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Abstract

Using nationally representative household survey data from 1995 to 2006, this paper explores heterogeneity among female part-time wage (salaried) workers in post-apartheid South Africa, specifically distinguishing between individuals who choose to work part-time and part-time workers who report wanting to work longer hours. As in studies of voluntary and involuntary part-time employment in other countries, the findings show that involuntary part-time workers in South Africa are outnumbered by voluntary part-time workers. In contrast to other countries, however, involuntary underemployment in South Africa has not risen substantially over time, nor is there consistent evidence to suggest a positive correlation between involuntary underemployment and broad unemployment. Significant differences are found among part-time workers, with occupational characteristics specifically being identified as key correlates of involuntary part-time employment. The wage premium to female part-time employment in South Africa, identified in an earlier study, is shown to be robust also to a distinction among part-time workers, and involuntary part-time workers are found to have a stronger labour force attachment than women who choose to work part-time.

1 Introduction

Studies of part-time and full-time employment among women often assume implicitly that women *choose* part-time work, even if this is a constrained choice in the face of childcare and other home responsibilities, and that women would not work more if additional employment were made available to them. But in developing countries, and particularly countries like South Africa that face high and rising unemployment rates and widespread poverty, women who work part-time may be involuntarily underemployed. Although these women may prefer full-time employment they may be forced to take on part-time jobs because there is no other, or more, employment available.

Using data from selected national household surveys, this paper aims to investigate involuntary and voluntary part-time wage employment among women in South Africa. First, I explore trends in part-time employment in South Africa from 1995 to 2006, distinguishing involuntary from voluntary part-time workers. I also examine whether changes in underemployment among women in post-apartheid South Africa track trends in female unemployment over the period. Second, I use multivariate analysis to examine how female voluntary and involuntary part-time workers differ in terms of their individual attributes as well as their household and occupational characteristics. Third, I consider the returns to voluntary and involuntary part-time work and examine specifically whether the premium to women's part-time work in South Africa, identified by Posel and Muller

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(2008), is robust to a distinction among the part-time employed. Finally, I identify whether there is evidence of differences in labour market attachment among South Africa's voluntary and involuntary part-time workers.

The next section discusses the data sources analysed and outlines the definitions of voluntary and involuntary part-time employment used in the study. Section 3 describes trends in voluntary and involuntary part-time wage employment, while section 4 uses multivariate analysis to identify the correlates of voluntary and involuntary part-time employment. Earnings differences among part-time workers are explored in section 5, and in section 6 differences in labour market attachment among voluntary and involuntary part-time workers are identified.

2 Data sources and definitions

This study uses both cross-sectional and panel household survey data collected by South Africa's official data collection agency, Statistics South Africa (StatsSA), to explore voluntary and involuntary part-time employment among women in South Africa. Trends in voluntary and involuntary part-time work and in unemployment are described using data from the 1995 and 1999 October Household Surveys (OHSs), together with data from selected September rounds of the Labour Force Survey (LFS) from 2000 to 2006. Both of these survey instruments comprise a sample of approximately 30 000 households in 3 000 clusters, and collect comprehensive information on individuals' labour market participation and wages.

To identify the correlates of voluntary and involuntary part-time employment, and for the estimations of wage equations that control for differences in observable characteristics between workers, a dataset constructed by pooling the biannual rounds of the cross-sectional LFSs from September 2001 to March 2006 is used. Finally, StatsSA's release of the LFS Panel, which also comprises data from September 2001 to March 2006, is used to control for individual fixed effects in the earnings estimations and to identify the frequency and percentage of women changing labour market status over time.

Part-time workers are identified as wage (salaried) employees who usually work fewer than 35 hours a week. The 35-hour threshold, which was also adopted in the South African study of part-time/full-time earnings differentials among women by Posel and Muller (2008), is often used to define part-time employment by surveys in the United States (see Hirsch 2005 and Hardoy and Schøne 2006, for example). A distinction between voluntary and involuntary part-time workers is made based on the recommendations of the Sixteenth International Conference of Labour Statisticians (ICLS) regarding the definition of 'time-related underemployment' (ILO 1998). In particular, the ICLS recommends that the underemployed be identified as individuals who are a) willing to work additional hours; b) available to work additional hours and c) work less than an hourly threshold during the reference period. This study adopts a definition of involuntary underemployment that is broadly consistent with the ICLS recommendations, identifying involuntary part-time workers (the involuntarily underemployed) as part-time workers who are willing to work longer hours (satisfying parts a) and c) of the ICLS criteria.)¹

3 Trends in involuntary & voluntary part-time employment, & in unemployment in post-apartheid South Africa

Studies that distinguish between voluntary and involuntary part-time employment have been primarily concerned with the underemployed as an underutilised labour resource, focusing on the incidence of involuntary part-time employment in relation to the level of economic activity. Researchers have

¹See Muller (2009) for further discussion on the distinction between voluntary and involuntary part-time wage workers in South Africa.

shown that although voluntary part-time workers often outnumber involuntary part-time workers, involuntary underemployment has typically become more prevalent over time with firms turning to part-time rather than full-time employment as a means of reducing labour costs. There is also evidence of a strong positive relationship between involuntary part-time work and unemployment. Faced with a recession, firms may decrease the hours worked by some of their employees in addition to laying-off workers (Tilly 1991; Stratton 1996, Görg and Strobl 2003). Furthermore, individuals may be more willing to consider part-time employment as an alternative to a full-time job when faced with an environment of economic decline (Buddelmeyer *et al* 2008).

Table 1 describes trends in women’s wage employment in South Africa from 1995 to 2006. The results show that women’s work has expanded substantially, rising by more than twenty percent from 1995 to 2006. Part-time work has also been a key component of the increase in women’s wage employment, growing by more than 150 000 jobs over the period. In addition, women’s share of part-time employment has increased considerably, rising from about 60 percent to more than 67 percent. These findings suggest that the expansion in part-time employment in South Africa has been an important component of the documented feminisation of the country’s labour force over the post-apartheid period (see also Posel and Muller 2008).

In addition to presenting estimates of composite part-time wage employment among women, the table shows disaggregated estimates that distinguish between voluntary and involuntary part-time wage workers. The results reveal that, like in other countries, the number of individuals working part-time voluntarily typically exceeds those part-time workers who desire longer working hours. In contrast to other countries, however, involuntary part-time employment has not become more prevalent over the years. Following an increase of approximately forty percent in the number of involuntary part-time workers from 1995 to 2000, involuntary part-time employment has remained quite stable, averaging at around 164 000 women. The share of involuntary part-time employment in total part-time work has also remained relatively constant from 2001 onwards, at approximately 33 percent on average, while the share of involuntary part-time work in total wage employment has typically declined. This is because of an expansion in total employment that has continued since 2001.

