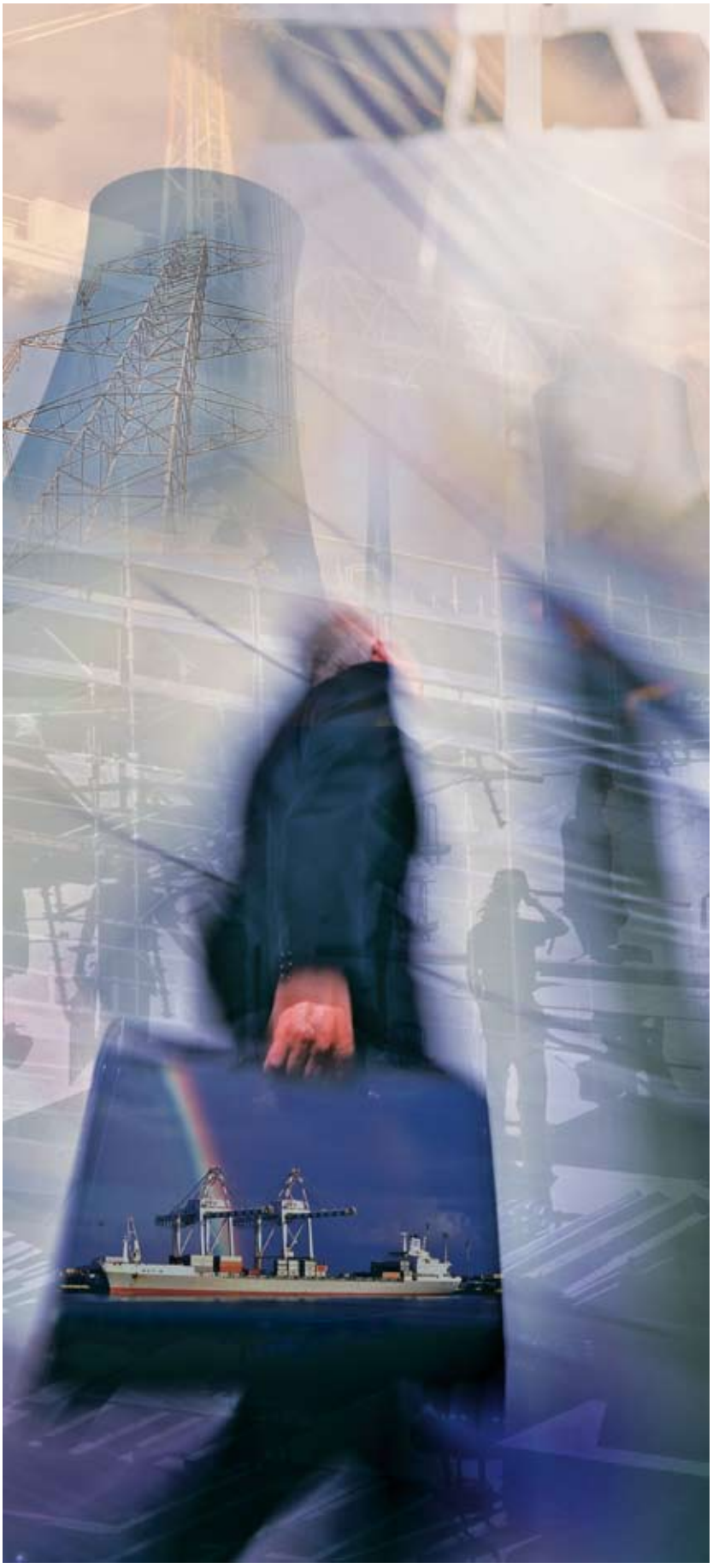

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Contributions of Longitudinal Data to Poverty Measurement in Australia

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Contributions of Longitudinal Data to Poverty Measurement in Australia

Abstract

Little is known about chronic poverty in Australia, yet this aspect of poverty should be important to policy makers, welfare organisations, charities and others. Until recently there was no way to reliably distinguish chronic poverty from transitory poverty in Australia because the only data suitable for studying poverty was cross-section data collected by the Australian Bureau of Statistics. That situation is changing. Six waves of longitudinal data are now available from the Household, Income and Labour Dynamics in Australia Survey, allowing the measurement of chronic and transitory poverty from 2000-01 to 2005-06. This paper explores the extent to which the longitudinal data adds to what is known about poverty from cross-section data. We find an imperfect correspondence between people's current poverty status and their chronic poverty status. Consequently, policies that aim to reduce chronic poverty using means-tested benefits will be partially misdirected if beneficiaries are identified using current income and some households experiencing chronic poverty may fall through the safety net.

I. Introduction

Many people experience poverty at some time in their lives. Tertiary students are an example, but most of them will escape poverty at the conclusion of their studies. People in transition between jobs may drop into poverty until new employment is found. This type of poverty – transitory poverty – is of less concern than prolonged, chronic poverty. Concepts such as the "working poor", a "cycle of poverty" and "inter-generational poverty" apply to poverty that is chronic, rather than transitory, in nature. Chronic and transitory poverty are likely to have different causes, different effects, and are likely to call for different policy initiatives.

The reason why we know so little about chronic poverty in Australia is that the necessary longitudinal data with which to measure it have not been available until recently. With the publication of successive waves of data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey, the situation is changing. To date, however, only a small number of published studies have utilised the HILDA data to measure poverty over more than one year. Heady, Marks and Wooden (2005) and Saunders and Bradbury (2006) both used the first three waves of HILDA data and found that roughly four per cent of Australians were poor in all three financial years 2000-01, 2001-02 and 2002-03. Of those who were poor in the first year, about half escaped poverty in the later years. Rodgers and Rodgers (2006) estimated that almost five per cent of Australians had real equivalised disposable incomes less than 14,000 (in 2003-04 dollars) per annum in the four years from 2000-01 through 2003-04.

