Employment, Workplace Relations and Small Business) (2000). *Casual Employment and Working Hours in Australia*, Ministerial Working Paper, Canberra.
- Greene, William H. 1998. *LIMDEP, Version 7.0, User's Manual*, Revised Edition. Castle Hill, NSW: Econometric Software, Inc.
- Johnson, David. (1987). "The Calculation and Use of Poverty Lines in Australia". *Australian Economic Review*, 21 (4): 45-55.
- Murtough, G. and Waite, M. (2000a). *The Growth of Non-Traditional Employment: Are Jobs Becoming More Precarious?*, Productivity Commission Staff Research Paper, AusInfo, Canberra.

- Murtough, G. and Waite, M. (2000b). *The Diversity of Casual Employment*, Productivity Commission Staff Research Paper, AusInfo, Canberra.
- Robertson, P. (1989). "Some Explanations for the Growth of Part-time Employment in Australia." *Australian Bulletin of Labour*, 15(5): 384-99.
- Sharpe, R. (1987). "Perils for Part-Timers." *Australian Society*, November: 37-38.
- Wooden, M. and Hawke, A. (1998). "Factors Associated with Casual Employment: Evidence from the AWIRS." *Economic and Labour Relations Review*, 9(1):82-107.

Table 1

Percentage of Full-Time Workers, Part-Time Workers and the Unemployed
by Demographic Group

[Percentage of Employed Persons]

(Percentage of Labour Force)

Demographic Group	Part-Time Worker (1)	Full-Time Worker (2)	Employed Persons (3)	Unempl'd Looking for PT Work (4)	Unempl'd Looking for FT Work (5)	Labour Force (6)
People, 60 years & older	6.59 [1.63] (1.50)	3.49 [2.62] (2.41)	[4.26]	2.89 (0.05)	2.01 (0.15)	(4.11)
Students (younger than 60 years) ^a	27.96 [6.93] (6.37)	9.59 [7.21] (6.63)	[14.14]	51.12 (0.84)	11.59 (0.76)	(14.60)
Wife with dependent children ^b	29.57 [7.33] (6.74)	8.31 [6.25] (5.74)	[13.58]	16.83 (0.29)	5.55 (0.39)	(13.17)
Single parent with dependent children ^b	4.14 [1.03] (0.94)	1.70 [1.28] (1.18)	[2.31]	8.12 (0.13)	4.06 (0.25)	(2.50)
Other females	19.02 [4.72] (4.34)	19.27 [14.49] (13.32)	[19.21]	8.37 (0.13)	19.82 (1.26)	(19.05)
Other males	12.71 [3.15] (2.90)	57.65 [43.36] (39.87)	[46.51]	12.67 (0.20)	56.97 (3.59)	(46.56)
Total	100.0 [24.79] (22.80)	100.0 [75.21] (69.15)	[100.0]	100.0 (1.61)	100.0 (6.44)	(100.0)

Source: Unit record data ABS: Income and Housing Costs Survey, Australia, 1997-98.

^a Consists of full-time students, part-time students and those still at school.

^b Not included in the first two categories.

Table 2

Absolute Poverty Rates of Individuals aged 15 Years and Older
by Labour-Force Status and Demographic Group

Demographic Group	Part-Time Worker (1)	Full-Time Worker (2)	Unemployed (3)	Not in Labour Force (4)
People, 60 years & older	12.08	11.67	6.30	10.60
Students (younger than 60 years) ^a	10.11	13.52	21.82	14.69
Wife with dependent children ^b	4.35	3.83	16.23	8.01
Single parent with dependent children ^b	14.53	3.46	41.71	25.64
Other females	16.73	7.86	55.04	11.50
Other males	23.66	6.86	42.78	15.44
Total	11.70	7.55	37.56	11.83

Source: Unit record data ABS: Income and Housing Costs Survey, Australia, 1997-98.

^a Consists of full-time students, part-time students and those still at school.

^b Not included in the first two categories.