To identify whether involuntary underemployment in South Africa follows changes in unemployment, graphical representations of trends in involuntary and voluntary part-time wage employment, together with trends in broad unemployment² are shown in Figure 1.

For the 1995 to 1999 period, the graph suggests that the change in involuntary part-time employment tracks the change in broad unemployment. In particular, both involuntary part-time work and broad unemployment increased significantly over these years, suggesting a positive relationship between unemployment and underemployment. From 1999 onwards, however, changes in broad unemployment and in involuntary part-time work have moved mostly in opposite directions, and are indicative of a negative correlation between unemployment and underemployment among women in South Africa. Broad unemployment increased by about one million individuals from 1999 up until 2002. Since 2003, broad unemployment typically has fallen (although the magnitudes of the reductions in unemployment in each year have not been that large). In contrast, involuntary part-time employment declined rapidly from 1999 to 2002. Following a small increase of about 20 000 individuals from 2002 to 2003, involuntary underemployment remained relatively stable from 2003 to 2006.

²The broadly unemployed include individuals who are willing to accept employment but who may not be actively seeking work. Estimates of broad unemployment have been divided by ten to allow them to be compared on the same scale as those for involuntary part-time work.

4 Differences in voluntary and involuntary part-time employment

Although studies do not usually make a direct comparison between voluntary and involuntary part-time workers, a few researchers have recognised that there may be differences among individuals who work part-time when comparing part-time workers to those who work full-time and to other labour market groups (Leppel and Clain 1993; Barret and Doiron 2001; Görg and Strobl 2003). Although differing methodologies are adopted in these studies³, the results suggest that differences in the preferences of part-time workers for additional hours are likely to stem both from differences in personal characteristics among part-time workers as well as differences in the types and/or quality of part-time jobs.

To test the correlates of involuntary versus voluntary underemployment in South Africa a simple probit model is estimated with data from the pooled cross-sections from the LFS for September 2001 to March 2004:

$$\Pr(y_i = 1|X_i, T) = \Phi(\eta, X_i, T) \quad (1)$$

The dependent variable, y , is a binary categorical variable which takes the value of 1 if the individual is involuntarily underemployed and 0 if the individual works part-time voluntarily. X_i is a vector of observed characteristics for individual i , T contains five time dummy variables, each representing one of the cross-sectional waves (the first wave is used as the reference category), η is a vector of parameters, and Φ is the standard cumulative normal distribution. Because the sample of involuntary part-time workers in each of the LFS cross-sections is quite small, using data from the pooled cross-sections of the LFS allows for a larger sample size which increases the reliability of the estimated coefficients and test statistics.

The issue of sample selection bias, which typically arises in estimations with continuous dependent variables, also poses a problem in models such as (E1) which use binary dependent variables. In either case, not accounting for unobservable differences between voluntary and involuntary part-time wage workers may result in an endogeneity problem that can bias the estimated coefficients. The results presented in Table 2 have, however, not been corrected for sample selection bias and should be interpreted as conditional on the selection into voluntary and involuntary part-time work.⁴

Four sets of regression results are shown, with the number of variables constituting X_i increasing in each specification. In the first specification (I), variables controlling for individual characteristics (population group and marital status) and location (province of residence and urban/rural area) are included, together with variables affecting the individual's potential productivity (age, education and job duration). The second specification (II) controls further for household composition, including controls for the number of children and for the number of unemployed adults in the household. The number of employed men and the number of other employed women living in the household, reflect the individual's access to earned income within the household. In specification III characteristics related to occupations are introduced – namely occupational and industry categories, whether the individual works in a large firm (in excess of fifty employees), union membership and sector of employment. Finally, controls for conditions of work are included in specification IV.

The results reported are the marginal effects, estimated at the mean for continuous variables and for a discrete change from zero to one for the dummy variables. The effects of different subsets of controls across the estimations are discussed in detail below.⁵

³An overview is provided in Muller (2009).

⁴Identifying variables that can serve as exclusion restrictions in the data available in South Africa's national household surveys is impossible given the complexity of the selection problem. For further discussion see Muller (2009).

⁵Likelihood ratio tests confirmed that the additional variables included in each specification were jointly significant. Full sets of estimates for all the econometric results presented are shown in Muller 2009 (Appendix B).

4.1 *Experience and job duration*

Across all four specifications, the results suggest that the probability of working part-time involuntarily rather than voluntarily initially increases with age and then tapers off. The positive effect of the continuous variable for age is significant only in the first and fourth specifications, however, while the effect of the negative quadratic age variable is significant (albeit very small) across all specifications. Longer job duration is negatively associated with involuntary part-time work and may reflect the precarious and unstable nature of the jobs occupied by involuntary part-time workers.

4.2 *Education*

In all four specifications, educational attainment is an important correlate of involuntary part-time employment. In comparison to women in part-time employment who are similar in other observed characteristics, the probability of being in involuntary part-time employment increases by between 6.1 and 7.1 percentage points when the woman has completed primary but not secondary school. However, having a completed tertiary education decreases the probability that female wage workers are working involuntarily in part-time employment. This effect is significant in specifications I and II and insignificant in specifications III and IV; the magnitude of the marginal effect also declines substantially in the latter two specifications (from more than nine percentage points in I and II to less than three percentage points in IV). Multicollinearity between tertiary education and some of the occupation and industry variables introduced in specification III may account for this result.

4.3 *Population group*

In all specifications the results show that the probability of involuntary part-time employment is significantly lower among the other population groups in comparison to Africans, the reference group. In particular, among part-time workers who are similar in other observable characteristics, the probability of wanting to work longer hours is the lowest among Whites (between 15 and 21 percentage points lower than among Africans). Indians also have a smaller probability of involuntary part-time employment in comparison to Africans (between eight and 13 percentage points lower) as do Coloureds (six to 7.5 percentage points lower). These findings could reflect the effect of differences in income between individuals, for which population group may serve as a proxy.

4.4 *Marital status and household characteristics*

Across all specifications being previously married (widowed or divorced) rather than unmarried significantly raises the probability of working part-time involuntarily by about four percentage points. In specifications I, II and III the probability of involuntary underemployment is lower for individuals who are married or cohabiting⁶, although this effect is significant only in specification I. It is possible that the decline in the magnitude (and significance) of the marriage/cohabitation dummy variable from specification II onwards is the result of multicollinearity: marriage/cohabitation is positively correlated with the number of employed men in the household, which was introduced as a control variable in specification II.