Six waves of data from the HILDA Survey are now available allowing the measurement of chronic and transitory poverty from 2000-01 to 2005-06 as well as snapshots of current poverty in each of the six years. This study investigates the extent to

which the longitudinal data add to information about poverty obtained from the cross-section data. Two related questions are addressed: How much poverty observed in any given cross section is chronic in nature and how much is transitory? How much chronic poverty escapes observation in a given cross-section snapshot? The answers to these questions have clear policy implications. If the aim is to reduce chronic poverty, then means-tested benefits that identify recipients using current income will be more appropriately targeted the larger the overlap between people who are in chronic poverty and people who are poor in any given year, and the smaller the overlap between people who are in chronic poverty and people who are not poor in any given year.

Three methods have been used in the literature to identify people in chronic and transitory poverty. The first method compares a person's permanent (or smoothed) income over a number of time periods with a given poverty line. A person who has permanent income below the poverty line is in chronic poverty during all the time periods considered. A person who has permanent income above the poverty line but is poor in at least one time period is said to be in transitory poverty. The second method is the "multiple-times-poor" approach, which identifies a person as chronically poor if he or she is poor in a large proportion of time periods. People in transitory poverty are poor in a small proportion of time periods. Under both the permanent-income and the "multiple-times-poor" methods, it is possible for a chronically poor person to be temporarily non-poor in some year(s). The third method, the duration approach first used to analyse poverty by Bane and Ellwood (1986), identifies a person as chronically poor if he or she is in the midst of a long poverty spell. A person experiencing a short poverty spell is said to be in transitory poverty. With only six years of data available for this study, we encounter the problem that many poverty spells are censored – they either begin in the

first year, end in the last year, or both – and consequently their length is indeterminate. The longest uncensored spell observable in six years of data is four years in duration. Uncensored spells of three or fewer years could, in fact, be much longer. For this reason, we decided not to consider the duration approach in this study.

The remainder of this paper is organised as follows. The suitability of the HILDA data for the measurement of chronic poverty is examined and the conventions we use to identify the poor are specified in Section II. In Section III we examine the temporal variability of people's real incomes and the extent to which low-income people save and borrow. Our findings support the case for using permanent income to measure chronic poverty. In Section IV we examine the overlap between cross-section poverty and chronic poverty measured by the permanent-income approach. The overlap between cross-section poverty and chronic poverty measured by the multiple-times poor approach is investigated in Section V. Section VI concludes.

II. The Data and Measurement Conventions

This study uses unit-record data from Release 6.0 of the Household, Income and Labour Dynamics in Australia (HILDA) Survey, conducted by the Melbourne Institute of Applied Economic and Social Research. The HILDA Survey began in 2001 with a complex random sample of 7,682 Australian households containing 19,914 people of various ages. When appropriate weighting procedures are applied, the original sample is representative of all Australians who were living in private dwellings in non-remote areas in 2001. Information has been collected annually on members of the households that participated in Wave 1, on any children later born to or adopted by them, and on people who later joined one of the households and had a child with one of the original sample

members or their descendents. Other people who, in Wave 2 or later, joined one of the original households have also been followed and information has been collected on them too, but only for as long as they remained in the household.[1]

By 2006, 12,798 of the people who were members of the households that participated in Wave 1 were still in the survey. Longitudinal weights, which take account of attrition between Wave 1 and Wave 6, are provided with the survey data and when applied, ensure that people in the six-year balanced panel remain representative of all Australians who were living in private dwellings in non-remote areas in 2001 (Watson, 2008, pp.86-87). The balanced panel is well suited to this study because we are able to measure poverty among the same group of people, using data from both cross-section "snapshots" and the entire six-year period.

In any empirical study of poverty there are a number of decisions that the researcher must make, which are largely judgment calls but which will affect the results of the analysis. For the most part, we have followed conventions that are commonly used by Australian researchers. Thus, poverty is identified at the household level on the assumption that one important reason why people live together is to improve their standard of living by taking advantage of economies of scale in consumption and household production that arise from sharing accommodation, utilities and other amenities.

The variable that is used to identify poor households is annual disposable income, adjusted for household size and composition using the modified OECD equivalence scale (ABS, 2006a, pp.52-53). Gross income is comprised of wages and salaries, business income, investment income, private pensions and transfers, Australian government

[1] For a discussion of the original HILDA sample, the rules by which individuals are followed and the reference population in Watson, 2008, pp.2-3 and pp.109-111.

pensions and benefits, family tax benefits and maternity allowances. Windfall income is excluded in order to obtain a measure of regular income. Transfers in kind, including the Child Care Benefit, are of necessity excluded because of lack of quantitative data. Although losses incurred from unincorporated business or investment income logically may equal or exceed positive income from other sources, we heed the warning of Heady, Warren and Harding (2006, p. 47) that such data in HILDA are not reliable. Therefore, we have excluded from the balanced panel 269 people living in households that have non-positive disposable income in one or more years. All our calculations have been performed after converting household annual disposable income data to 2005-06 dollars using the consumer price index. For the sake of brevity, throughout the remainder of the paper we use the term "READ income" to stand for real, equivalised, annual, disposable income.

The poverty line with which we compare each household's READ income is relative, rather than absolute, in nature. It is equal to a certain percentage of median READ income of all people in the balanced panel. Rather than select a single percentage figure, we explore the sensitivity of our results to where that percentage is set. Relative poverty lines are the choice of most Australian researchers and they are commonly used in European countries and in international comparisons of poverty. Each household is classified as poor or non-poor and, on the assumption that income is equally shared among household members, every member of a poor household is considered to be poor.