Table 3

Percentage of Individuals by Labour-Force Status and Demographic Group,
Who Live with at Least one Full-Time Worker

Demographic Group	Part-Time Worker (1)	Full-Time Worker (2)	Unemployed (3)	Not in Labour Force (4)
People, 60 years & older	21.36	23.95	2.04	2.43
Students (younger than 60 years) ^a	72.43	27.10	47.49	58.30
Wife with dependent children ^b	91.08	87.75	62.38	76.90
Single parent with dependent children ^b	0.84	0.00	0.00	0.00
Other females	54.48	41.33	10.37	33.60
Other males	18.00	26.79	8.85	8.09
Total	61.28	34.13	20.72	24.43

Source: Unit record data ABS: Income and Housing Costs Survey, Australia, 1997-98.

^a Consists of full-time students, part-time students and those still at school.

^b Not included in the first two categories.

Table 4

Absolute Poverty Rates of Individuals aged 15 Years and Older
by Labour-Force Status, Demographic Group
and Presence or Absence of a Full-Time Worker in the Income Unit

Demographic Group		Part-Time Worker (1)	Full-time Worker (2)	Unemployed (3)	Not in Lab Force (4)
People, 60 years & older	FT worker in unit	5.76	8.72	0.00	11.25
	No FT worker in unit	13.80	12.60	6.43	10.58
Students (younger than 60 years) ^a	FT worker in unit	1.83	4.01	1.64	3.32
	No FT worker in unit	31.86	17.06	40.07	30.59
Wife with dependent children ^b	FT worker in unit	3.28	3.50	12.36	5.86
	No FT worker in unit	15.31	6.19	22.64	15.16
Single parent with dependent children ^b	FT worker in unit	0.00	n.a.	n.a.	n.a.
	No FT worker in unit	14.65	3.46	41.71	25.64
Other females	FT worker in unit	3.96	3.10	8.86	5.99
	No FT worker in unit	32.01	11.22	60.39	14.29
Other males	FT worker in unit	3.14	3.80	4.44	0.00
	No FT worker in unit	28.17	7.98	46.50	16.80
Total	FT worker in unit	2.96	3.71	5.56	5.12
	No FT worker in unit	25.53	9.54	45.92	14.00

Source: Unit record data ABS: Income and Housing Costs Survey, Australia, 1997-98.

^a Consists of full-time students, part-time students and those still at school.

^b Not included in the first two categories.

Table 5

Probit Model of the Probability of Being Poor

Variable	Coeff	Variable	Coeff
Constant	-1.0528 ***	Weekly hours 1-9	0.4488 ***
Weekly earnings (\$)	-0.0015 ***	Weekly hours 11-24	0.2344 **
Female	-0.2061 ***	Weekly hours 25-34	0.3615 ***
Att school, 15-19 yrs	-1.2249 ***	Weekly hours 40-49	0.1291
FT tertiary, 15-19 yrs	-0.4569 **	Weekly hours ≥50	0.2823 **
Other, 15-19 yrs	1.7237 ***	Immigrant arrived <1981	0.0480
FT tertiary, 20-24 yrs	-0.2510	Immigrant arr 1981-90	0.2301 *
Other, 20-24 yrs	0.4157 ***	Immigrant arrived >1990	0.6091 ***
Age 30-34	0.0295	Rural NSW	0.3545 ***
Age 35-39	-0.0850	Urban Victoria	0.2323 **
Age 40-44	-0.0134	Rural Victoria	0.3833 ***
Age 45-49	-0.1834	Urban Queensland	0.0565
Age 50-54	-0.1786	Rural Queensland	0.3336 ***
Age 55-59	-0.0538	Urban Sth Australia	0.1773
Age 60-64	-0.0001	Rural Sth Australia	0.4823 **
Age 65 or older	0.0539	Urban West Australia	0.1813
Husb/wife + dependents	-0.4595	Rural West Australia	0.4965 ***
Husb/wife, no dependents	-0.7887	Urban Tasmania	-0.5644
1 parent + dependents	-0.1350	Rural Tasmania	0.0063
1 parent, no dependents	0.3961	NT/ACT	0.3711 **
Married	0.0382		

n=6209, pseudo R² = 0.5139,
 Chi-square (goodness-of-fit test) = 884.1279,
 degrees of freedom = 40, significance level = 0.000.

Note:

*, ** and *** indicate a coefficient that is statistically different from zero at the 10%, 5% and 1% levels of significance, respectively.