Having access to earned income (through living in a household with other employed men or women) significantly reduces the probability of working part-time involuntarily by about six percentage points in specifications II, III and IV. These findings suggest that financial support from household members may be a critical factor enabling women to work part-time voluntarily. In contrast, as the number of unemployed men and women in the household rises, the probability of a part-time worker wanting to work longer hours increases – indicative of the worker’s need to earn

⁶The LFS questionnaires only differentiated between marriage and cohabitation in surveys conducted from September 2004 onwards. In the LFS data used here it is therefore impossible to distinguish individuals who are married and who live with their spouses, from individuals who are not married but who reside with their partners.

more to support members of her household. There is also an inverse relationship between involuntary part-time employment and non-market activities such as childcare, which is consistent with women choosing part-time employment as a way of combining market work with the care of children.

4.5 *Location*

In all specifications involuntary part-time workers are shown to be significantly more likely to live in urban areas than voluntary part-time workers. One explanation for this finding is that women in urban areas may face greater financial pressure to work longer hours, to cover higher living expenses. It is also possible that the estimated relationship between involuntary part-time employment status and residing in an urban area is overstated as a result of a selection bias. This could occur if, for example, women who want to work longer hours migrate to urban areas where there are more employment opportunities.

4.6 *Occupation and industry*

The results reported in specification III suggest that involuntary part-time workers are significantly less likely than voluntary part-time workers to work in occupations that offer union protection. The marginal effect of union membership on the probability of involuntary part-time employment declines in specification IV, although it remains negative. This is probably accounted for by multicollinearity between union membership and conditions of work, for which controls were introduced in specification IV. In addition to higher wages, the benefits of unionised employment may also include preferential working and job conditions. Involuntary part-time work is also positively associated with working in a large firm. Large firms may be more willing than smaller firms to employ part-time workers to meet demand during peak periods, and may also be more likely to shorten the working hours of their full-time staff complement during economic slowdowns. In addition, the probability of working part-time involuntarily is significantly lower in the agricultural sector (the reference industry) than in other industries. The types of jobs offered part-time in South Africa's agricultural sector (fruit and vegetable picking, for example) are likely to be seasonal in nature, attracting individuals specifically seeking interim employment.

4.7 *Conditions of work*

Involuntary part-time employment among women is associated both with significantly fewer benefits (medical aid contributions and paid leave, in particular) and with more insecure employment: Working in an occupation which is permanent, significantly decreases the probability of involuntary part-time work by 16.4 percentage points, *ceteris paribus*. This result is among the largest of the marginal effects, and would be consistent with involuntary part-time workers seeking ways to maximise their current income streams in the face of uncertain future employment prospects.

The results of this analysis suggest that significant differences exist between women who work part-time voluntarily and those who are reported to desire longer working hours. In addition to individual characteristics like age and education, household characteristics, such as living in households where employed men and unemployed adults also reside, appear to be critical correlates of involuntary part-time work. The probability of involuntary part-time employment increases significantly with an increase in the number of unemployed adults residing in the household, for example, while the probability of involuntary part-time employment is significantly lowered by an increase in the number of employed men in the household. These findings suggest that financial support from household members (or a lack thereof) is a key factor influencing whether part-time workers desire longer working hours. Job characteristics and conditions of employment in particular, are also important correlates of involuntary part-time employment. In comparison to the jobs of women who

voluntarily work part-time, the work performed by involuntary part-time workers is significantly less likely to be permanent and less likely to offer union protection or benefits.

One can also expect the poor quality of jobs occupied by involuntary part-time workers to be reflected in their remuneration. Wage differences between voluntary and involuntary part-time workers and the full-time employed are investigated in the following section.

5 Voluntary & involuntary part-time employment and wages

A key finding in international studies investigating part-time versus full-time earnings differentials is that women are penalised for working part-time (Hardoy and Schøne 2006; Bardasi and Gornick 2008). However, Posel and Muller (2008) show that, despite female part-time workers in South Africa earning on average significantly less per month, and per hour, than their full-time counterparts, there is evidence of a wage *premium* to female part-time wage employment once observable and unobservable differences between part-time and full-time workers are accounted for. Evidence of a part-time employment premium in South Africa is consistent with the country's protective labour legislation, and may serve to compensate workers for the limited benefits and lack of security associated with part-time jobs.

This section explores whether the wage premium to female part-time employment persists once heterogeneity in observed and unobserved characteristics between voluntary and involuntary part-time workers is accounted for.

Estimates of average hourly and monthly wages, calculated using data from the September 2003 LFS, together with estimates of average working hours, are shown for female voluntary and involuntary part-time workers and female full-time workers in Table 3. The distributions of hourly wages for voluntary and involuntary part-time workers and the full-time employed are shown by the kernel density plots in Figure 2. The distributions of working hours for voluntary and involuntary part-time workers are shown in Figure 3.

Figure 2 shows that the hourly wage distribution for involuntary part-time workers is more compressed than that for voluntary part-time workers and is skewed to the right. As a result, average hourly wages are significantly higher among part-time workers who do not want more hours. In contrast, the distribution of working hours for voluntary part-time workers, shown in Figure 3, is more compressed than for the involuntarily underemployed and is skewed to the left. Mean working hours are therefore lower among involuntary part-time workers than among voluntary part-time workers. Working fewer hours, on average, than voluntary part-time workers, and at a lower mean hourly wage, translates into monthly wages that are significantly lower among involuntary part-time workers. On average, involuntary part-time workers earn less than half the monthly wage of individuals who voluntarily work part-time.

The statistics presented in Table 3 also reveal significant differences in both monthly and hourly wages between involuntary part-time workers and the full-time employed, and between voluntary part-time workers and the full-time employed. Involuntary part-time workers earn significantly less per hour, on average, than full-time workers, while women who voluntarily work part-time earn significantly more. Because they work fewer hours, however, the monthly wages of both voluntary and involuntary part-time workers are significantly lower than for the full-time employed. Per month, the average wage for a voluntary part-time worker is about forty percent lower than for a full-time worker, while the average monthly wage of an involuntary part-time worker is less than one-quarter of that received by a full-time worker.

To explore wage disparities between voluntary and involuntary part-time workers and those who work full-time further, data from the pooled LFS cross-sections, along with data from the LFS Panel from September 2001 to March 2004 are used. Of particular interest here is establishing whether the premium to female part-time employment in South Africa, identified by Posel and Muller (2008), is robust to a distinction among part-time workers.