Annual poverty-rate profiles for the six cross sections are presented in Figure 1. Each profile is a graph of the poverty rate against the poverty threshold for a single adult, which ranges from one per cent to 100 per cent of median READ income. It is clear from Figure 1 that, at any given poverty line, the variation among the poverty rates for the six

years is small, the largest difference between poverty rates in any two years being two percentage points. Furthermore, in any given year the poverty rate is both small and unresponsive to the poverty line, provided the poverty line is less than approximately 35 per cent of median READ income. At such low poverty lines, poverty rates do not exceed three percent and a one percentage point increase in the poverty line elicits a change in the poverty rate of no more than 0.3 percentage points. Therefore, the tables in this paper document the overlap between chronic poverty and cross-section poverty using a poverty line equal to 40 per cent of median READ income, as well as the two most commonly used relative poverty lines, 50 and 60 per cent of median READ income. Table 1 shows cross-section poverty rates at these poverty lines.

III. Income Variability, Saving and Borrowing

Affluent countries such as Australia have financial institutions that allow individuals to save and borrow. Whether people *actually do* save and borrow depends in part upon the variability of their incomes over a given period. Economic theory suggests that among people with stable rates of time preference, those with incomes that vary substantially over time will have more incentive to save and borrow than those with incomes that are more stable, *ceteris paribus*. In this section, we investigate the extent to which people's READ incomes varied over the six years, 2000-01 through 2005-06 and the extent to which they saved and borrowed.

For each individual in HILDA's balanced panel we computed the six-year average, standard deviation and coefficient of variation in his or her READ income. We then separated people into low and high income groups according to whether the person's six-year smoothed READ income is less than, or not less than, half the median of the

smoothed READ incomes of all people. The frequency distributions of the coefficients of variation of the two groups are plotted in Figure 2. They show that both high-income, and low-income, people have coefficients of variation that range from close to zero, meaning there is virtually no temporal variation in their READ incomes, to approximately 1.5, meaning that the six-year standard deviation is 1.5 times as large as the six-year average. The median coefficient of variation for low-income people is 0.18 whereas the median coefficient of variation for high-income people is 0.21. This means that low-income people experience almost as much relative income variability as high-income people. To put these figures in perspective, consider the following income streams. Someone who experiences a 10 per cent increase, or a 9 per cent decrease, in READ income in each of six consecutive years has a coefficient of variation equal to 0.18. Someone with a six-year READ income stream of {X, 0.77X, X, 1.23X, X, 0.77X} (for any positive X) has a coefficient of variation equal to 0.18. When viewed in this light, the coefficients of variation in Figure 2 indicate substantial variation in READ income for at least half the low-income people in the panel, and also for at least half the high-income people in the panel. Hence, there appears to be a *prima facie* incentive for many people in both groups to save and borrow.

The extent to which people actually do save and borrow can be gleaned from Table 2, which has been constructed using data from the special 'wealth modules' that were part of the HILDA surveys in 2002 and 2006. This time, individuals have been split into two groups in each year according to whether the person's READ income was less than half of current median READ income (the low-income group) or at least half of current median READ income (the high-income group). The top panel of Table 2 gives a frequency distribution of the equivalised bank accounts of the two groups. Although

slightly less than 50 per cent of low-income people, and 23 to 27 per cent of high-income people, hold no more than $1,000 in bank accounts, a substantial proportion of both groups have quite large savings of this type. For example, 30.7 per cent of low-income people and 47.3 per cent of high-income people, have equivalised bank-account balances of more than $5,000 in 2005-06. Similar figures were reported in 2001-02. The second panel of Table 2 displays a frequency distribution of equivalised debt, which is the total of credit-card debt, car loans, hire purchase debt, overdrafts and loans from people not in the household. Borrowing is less prevalent than saving and, as one might expect, low-income people borrow less than high-income people. Nevertheless, borrowing is still common even for low-income people: 19 per cent of low-income people and 45.8 per cent of high-income people had borrowed more than $1,000 in 2005-06; 8.3 per cent of low-income people and 29.2 per cent of high-income people had a total debt of more than $5,000 in 2005-06. Again similar results were obtained in 2001-02.

The statistics in Table 2 are consistent with ABS findings,[2] overseas research[3] and with HILDA respondents' statements about their saving and borrowing behaviour. Sixty per cent of low-income people, and 73 per cent of high-income people, report that they save, either irregularly or regularly. Eighteen per cent of low-income people, and 25 per cent of high-income people, report that they save on a regular basis. Thirty-nine per cent of low-income people, and 55 per cent of high-income people, report that they could easily raise $2,000 in the period of one week. Sixty-two per cent of low-income people and 65 per cent of high-income people indicated that they would use their own savings to

[2] Based on data from the Household Expenditure Survey, the ABS cautiously concludes that people in the lowest and second lowest income quintiles spend more than they earn (ABS 2006b, p.204 and ABS 2003-04, pp.11-12), which could indicate savings and borrowing behaviour.

[3] Slesnick (1993) and Mayer and Jencks (1989) provide evidence that many poor people in the U.S. can and do save and borrow.

access $2,000 if the need arose. Thirteen and 27 per cent of low-income and high-income people, respectively, indicated they would borrow from a financial institution or use credit to raise the $2,000.