Source: Unit record data ABS: Forms of Employment Survey, Australia, 1998.

Appendix A

1996-97 Absolute Poverty Line (\$ per annum)					
Couple	Head in	Head not in	Single Person	Head in	Head not in
	Workforce	Workforce	Single Parent	Workforce	Workforce
(1)	(2)	(3)	(4)	(5)	(6)
Couple	12,787.68	10,979.60	Single	9,559.34	7,751.25
plus 1	15,371.43	13,563.35	plus 1	12,272.37	10,462.49
plus 2	17,955.19	16,147.10	plus 2	14,854.33	13,046.24
plus 3	20,538.94	18,730.85	plus 3	17,438.08	15,629.99
plus 4	23,122.69	21,314.60	plus 4	20,021.83	18,213.74
plus 5	25,577.16	23,767.28	plus 5	22,605.58	20,797.49
plus 6	28,031.64	26,221.75	plus 6	25,060.05	23,251.97
plus 7	30,484.31	28,676.23	plus 7	27,514.53	25,706.44
plus 8	32,938.79	31,130.70	plus 8	29,969.00	28,159.12
plus 9	35,393.26	33,585.18	plus 9	32,423.47	30,613.59
plus 10+	38,364.85	36,556.76	plus 10+	34,876.15	33,068.07

Note: Poverty lines were calculated using a benchmark income of \$62.70 per week for a couple plus two dependents that applies to the September quarter, 1973. The benchmark weekly income was inflated using the consumer price index to obtain absolute poverty lines for the four quarters of 1996-97. The latter were aggregated to obtain annual poverty lines for 1996-97 for a couple plus two dependents. Poverty lines for other family types were derived by multiplying the annual poverty line by the value assigned to that family type in the equivalence scales of Johnson (1987, Table 1).

Appendix B Incidence of ‘Casual’ Employment in the FOES

Notation: S = paid sick leave, H = paid holiday leave.

Definition 1 (includes owner-managers of incorporated businesses, notS \cap notH)

‘employees with leave entitlements’	= 4,939,738
‘self identified casuals’ (1,486,862 – 38,013*)	= 1,448,849
‘other employed persons’ (299,481 – 44,223*)	= 255,258
‘owner-managers of incorporated businesses’ (590,910 – 13,430*)	= <u>577,480</u>
total employees	= 7,221,325

‘self identified casuals’, notS \cap notH	= 1,413,369
‘other employed persons’, notS \cap notH	= 209,870
‘owner-managers of incorporated businesses’, notS \cap notH	= <u>294,722</u>
total casuals, notS \cap notH	= 1,917,961

Proportion of Employees who are ‘Casuals’ = $1,917,961 \div 7,221,325 = 0.266$

Proportion of Owner-Managers of Incorporated Businesses who are ‘Casuals’

= $294,722 \div 577,480 = 0.510$

Definition 2 (excludes owner-managers of incorporated businesses, notS \cap notH)

‘employees with leave entitlements’	= 4,939,738
‘self identified casuals’ (1,486,862 – 38,013*)	= 1,448,849
‘other employed persons’ (299,481 – 44,223*)	= <u>255,258</u>
total employees	= 6,643,845

‘self identified casuals’, notS \cap notH	= 1,413,369
‘other employed persons’, notS \cap notH	= <u>209,870</u>
total casuals	= 1,623,239

Proportion of Employees who are ‘Casuals’ = $1,623,239 \div 6,643,845 = 0.244$

Definition 3 (excludes owner-managers of incorporated businesses, not(S \cap H))

‘employees with leave entitlements’	= 4,939,738
‘self identified casuals’ (1,486,862 – 38,013*)	= 1,448,849
‘other employed persons’ (299,481 – 44,223*)	= <u>255,258</u>
total employees	= 6,643,845

‘self identified casuals’, not(S \cap H)	= 1,448,849
‘other employed persons’, not(S \cap H)	= <u>255,258</u>
total casuals, not(S \cap H)	= 1,704,107

Proportion of Employees who are ‘Casuals’ = $1,704,107 \div 6,643,845 = 0.257$

* Number of individuals omitted because they did not know whether they received S or H.