The analysis begins by using data from the pooled LFS cross-sections to estimate:

$$\ln(W_{it}) = \alpha + \phi V_{it} + \vartheta I_{it} + \beta X_{it} + \tau T_t + \varepsilon_{it} \quad (2)$$

One concern with using a model such as (E2) to estimate and compare the returns to voluntary and involuntary part-time employment, is that it does not account for the possibility that there are also non-random unobservable differences between the two groups of workers. Failure to account for differences in selection between the two groups could bias the coefficient estimates. To address problem of selection bias, data from the LFS Panel are used. First, the cross-sectional waves of the LFS Panel are pooled, and OLS is used to estimate:

$$\ln(W_{it}) = \alpha + \phi V_{it} + \vartheta I_{it} + \beta X_{it} + \tau T_t + \partial_i + v_{it} \quad (3)$$

The key difference between (E2) and (E3) is in the specification of the error term. In (E3) the composite error term has been disaggregated into a time-variant and a time-invariant component. The time-invariant component of the error term, ∂_i , is presumed to capture the effects of unobservable characteristics that remain constant over time.

One of the problems with using panel data is that non-random attrition may cause the resulting sample to be unrepresentative of the population. To assess how representative the cross-sectional waves of the panel are, given the distinction between voluntary and involuntary part-time workers, results from the estimation of equation (E3) are benchmarked against those obtained by estimating equation (E2), using the pooled data from the full cross-sectional waves of the LFS (data which should be unbiased by the problem of attrition).

The fixed-effects transformation is then estimated, where, through time-demeaning, the time-invariant component of the error term is removed.

$$\ln(W_{it}) - \ln(\bar{W}_i) = \phi^{FE}(V_{it} - \bar{V}_i) + \vartheta^{FE}(I_{it} - \bar{I}_i) + \beta^{FE}(X_{it} - \bar{X}_i) + \tau^{FE}(T_t - \bar{T}) + v_{it} - \bar{v}_i \quad (4)$$

In the study by Posel and Muller (2008), controlling for individual fixed effects in the wage estimations for part-time and full-time employment resulted in an increase in the estimated premium to female part-time employment, suggesting that workers were negatively selected into part-time employment. It is possible, though, that the selection effects into part-time employment may differ for voluntary and involuntary part-time workers. Negative selection may be expected among voluntarily part-time workers if these individuals have less commitment to the labour force or are less motivated, while the converse would be expected among the involuntarily underemployed if their desire to work longer hours signals greater motivation or a stronger commitment to employment. If there is negative selection into voluntary part-time work then $\hat{\phi}^{FE}$ from equation (4) will exceed $\hat{\phi}$ from equation (3). Similarly, $\hat{\vartheta}^{FE}$ from equation (4) should be lower than $\hat{\vartheta}$ from equation (3) if there is positive selection into involuntary part-time work.

The identification of a positive selection effect may, however, be complicated by attenuation bias. If measurement error in the change in voluntary/involuntary part-time status causes the fixed effects estimates to be understated, then it may be difficult to determine whether any decline in the fixed effects estimate of the wage premium relative to the OLS estimate is the result of positive selection or the consequence of attenuation bias. In addition, the effects of negative selection may be understated in the presence of measurement error.⁷

The results of the wage regressions from the pooled cross-sectional data, estimated for three sets of covariates, are presented in Table 4. In the first specification, controls for individual characteristics (age and job duration, education, marital status and location) are included. The second specification

⁷Although there are a number of corrective procedures available to address the problem of errors in variables (such as weighted regression and instrumental variables, for example) data limitations prevented these from being implemented here.

contains additional controls for occupation type and industry, along with sector of employment, whether the firm is large (more than fifty employees), and whether the individual belongs to a union. In the third specification, variables controlling for conditions of work are included; these reflect whether employment is permanent rather than casual or temporary, whether the individual receives pension fund and/or medical aid and/or Unemployment Insurance Fund contributions from their employer, and whether the employer provides paid leave.

The findings suggest that the wage premium to female part-time employment in South Africa is robust to a distinction among part-time workers, with an estimated wage premium to involuntary part-time employment of between 28 percent and 67 percent, and a premium to voluntary part-time employment of between 30 and 58 percent, depending on the controls utilised. The results reflect not only that there are significant differences in observable characteristics between part-time workers and the full-time employed, but that substantial differences exist also among part-time workers. The results of F-tests show that the difference in the premium to voluntary and involuntary part-time employment is significant only in specification III, however. It is therefore as a result of differences in their conditions of work that significant differences in the wage premiums to voluntary and involuntary part-time employment are observed, despite there being substantial differences also in the individual and occupational characteristics of these groups.

These results are consistent with the cross-sectional estimates of the part-time employment premium documented in Posel and Muller (2008). However, as was the case in that study, failure to account for differences in unobservable characteristics between voluntary and involuntary part-time workers and those who work full-time could bias the estimated coefficients. Possible differences also in the direction of selection into voluntary and involuntary part-time employment could further complicate the interpretation of the results: Negative selection into voluntary part-time employment and positive selection into involuntary part-time employment, for example, would reduce the difference in the wage premiums between each group.

To address the problem of selection bias, data from the LFS Panel is used to estimate a fixed-effects regression, which differences out the unobserved effects. The results, estimated using the full set of covariates, are shown in Table 5. The first column presents estimates from the pooled LFS data from the full cross-sections, and results from the pooled waves of the LFS Panel are shown in the second column. By comparing the estimates obtained from the pooled waves of the panel with those from the pooled cross-sections of the original sample, it is possible to identify whether the panel sample has been affected by the problem of attrition. The results presented in Table 5 suggest that the differences between the panel sample and the original cross-sectional sample are not that large. The third column reports the fixed-effects estimates, where the effect of non-random unobservable differences between voluntary and involuntary part-time workers and those who work full-time have been accounted for.

The estimates from all three specifications confirm the earlier cross-sectional findings, and show that the estimated wage premium to part-time work in South Africa is not sensitive to a distinction among part-time workers. A substantial and significant premium to both voluntary and involuntary part-time wage employment among women persists even when unobservable differences between workers have been accounted for.

The difference between the premiums to voluntary and involuntary part-time employment narrows considerably in the fixed-effects estimation, however. Although controlling also for unobservable differences between workers causes the estimated premium to involuntary part-time work to exceed that for voluntary part-time employment, F-tests show that the difference in the magnitude of these estimated wage premiums is not significant. This narrowing of the gap in the wage premiums between voluntary and involuntary part-time workers appears to be a consequence of differences in the direction of the selection effect between voluntary and involuntary part-time workers. When comparing the results from column II and column III, it can be seen that the size of the coefficient on voluntary part-time employment increases when estimating the within-transformation, while there is a (small) decrease in the coefficient on involuntary part-time employment. These results are con-

sistent with negative selection into voluntary part-time employment, and with positive selection into involuntary part-time employment.⁸

Even though the effects of endogeneity bias on the parameter estimates, introduced by the problem of sample selection, has been addressed in the fixed-effects estimation, a further source of bias (in addition to that resulting from errors in variables) remains in the results presented above. In particular, simultaneity bias may occur if changes in employment status are a function of changes in the wage rate. Higher wage growth could see women working full-time choosing to work fewer hours, resulting in them changing their status to voluntary part-time. Alternatively, higher wage growth may induce employers to reduce working hours, causing women working full-time to become involuntarily underemployed. Classification as an involuntary/voluntary part-time worker may also be dependent on earnings.⁹ Higher wage growth could cause the involuntarily underemployed to become voluntary part-time workers (conditional on working hours) while low wage growth could result in the converse. The implication of simultaneity bias for the results presented here is that the estimated wage premiums to both voluntary and involuntary part-time employment may be overstated. But because it is not possible to identify any instrumental variables in the LFS Panel that distinguish between voluntary and involuntary part-time workers and the full-time employed, any potential overestimation of these wage premiums cannot be addressed.