IV. Permanent-Income Approach to Chronic Poverty

Measures of poverty based on annual data assume that individuals can make intra-year income transfers at zero cost but that inter-year income transfers are impossible. The fact that low-income people experience considerable variation in their incomes from year to year, and the fact that many low-income people save and borrow, suggest that chronic poverty is better analysed using some measure of permanent, rather than annual, income. In this section we adopt the approach of Rodgers and Rodgers (1993): permanent income is defined as "the maximum sustainable annual consumption level that the agent could achieve with his or her actual income stream over …. T years, if the agent could save and borrow at prevailing interest rates" (Rodgers and Rodgers, 1993, p. 31). If the same interest rate applies to both saving and borrowing and is constant through time then permanent income is an annuity of equivalent value to the actual income stream. Otherwise, permanent income is calculated using a numerical algorithm described in Rodgers and Rodgers (1993, p. 37). We have used an interest rate on savings equal to five per cent per annum and an annual interest rate on borrowing of 15 per cent to compute each individual's permanent income during the six-year period 2000-01 to 2005-06.

Chronic poverty is identified by comparing an individual's permanent income with a selected poverty line. In this paper, we modify Rodgers and Rodgers' (1993) method to accommodate a relative, rather than an absolute, poverty line. Our relative

poverty line is set equal to the permanent income of a person whose READ income equals a given percentage of median READ income in each year. Thus, over the entire T-year time period each individual is either chronically poor, or not. An individual who is not chronically poor but is poor in a particular year is said to be in transitory poverty. It is possible for an individual who is chronically poor to be non-poor in a particular year, in which case that person is said to be temporarily out of poverty.

The concepts of chronic and transitory poverty that apply to the individual also apply to the population to which the individual belongs. If Person i is poor in cross section t then let $p_{it} = 1$, otherwise $p_{it} = 0$. Thus, the poverty rate in cross section t equals $H_t = \frac{1}{n}\sum_{i=1}^{n} p_{it}$ and Person i's average annual poverty, $a_i = \frac{1}{T}\sum_{t=1}^{T} p_{it}$, is the proportion of periods he or she is poor according to T cross sections.

Average annual poverty in the population is a simple average of the proportion of cross sections in poverty for all people in the panel, or equivalently a simple average of the poverty rates for the T time periods:

$$A = \frac{1}{nT}\sum_{i=1}^{n}\sum_{t=1}^{T} p_{it} = \frac{1}{n}\sum_{i=1}^{n} a_i = \frac{1}{T}\sum_{t=1}^{T} H_t . \qquad (1)$$

This average-annual-poverty index is decomposable into chronic and transitory components, as we shall now show.

If Person i is chronically poor then let $c_i = 1$, otherwise $c_i = 0$. Chronic poverty in the population is the proportion of people, C, who are chronically poor:

$$C = \frac{1}{n}\sum_{i=1}^{n} c_i . \qquad (2)$$

The difference between average-annual and chronic poverty for Person i, $d_i = a_i - c_i$, indicates whether that person experiences transitory, rather than chronic, poverty during

the T time periods ($d_i > 0$), or is chronically poor but temporarily escapes poverty in some time periods ($d_i < 0$). The absolute value of d_i gives proportion of time periods that Person i is either in transitory poverty, or temporarily out of chronic poverty. (If Person i is always in chronic poverty, or is never poor, then $d_i = 0$). In the population as a whole,

$$D = \frac{1}{n}\sum_{i=1}^{n} d_i = \frac{1}{n}\sum_{i=1}^{n} a_i - \frac{1}{n}\sum_{i=1}^{n} c_i = A - C \qquad (3)$$

A positive value of D measures the net rate of transitory poverty in the population. It is also possible for D to be negative, in which case it is interpreted as the net rate of chronic poverty that is temporarily absent in the population.

Average-annual, chronic and transitory poverty-rate profiles for 2000-01 through 2005-06 are presented in Figure 3. It is evident that the rate of chronic poverty is quite sensitive to the choice of poverty line once the latter reaches approximately 35 per cent of median READ income. At a poverty line equal to 40 per cent of median READ income, 1.4 per cent of people are in chronic poverty (see Table 3). The chronic-poverty rate increases to 9.0 per cent, and then to 16.7 per cent, as the poverty line increases to 50 per cent, and to 60 per cent, of median READ income, respectively. The transitory poverty rate is approximately three to four per cent and is largely independent of the poverty line. The proportion of average-annual poverty that is chronic ranges from 30.1 per cent when the poverty line is 40 per cent of median READ income, to an amazing 81.8 per cent when the poverty line is 60 per cent of median READ income.

Figure 4 and Table 4 depict how much chronic poverty is captured by cross-section poverty rates. If there were little to be learned from the longitudinal data then the overlap between cross-section poverty and permanent-income poverty would be almost complete. Figure 4 shows the overlap in a typical year, 2002-03, at poverty lines from zero through 100 per cent of median income. Table 4 shows the overlap in all years, at

poverty lines equal to 40, 50 and 60 per cent of median income. In fact the overlap is far from complete, particularly at low poverty lines. At a poverty line equal to 40 per cent of median READ income, between 14.9 and 19.0 per cent of people who were poor in any given year, had a permanent income below the poverty line. A poverty line equal to 50 per cent of median READ income implies between 50.8 and 55.1 per cent of people who were poor in any given year were chronically poor. Even at the highest poverty line, 60 per cent of median READ income, between 64.8 and 69.0 per cent of people who were poor in any given year were also chronically poor.

If an absence of cross-section poverty is accompanied by little or no permanent-income poverty then there is little to be learned from the longitudinal data. In fact there is chronic poverty that is not observed in cross section, and more so the higher the poverty line. At a poverty line equal to 40 per cent of median READ income, less than one per cent of people who were non-poor in any given year had a permanent income below the poverty line. A poverty line equal to 50 per cent of median READ income implies between 2.0 and 2.8 per cent of people who were non-poor in any given year were chronically poor. At the highest poverty line, 60 per cent of median READ income, between 3.2 and 4.3 per cent of people who were non-poor in any given year were also chronically poor.