6 Labour force attachment among voluntary and involuntary part-time workers

Although the premium to women's part-time employment in South Africa appears robust to a distinction between voluntary and involuntary part-time employment, evidence pointing to possible differences in the direction of selection into these employment categories, would suggest that voluntary and involuntary part-time workers may exhibit differing degrees of labour market attachment. By using panel data to track the movements of individuals into and out of various labour market states over time it is possible to examine labour force attachment among the employed, and among part-time workers.

Research undertaken in the United States suggests that part-time workers may be more likely to change labour market status than other groups (Blank 1989; Stratton 1996). Among part-time workers in the US, differences in transition probabilities have also been identified, with voluntary part-time workers being less likely to move into full-time employment than the involuntarily underemployed (Stratton 1996). To investigate the labour force attachment of voluntary and involuntary part-time workers in South Africa the frequency and percentage of women changing labour market status between adjacent periods in the LFS Panel are presented in Table 6.

The results on the leading diagonal of Table 6 show the frequency and percentage of workers who stayed in their respective labour market statuses. The transition probabilities depict considerable churn in the South African labour market, particularly among those who work part-time. Less than one quarter of voluntary part-time workers, and less than one-fifth of involuntary part-time workers, remained in these respective employment states over the adjacent panel waves. Involuntary part-time workers have only limited success in achieving their desire for longer working hours: Approximately one-third of part-time workers who indicated that they would like to work more hours transitioned into full-time jobs. An even larger portion (almost forty percent) of voluntary part-time

⁸Note that if there is measurement error in involuntary part-time employment status and in involuntary part-time employment status over time, the effects of positive selection may be overstated and the effects of negative selection understated.

⁹From the questions asked of respondents in the LFS questionnaires it is not possible to identify whether a part-time wage employee who is reported to want longer working hours would work these additional hours at the existing wage rate, or whether they would be content with their current hours given an increase in their wage. Similarly, for those who do not want longer working hours, it is not possible to determine whether their preferences would remain unchanged if they were faced with a higher or lower wage.

workers reported full-time employment in the following period, however. These findings suggest that voluntary part-time workers find it easier to access full-time employment than the involuntarily underemployed. One possibility is that voluntary part-time employment is transitory. Women may revert to full-time employment following periods of reconciling market work and household responsibilities such as childcare, for example. It is also possible that the kinds of occupations held by voluntary part-time workers offer greater opportunities for longer working hours.

The precarious and unstable nature of the jobs occupied by involuntarily part-time workers can be seen when considering the movements of workers out of employment over the waves of the panel. In comparison to voluntary part-time workers, of whom less than one-third reported leaving employment, a greater percentage of involuntary part-time workers (almost 35 percent) exited employment. However, involuntary part-time workers who left employment were more likely to maintain an attachment to the labour market (becoming unemployed) than voluntary part-time workers, who were more likely to leave the labour force. Almost one-quarter of involuntary part-time workers were reported as unemployed in the following period, as compared to only 14 percent of voluntary part-time workers, and approximately 17 percent of voluntary part-time workers exited the labour market as compared to just ten percent of the involuntarily underemployed. These findings on the transition out of employment are indicative of differences in commitment to employment between voluntary and involuntary part-time workers, and would be consistent with the results presented earlier, which pointed to possible differences also in the direction of selection into these types of employment.

Finally, there is only limited evidence that part-time employment in South Africa provides a successful route out of unemployment, with unemployed individuals being more likely to transition into full-time than part-time wage employment. While almost nine percent of the unemployed found full-time jobs, only about 2.5 percent of individuals who started off unemployed were able to obtain part-time employment by the next period, and nearly half of these individuals reported working in part-time jobs that offered insufficient working hours. Overall, it appears to be quite difficult for individuals without jobs to obtain work in South Africa. Across adjacent panel waves, less than 12 percent of the unemployed were reported to find employment, and nearly seventy percent remained unemployed but willing to accept employment. A further twenty percent of broadly unemployed workers were reported as economically inactive in the next period.

7 Concluding comments

Using information on the working-hour preferences of female part-time workers, this paper explores empirically the differences between voluntary part-time workers and the involuntarily underemployed (part-time workers who are reported to want longer working hours).

Like in other countries, in South Africa the proportion of part-time workers who desire longer working hours is less than the proportion working part-time voluntarily. However, in contrast to other countries, where involuntary part-time employment has risen over time, in South Africa the number of involuntary part-time workers has remained relatively stable. There is also no consistent evidence of a positive relationship between involuntary underemployment and unemployment in South Africa. Although both broad unemployment and involuntary part-time work increased from 1995 to 1999, in subsequent years broad unemployment and involuntary underemployment have typically diverged.

A multivariate analysis, which tested the correlates of voluntary and involuntary part-time employment, suggested that occupational characteristics in particular, are key correlates of involuntary underemployment. Women who work part-time and who desire longer working hours are significantly more likely than voluntary part-time workers to work in occupations that are insecure and unprotected by unions, and are significantly less likely have permanent jobs.

The analysis of earnings differences revealed significant differences also in wages between volun-

tary and involuntary part-time workers. The mean monthly wage of involuntary part-time workers is significantly lower than that for voluntary part-time workers - the result of working significantly fewer hours, on average, at a lower mean hourly wage. When differences in both individual and job characteristics are controlled for using multivariate analyses a premium to *both* voluntary and involuntary part-time employment is found. This result shows that the premium to female part-time employment in South Africa is robust to a distinction in working hour preferences among part-time workers. The premium to involuntary part-time employment is also found to be significantly larger than for voluntary part-time work when controlling for differences in conditions of work. However, when fixed-effects estimation is used to address the possibility that non-random unobservable differences exist between voluntary and involuntary part-time workers and the full-time employed, the difference in the estimated wage premiums to voluntary and involuntary part-time employment decreases and is no longer significant. Differences in the direction of selection into voluntary and involuntary part-time employment could account for this result, which would be consistent also with differences in labour market attachment among these workers.