V. The "Multiple-Times-Poor" Approach to Measuring Chronic Poverty

A simple, but common, way to measure chronic poverty is to compute the proportion of people who are poor in a large proportion of years. Using the multiple-times-poor approach, in this paper, chronically poor people are defined as those who are poor in at least four of the six years. People in transitory poverty are poor in three or

fewer years. Figure 5 graphs the proportion of people who are poor in exactly one through six years against poverty lines from of zero through 100 per cent of median READ income. Table 5 displays the proportions of people with READ incomes that fell below each of three poverty lines multiple-times during the six year period. With chronic poverty defined as poor in at least four of the six years, the percentage of people who are chronically poor is 1.0 per cent when the poverty line equals 40 per cent of median READ income, but is 8.4 and 15.9 per cent at poverty lines equal to 50 and 60 per cent of median READ income, respectively.

Figure 6 and Table 6 depict how much chronic poverty is captured, and how much chronic poverty is missed, by cross-section analyses. The bottom section of Figure 6 and the top section of Table 6 record the number of people where are poor in cross section and in at least three additional years as a percentage of the number of people who are poor in cross section. Figure 6 shows the overlap in a typical year, 2002-03, only. It is apparent that the overlap between cross-section poverty and chronic poverty is far from complete, and less so the lower the poverty line. For example, consider the 2002-03 cross-section results. At a poverty line equal to 40 per cent of median READ income, 16.1 per cent of people who were poor in 2002-03 were poor in at least four years. The remaining 83.9 per cent were poor in one, two or three years only. A poverty line equal to 50 per cent of median READ income presents a different picture: 55.3 per cent of people who were poor in 2002-03 were poor in four to six years. At the highest commonly used poverty line, 60 per cent of median READ income, 68.5 per cent of people who were poor in 2002-03 were also poor in at least four years. Similar results are obtained using the other cross-section data. Thus, the lower the poverty line, the more transitory poverty is captured by cross-section analyses of poverty. As expected, the

higher the poverty line, the more chronic poverty is captured by cross-section analyses of poverty.

The top section of Figure 6 and the bottom section of Table 6 document how much chronic poverty is missed by cross-section poverty rates. Clearly, the answer is "not much". For example, of those people who were non-poor in 2002-03, the percentage who were poor at least four years is 0.2, 1.2 and 2.1 per cent at poverty lines equal to 40, 50 and 60 per cent of median READ income, respectively. The overlap between the absence of poverty in cross-section and transitory poverty is, however, substantial: of those people who were non-poor in 2002-03, the percentage who were poor in at least one but no more than three years is 14.8, 19.1 and 22.3 per cent at poverty lines equal to 40, 50 and 60 per cent of median READ income, respectively. Depending on the poverty line, the never poor constitute between 75.6 and 85 per cent of people who were non-poor in 2002-03. Similar results are found when the other cross-section data are used.

VI. Conclusions

We have found that a substantial amount of poverty that is observed in cross section is transitory, rather than chronic, in nature. On the other hand quite small proportions of people who are not observed to be poor in any cross section are, in fact, in chronic poverty over the entire six years considered in the study. This was true whether chronic poverty is measured by the proportion of people with permanent income over the six years that is below the poverty line, or by the proportion of people who are poor in at least four of the six years. Our conclusion, therefore, is that panel data add an important dimension to chronic poverty measurement, a dimension that cannot be observed using cross section data.

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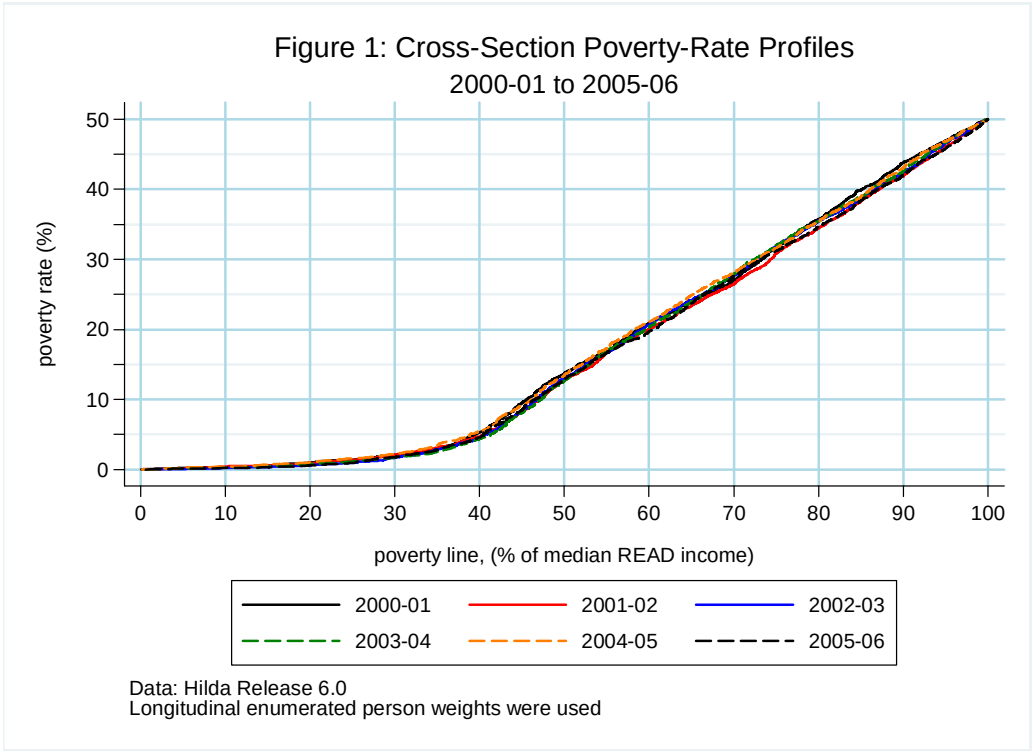


Table 1: Cross-Section Poverty Rates

Year	Median READ Income (in 2005-06 dollars)	Poverty Line as a Per Cent of Median READ Income 40%	50%	60%
2000-01	$28,922	5.3	13.7	20.9
2001-02	$28,723	4.7	12.7	20.1
2002-03	$29,237	4.5	13.2	20.7
2003-04	$29,959	4.4	12.7	20.3
2004-05	$30,721	5.4	13.4	21.1
2005-06	$32,133	4.6	12.9	19.7

Source Hilda, Release 6.0.
Notes Author's computations based on a six-year balanced panel of persons present in HILDA households. Longitudinal enumerated person weights were used.

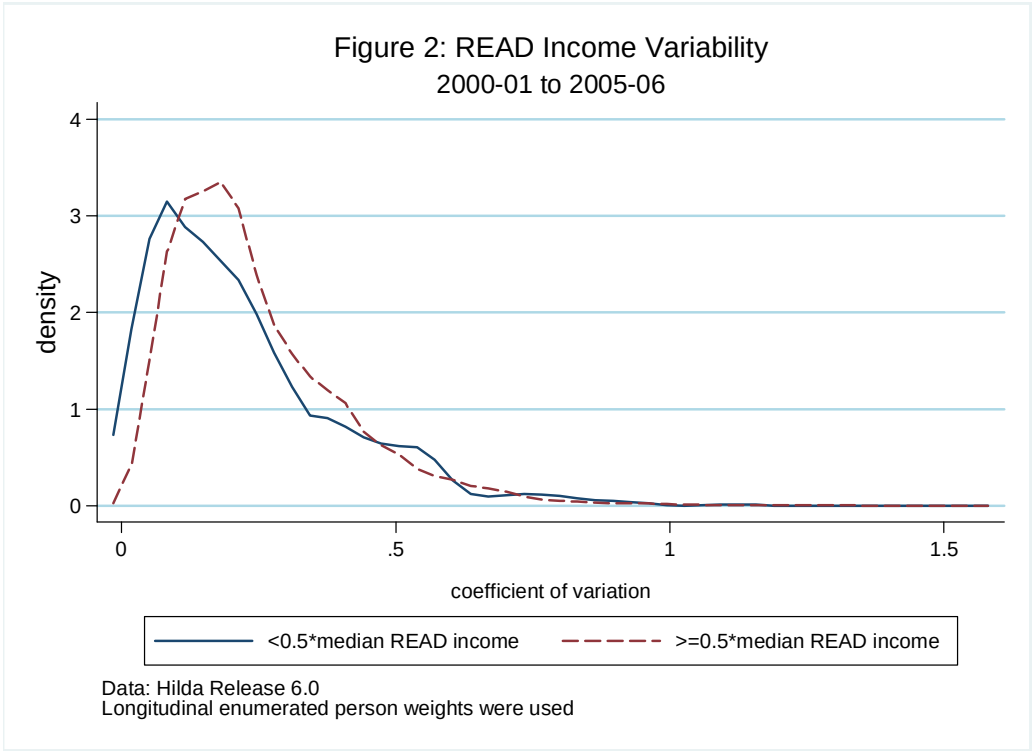


Table 2: Frequency Distributions of Saving and Borrowing

	2001-02			2005-06		
	People with READ income			People with READ income		
	<½ median	≥½ median	All people	<½ median	≥½ median	All people
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Household equivalised bank accounts (in 2005-06 dollars)						
nil	4.9	1.6	2.0	3.5	1.7	1.9
$1-$1000	44.9	25.7	28.2	44.4	21.6	24.3
$1001-$5000	20.2	31.2	29.8	21.4	29.4	28.5
$5001 or more	**30.0**	**41.5**	40.0	**30.7**	**47.3**	45.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Household equivalised debt (in 2005-06 dollars)						
nil	69.6	45.7	48.8	67.6	44.2	47.0
$1-$1000	10.4	11.0	10.9	13.4	10.0	10.4
$1001-$5000	**11.7**	**18.9**	18.0	**10.7**	**16.6**	15.9
$5001 or more	**8.3**	**24.4**	22.3	**8.3**	**29.2**	26.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Hilda, Release 6.0, combined files, Waves 1 through 6.
Notes: Computations are based on persons present in HILDA households in Waves 2 and 6, respectively. Cross-section enumerated persons weights were used.