The labour market attachment of voluntary and involuntary part-time workers was investigated in the final part of the study. The findings correspond, in part, with those from studies of the United States: female part-time workers in South Africa are more likely than other groups to change their labour market status. Unlike in the United States, however, involuntary part-time workers in South Africa are less likely to transition into full-time employment than voluntary part-time workers. Although this result could suggest that voluntary part-time workers behave in a manner which is inconsistent with their preferences, it is also possible that the occupations of voluntary part-time workers offer greater opportunities for advancement into full-time employment than those of involuntary part-time workers. The analysis of labour market transitions also shows that involuntary part-time workers may have a stronger attachment to the labour market than voluntary part-time workers. A higher percentage of the involuntarily underemployed who left the labour market were reported as unemployed and willing to accept work in the next period in comparison to voluntary part-time workers, of whom a greater percentage were reported as economically inactive.

Part-time jobs provide a valuable source of employment to many women in South Africa, particularly to those with household responsibilities. Although part-time jobs also have the potential to offer individuals who lack the skills and/or qualifications to obtain full-time employment the opportunity to enter into the labour market and acquire labour market experience, this study presents only limited evidence to suggest that part-time jobs provide a stepping stone into employment in the South African labour market. Given the already high and continually increasing rates of unemployment in the country, more research is needed to explore whether there is scope to expand the opportunities for part-time employment in South Africa and to identify the role that both the government and the private sector can play in increasing the number and the quality of part-time jobs.

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Table 1. Wage employment among women in South Africa, 1995-2006.

| | 1995 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total female wage employment | 3 508 (30) | 3 662 (37) | 3 855 (48) | 3 830 (48) | 3 758 (44) | 3 914 (49) | 3 947 (56) | 4 129 (56) | 4 320 (63) |
| Female part-time wage employment | 405 (12) | 503 (16) | 612 (22) | 506 (20) | 456 (16) | 520 (19) | 479 (20) | 553 (22) | 557 (25) |
| Proportion of part-time wage employed who are women | 60.5 (1.2) | 62.5 (1.2) | 63.0 (1.3) | 64.0 (1.5) | 64.2 (1.5) | 65.9 (1.5) | 64.0 (1.7) | 64.9 (1.6) | 67.3 (1.7) |
| Involuntary female part-time wage employment | 138 (7) | 256 (10) | 193 (9) | 152 (8) | 142 (8) | 166 (10) | 164 (12) | 166 (12) | 163 (12) |
| Voluntary female part-time wage employment | 267 (9) | 227 (10) | 414 (17) | 349 (16) | 312 (12) | 353 (13) | 313 (14) | 387 (16) | 393 (20) |
| Proportion of female part-time wage employment that is involuntary | 34.1 (1.5) | 53.0 (1.6) | 31.8 (1.5) | 30.3 (1.7) | 31.4 (1.6) | 31.9 (1.7) | 34.4 (2.0) | 30.0 (1.9) | 29.4 (2.0) |

Source: OHS 1995 and 1999; September LFSs: 2000 to 2006.

Notes: The data are weighted and counts are in thousands. Standard errors are in parentheses. All employment estimates (total and part-time) are for individuals older than 15 years of age with wage employment, who reported non-zero working hours of fewer than 113 hours a week and for whom earnings information is not missing. In 1995 only actual hours worked are available. Voluntary and involuntary part-time categories may not sum to total part-time due to missing information on the desire to work longer hours.

Table 2. Marginal effects estimates from a binomial probit comparison between involuntary and voluntary part-time wage workers.

| | I | II | III | IV |
|--|----------------------|----------------------|----------------------|----------------------|
| Age | 0.006* (0.003) | 0.003 (0.003) | 0.005 (0.003) | 0.008** (0.003) |
| Age ² /1000 | -0.120*** (0.038) | -0.097** (0.039) | -0.113*** (0.040) | -0.150*** (0.041) |
| Job duration | -0.021*** (0.002) | -0.021*** (0.002) | -0.018*** (0.002) | -0.010*** (0.003) |
| (Job duration) ² | 0.367*** (0.083) | 0.363*** (0.083) | 0.316*** (0.083) | 0.148* (0.090) |
| Coloured | -0.075*** (0.019) | -0.060*** (0.020) | -0.071*** (0.020) | -0.073*** (0.020) |
| Indian | -0.128*** (0.038) | -0.107*** (0.041) | -0.107** (0.042) | -0.083* (0.045) |
| White | -0.204*** (0.016) | -0.185*** (0.017) | -0.195*** (0.018) | -0.156*** (0.021) |
| Urban | 0.114*** (0.013) | 0.105*** (0.013) | 0.087*** (0.014) | 0.083*** (0.014) |
| Primary education | 0.018 (0.020) | 0.012 (0.020) | 0.015 (0.020) | 0.024 (0.021) |
| Incomplete secondary education | 0.071*** (0.022) | 0.064*** (0.022) | 0.061*** (0.023) | 0.070*** (0.023) |
| Matric or equivalent | 0.011 (0.025) | 0.007 (0.025) | 0.004 (0.028) | 0.017 (0.030) |
| Tertiary education | -0.094*** (0.023) | -0.098*** (0.023) | -0.040 (0.035) | -0.025 (0.037) |
| Married/cohabiting | -0.035** (0.014) | -0.009 (0.015) | -0.001 (0.015) | 0.008 (0.016) |
| Previously married | 0.038* (0.020) | 0.037* (0.020) | 0.036* (0.020) | 0.041** (0.021) |
| Number of employed men in the household (ages 16 to 64) | - | -0.060*** (0.011) | -0.061*** (0.011) | 0.054*** (0.011) |
| Number of employed women in the household (aged 16 to 59 years) | - | -0.017 (0.013) | -0.014 (0.013) | -0.018 (0.013) |
| Number of unemployed adults in the household | - | 0.026*** (0.007) | 0.025*** (0.007) | 0.024*** (0.007) |
| Number of children younger than 7 years in the household | - | -0.020*** (0.007) | -0.017** (0.008) | -0.016** (0.008) |
| Number of children aged 7 to 14 years in the household | - | 0.003 (0.006) | 0.002 (0.006) | 0.001 (0.006) |
| Professional | - | - | -0.058 (0.089) | -0.086 (0.086) |
| Technical and associated professional | - | - | -0.003 (0.090) | -0.032 (0.090) |
| Clerks | - | - | 0.008 (0.091) | -0.036 (0.088) |
| Sales and service | - | - | -0.040 (0.086) | -0.077 (0.083) |
| Fishery | - | - | 0.395*** (0.124) | 0.328** (0.142) |
| Craft and related trades | - | - | 0.085 (0.112) | 0.037 (0.110) |
| Plant and machine operators | - | - | -0.002 (0.113) | -0.017 (0.114) |
| Elementary occupations | - | - | 0.051 (0.096) | 0.009 (0.095) |
| Domestic Services | - | - | 0.187* (0.112) | 0.160 (0.115) |