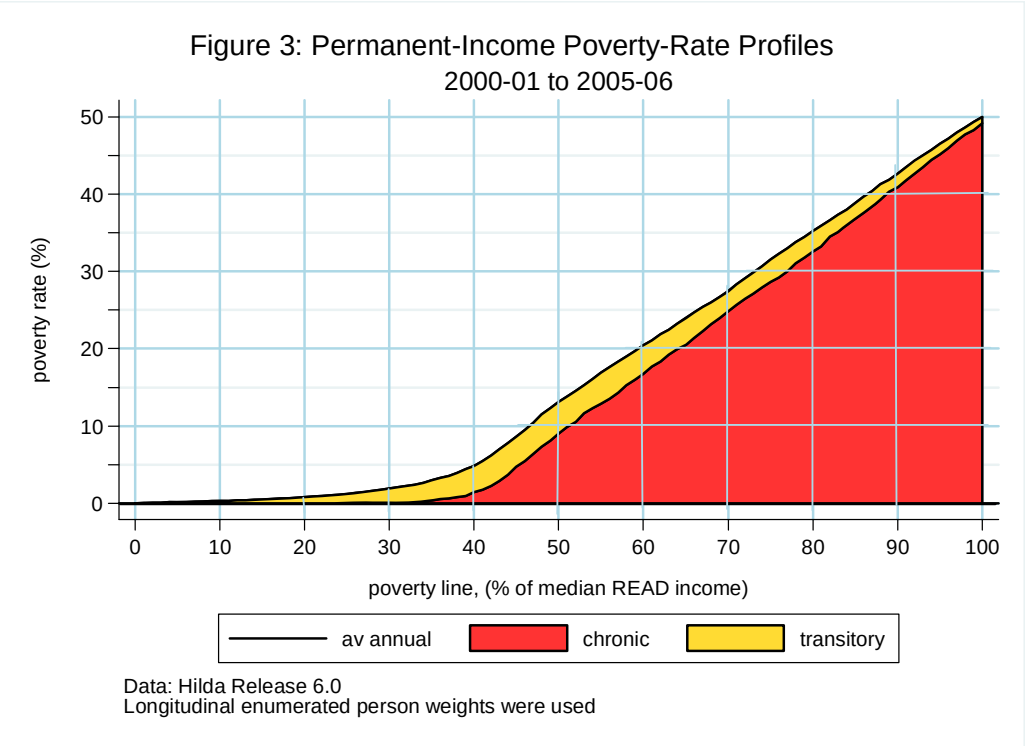
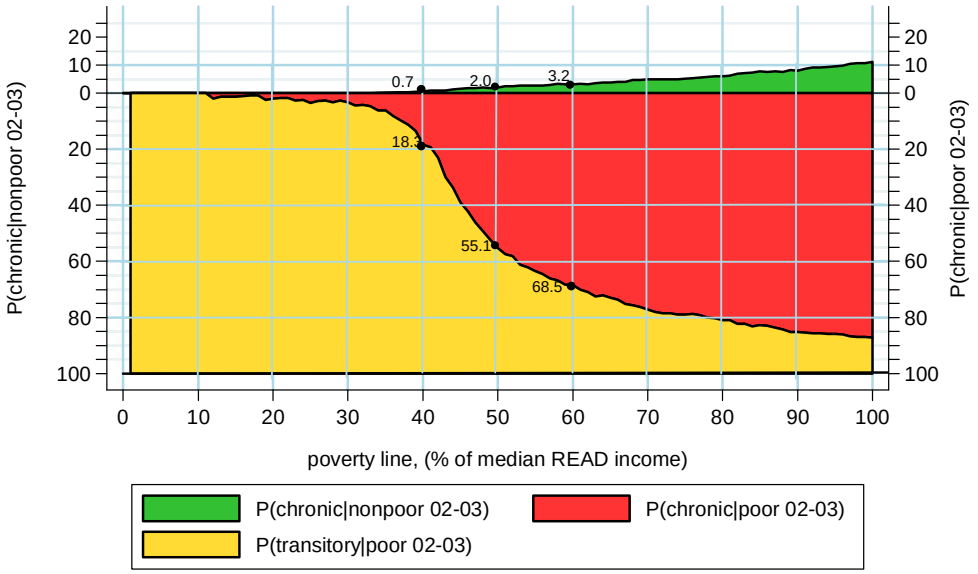


Table 3: Permanent-Income Poverty

	Poverty Line as a Per Cent of Median READ Income		
Type of Poverty	40%	50%	60%
Average Annual Poverty	4.8	13.1	20.5
Chronic Poverty	1.4	9.0	16.7
Transitory Poverty	3.4	4.1	3.7
Poverty Line (in 2005-06 dollars)	$11,879	$14,848	$17,818

Source Hilda, Release 6.0.
Notes Author's computations based on a six-year balanced panel of persons present in HILDA households. Longitudinal enumerated person weights were used.

Figure 4: Overlap Between Cross-Section & Permanent-Income Poverty
2002-03



Data: Hilda Release 6.0
Longitudinal enumerated person weights were used

Table 4: Overlap Between Cross-Section and Permanent-Income Poverty

	Poverty Line as a % of Median Income		
Pr(chronically poor | poor in year t)	40%	50%	60%
2000-01	16.5	52.9	64.8
2001-02	16.7	54.9	69.0
2002-03	18.3	55.1	68.5
2003-04	19.0	54.3	67.5
2004-05	14.9	51.5	66.2
2005-06	16.5	50.8	67.4
	Poverty Line as a % of Median Income		
Pr(chronically poor | non-poor in year t)	40%	50%	60%
2000-01	0.6	2.1	4.0
2001-02	0.7	2.3	3.6
2002-03	0.7	2.0	3.2
2003-04	0.6	2.5	3.8
2004-05	0.7	2.4	3.5
2005-06	0.7	2.8	4.3

Source Hilda, Release 6.0.
Notes Author's computations based on a six-year balanced panel of persons present in HILDA households. Longitudinal enumerated person weights were used.

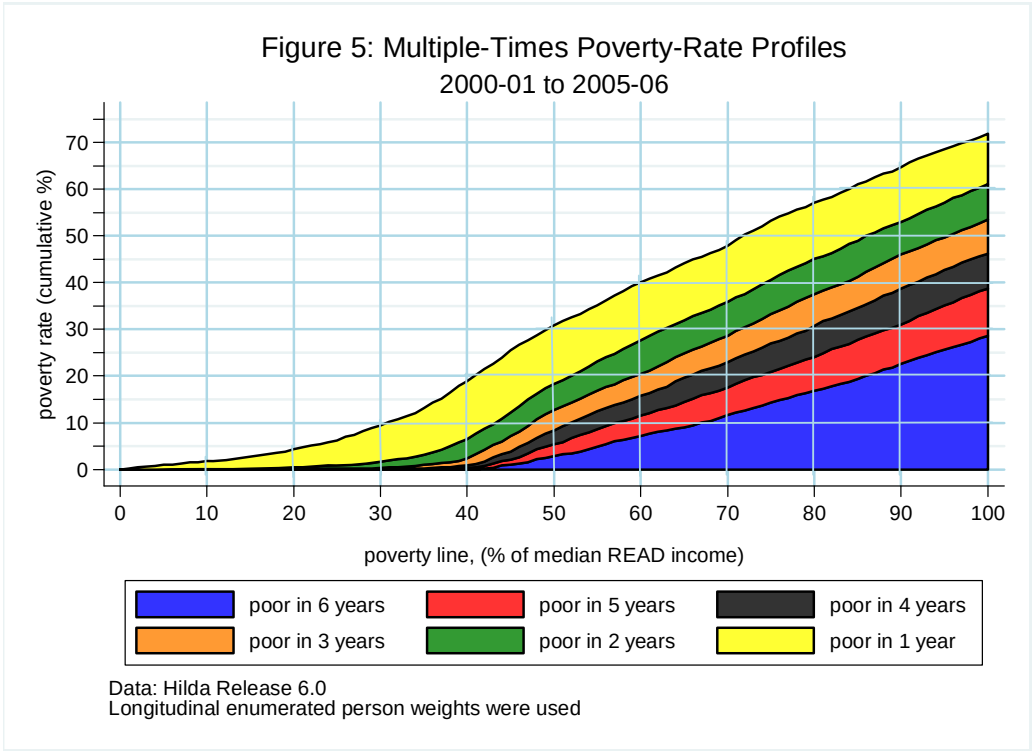
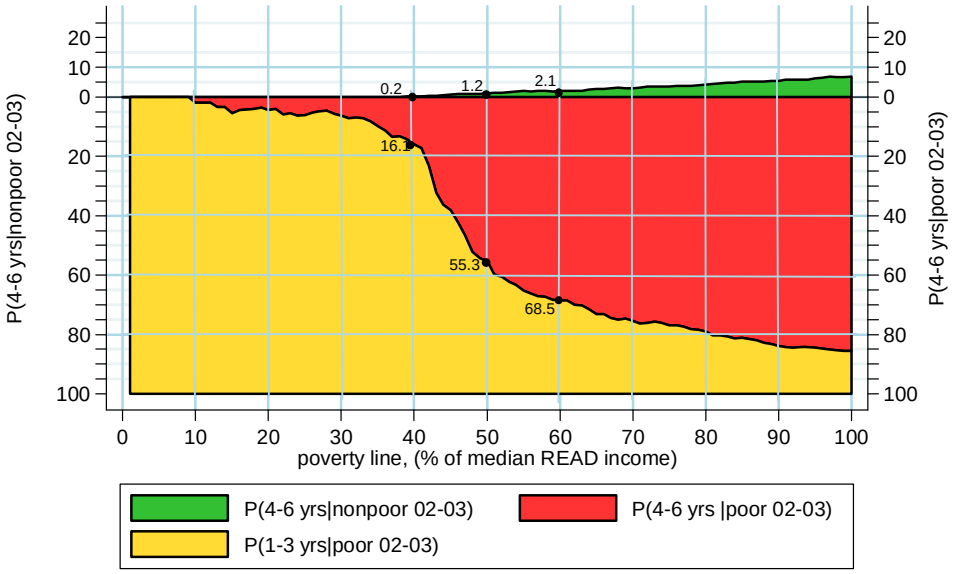


Table 5: Multiple-Times Poverty

	Poverty Line as a Per Cent of Median Income		
Number of Years Poor	40%	50%	60%
6 years	0.1	2.9	7.2
5 years	0.3	2.5	4.3
4 years	0.6	3.0	4.4
3 years	1.4	4.3	4.6
2 years	4.1	5.7	7.2
1 year	12.4	12.5	12.3
0 years	81.2	69.1	60.0

Source Hilda, Release 6.0.
Notes Author's computations based on a six-year balanced panel of persons present in HILDA households. Longitudinal enumerated person weights were used.

Figure 6: Overlap Between Cross-Section & Multiple-Times Poverty
2002-03



Data: Hilda Release 6.0
Longitudinal enumerated person weights were used

Table 6: Overlap Between Cross-Section and Multiple-Times Poverty

		Poverty Line as a Per Cent of Median READ Income		
Pr(n-years poor | poor in year t)		40%	50%	60%
4 to 6 years	2000-01	10.6	47.2	61.2
4 to 6 years	2001-02	13.3	53.4	67.8
4 to 6 years	2002-03	16.1	55.3	68.5
4 to 6 years	2003-04	17.0	57.1	68.4
4 to 6 years	2004-05	12.4	54.3	67.5
4 to 6 years	2005-06	14.4	51.4	67.9
		Poverty Line as a Per Cent of Median READ Income		
Pr(n-years poor | non-poor in year t)		40%	50%	60%
4 to 6 years	2000-01	0.4	2.2	3.8
1 to 3 years		13.9	17.7	20.3
4 to 6 years	2001-02	0.3	1.8	2.8
1 to 3 years		14.5	19.0	22.2
4 to 6 years	2002-03	0.2	1.2	2.1
1 to 3 years		14.8	19.1	22.3
4 to 6 years	2003-04	0.2	1.3	2.4
1 to 3 years		14.9	19.5	22.3
4 to 6 years	2004-05	0.2	1.2	2.0
1 to 3 years		13.9	18.9	22.0
4 to 6 years	2005-06	0.3	2.0	3.1
1 to 3 years		14.7	18.6	22.2

Source Hilda, Release 6.0.
Notes Author's computations based on a six-year balanced panel of persons present in HILDA households. Longitudinal enumerated person weights were used.