Table 2. Continued.

| | I | II | III | IV |
|--|-------|-------|----------------------|----------------------|
| Mining | - | - | 0.196 (0.197) | 0.186 (0.202) |
| Manufacturing | - | - | 0.195*** (0.057) | 0.247*** (0.059) |
| Electricity | - | - | 0.112 (0.215) | 0.216 (0.212) |
| Construction | - | - | 0.166** (0.075) | 0.153** (0.076) |
| Wholesale/retail trade | - | - | 0.283*** (0.046) | 0.272*** (0.048) |
| Transport | - | - | 0.152* (0.083) | 0.227*** (0.086) |
| Financial | - | - | 0.235*** (0.053) | 0.283*** (0.055) |
| Community/social services | - | - | 0.172*** (0.045) | 0.208*** (0.047) |
| Private households | - | - | 0.017 (0.078) | 0.028 (0.078) |
| Formal sector | - | - | 0.022 (0.026) | 0.043 (0.027) |
| Union | - | - | -0.107*** (0.022) | -0.006 (0.028) |
| Large firm | - | - | 0.063*** (0.024) | 0.055** (0.025) |
| Permanent employment | - | - | - | -0.164*** (0.015) |
| Unemployment insurance fund contribution | - | - | - | -0.018 (0.017) |
| Medical aid contribution | - | - | - | -0.050* (0.026) |
| Pension fund contribution | - | - | - | -0.030 (0.024) |
| Employee received paid leave | - | - | - | -0.042** (0.020) |
| Number of observations | 6 725 | 6 725 | 6 550 | 6 308 |

Source: Pooled LFS cross-sections from September 2001 to March 2004.

Notes: The sample is restricted to women aged 15 years and older with wage employment, who reported non-zero working hours of fewer than 113 hours a week and for whom earnings information is not missing. The data are not weighted. Standard errors are in parentheses. The omitted population group is 'African', the omitted marital status category is 'never married', the omitted education category is 'no schooling', the omitted occupational category is 'Managerial' and the omitted industry category is 'Agriculture'. Dummy variables for each cross-sectional wave were also included, as were dummy variables for each province. *** Significant at 1 %, ** significant at 5 %, * significant at 10 percent.

Table 3. Average wages and working hours for female involuntary and voluntary part-time and female full-time wage employees, 2003.

| | Involuntary Part-time | Voluntary Part-time | Full-time |
|------------------------|--------------------------|-------------------------------------|----------------------|
| Monthly wage | R700.13* (52.12) | R1 670.34* ^ψ (107.73) | R2 987.01 (69.81) |
| Weekly hours worked | 19.61* (0.56) | 22.94* ^ψ (0.35) | 45.99 (0.14) |
| Hourly wages | R9.77* (0.77) | R17.25 ^ψ (1.11) | R15.96 (0.37) |
| Number of observations | 368 | 765 | 7 160 |

Source: LFS 2003:2.

Notes: The sample is restricted to women aged 15 years and older with wage employment, who reported non-zero working hours of fewer than 113 hours a week and for whom earnings information is not missing. The data are weighted. * indicates that means for involuntary/voluntary part-time workers are significantly different from those for full-time workers (using a 95 percent confidence interval). ^ψ indicates that means for involuntary part-time workers are significantly different from those for voluntary part-time workers (using a 95 percent confidence interval).

Table 4. Estimating the part-time/full-time wage differential for women.

| | I | II | III |
|--|----------------------|----------------------|----------------------|
| Involuntary part-time | 0.250*** (0.017) | 0.412*** (0.016) | 0.513*** (0.016) |
| Voluntary part-time | 0.262*** (0.012) | 0.402*** (0.011) | 0.460*** (0.011) |
| Age | 0.037*** (0.002) | 0.025*** (0.002) | 0.021*** (0.002) |
| Age ² /1000 | -0.382*** (0.024) | -0.244*** (0.021) | -0.202*** (0.020) |
| Job duration | 0.064*** (0.001) | 0.035*** (0.001) | 0.021*** (0.001) |
| (Job duration) squared/1000 | -1.298*** (0.044) | -0.763*** (0.037) | -0.426*** (0.036) |
| Primary education | 0.158*** (0.012) | 0.108*** (0.010) | 0.098*** (0.010) |
| Incomplete secondary | 0.585*** (0.013) | 0.264*** (0.011) | 0.243*** (0.011) |
| Matric | 1.129*** (0.014) | 0.482*** (0.014) | 0.425*** (0.013) |
| Post-matric | 1.912*** (0.014) | 0.819*** (0.017) | 0.729*** (0.016) |
| Married/cohabiting | 0.107*** (0.008) | 0.049*** (0.007) | 0.040*** (0.006) |
| Previously married | 0.121*** (0.011) | 0.065*** (0.009) | 0.050*** (0.009) |
| Urban area | 0.321*** (0.008) | 0.207*** (0.007) | 0.184*** (0.007) |
| Formal sector | - | 0.314*** (0.014) | 0.223*** (0.014) |
| Large firm | - | 0.101*** (0.007) | 0.048*** (0.007) |
| Union member | - | 0.306*** (0.008) | 0.136*** (0.008) |
| Permanent employment | - | - | 0.033*** (0.008) |
| Medical aid contribution | - | - | 0.224*** (0.008) |
| Unemployment insurance fund contribution | - | - | 0.041*** (0.007) |
| Pension contribution | - | - | 0.246*** (0.009) |
| Paid leave | - | - | 0.188*** (0.008) |
| Constant | -0.459*** (0.039) | 0.653*** (0.046) | 0.662*** (0.045) |
| Number of observations | 51 172 | 49 425 | 47 685 |
| R-squared | 0.62 | 0.73 | 0.75 |

Source: Pooled LFS cross-sections from September 2001 to March 2004.

Notes: The sample is restricted to women aged 15 years and older with wage employment, who reported non-zero working hours of fewer than 113 hours a week and for whom earnings information is not missing. The data are not weighted. Robust standard errors are in parentheses. The omitted marital status category is 'never married', and the omitted education category is 'no schooling'. In specifications II and III, 9 occupation dummies (including domestic work as a separate occupational category), and 11 industry dummies were also included. Dummy variables for each cross-sectional wave, for population group and for province of residence are also included in all three specifications. *** Significant at 1 %.

Table 5. Wage estimations for involuntary and voluntary part-time vs. full-time female wage employment, 2001 to 2004.

| | Pooled cross-sections | Pooled panel cross-sections | Fixed effects |
|--|-----------------------|-----------------------------|----------------------|
| Involuntary part-time employment | 0.494** (0.016) | 0.488*** (0.021) | 0.479*** (0.023) |
| Voluntary part-time employment | 0.443*** (0.011) | 0.420*** (0.015) | 0.462*** (0.016) |
| Age | 0.022*** (0.002) | 0.018*** (0.003) | - |
| (Age) ² /1000 | -0.213*** (0.020) | -0.164*** (0.031) | 0.118 (0.116) |
| Job duration | 0.026*** (0.001) | 0.024*** (0.001) | 0.009*** (0.002) |
| (Job duration) ² /1000 | -0.541 (0.037)*** | -0.491*** (0.047) | -0.224*** (0.071) |
| Primary education | 0.105*** (0.010) | 0.111*** (0.016) | - |
| Incomplete secondary education | 0.258*** (0.011) | 0.277*** (0.016) | - |
| Matric or equivalent | 0.455*** (0.014) | 0.444*** (0.019) | - |
| Tertiary education | 0.771*** (0.017) | 0.741*** (0.022) | - |
| Married/cohabiting | 0.043*** (0.006) | 0.045*** (0.009) | 0.035 (0.028) |
| Previously married | 0.057*** (0.009) | 0.065*** (0.012) | 0.013 (0.027) |
| Urban area | 0.194*** (0.007) | 0.203*** (0.010) | - |
| Formal sector | 0.261*** (0.014) | 0.260*** (0.020) | 0.094*** (0.022) |
| Large firm | 0.066*** (0.007) | 0.066*** (0.009) | 0.023* (0.012) |
| Union member | 0.217*** (0.008) | 0.226*** (0.010) | 0.067*** (0.012) |
| Permanent employment | 0.134*** (0.007) | 0.154*** (0.010) | 0.081*** (0.013) |
| Medical aid contribution | 0.294*** (0.008) | 0.289*** (0.011) | 0.075*** (0.012) |
| Unemployment insurance fund contribution | 0.099*** (0.007) | 0.083*** (0.009) | 0.036*** (0.010) |
| Number of observations | 48 293 | 28 274 | 28 435 |
| R ² | 0.74 | 0.73 | 0.12 (within) |

Source: Pooled LFS cross-sections from September 2001 to March 2004; LFS Panel (September 2001 to March 2004)

Notes: The sample is restricted to women aged 15 years and older with wage employment, who reported non-zero working hours of fewer than 113 hours a week and for whom earnings information is not missing. The data are not weighted. Standard errors are in parentheses. In both regressions, the omitted marital status variable is 'never married'; in the pooled regressions, the omitted education category is 'no schooling'. The estimations also include 9 occupation, 11 industry and 5 wave dummy variables, not reported here; and the pooled estimations controlled further for province of residence and population group. *** Significant at 1% ** Significant at 5% * Significant at 10%.

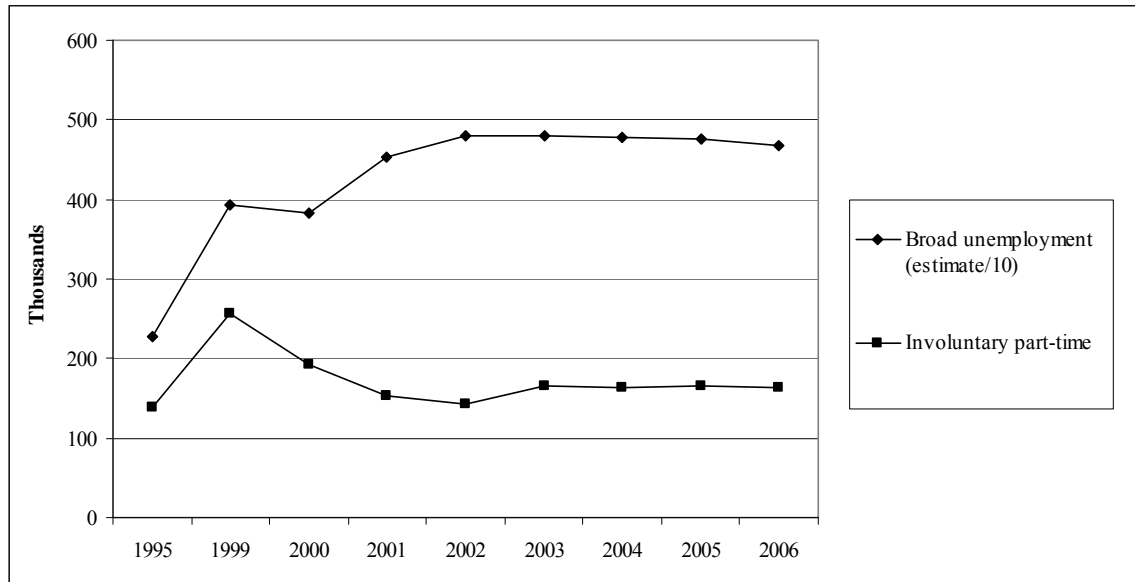
Table 6. Transition patterns among women aged 15 years and older: percent and frequency changing labour market status between year's t and $t+1$.

| Year t | Year $t + 1$ | | | | |
|-----------------------|-----------------------|---------------------|-------------------|-------------------------------|-----------------------|
| | Involuntary part-time | Voluntary part-time | Full-time | Unemployed (broad definition) | Economically inactive |
| Involuntary part-time | 172 (18.09) | 132 (13.88) | 315 (33.12) | 235 (24.71) | 97 (10.20) |
| Voluntary part-time | 111 (5.54) | 458 (22.88) | 799 (39.91) | 281 (14.04) | 353 (17.63) |
| Full-time | 254 (1.35) | 783 (4.17) | 14 728 (78.38) | 1 853 (9.86) | 1 172 (6.24) |
| Broad unemployment | 273 (1.20) | 310 (1.36) | 2 040 (8.97) | 15 624 (68.66) | 4 507 (19.81) |
| Economically inactive | 110 (0.29) | 298 (0.79) | 992 (2.62) | 5 516 (14.55) | 30 988 (81.75) |

Source: LFS Panel (September 2001 to March 2004).

Notes: The sample is restricted to women aged 15 years and older. Percentages are in parentheses.

Figure 1. Involuntary part-time employment and broad unemployment.



Source: OHS 1995 and 1999; September LFSs: 2000 to 2006.

Figure 2. Kernel density plot of the natural logarithm of nominal wages per hour usually worked, 2003.

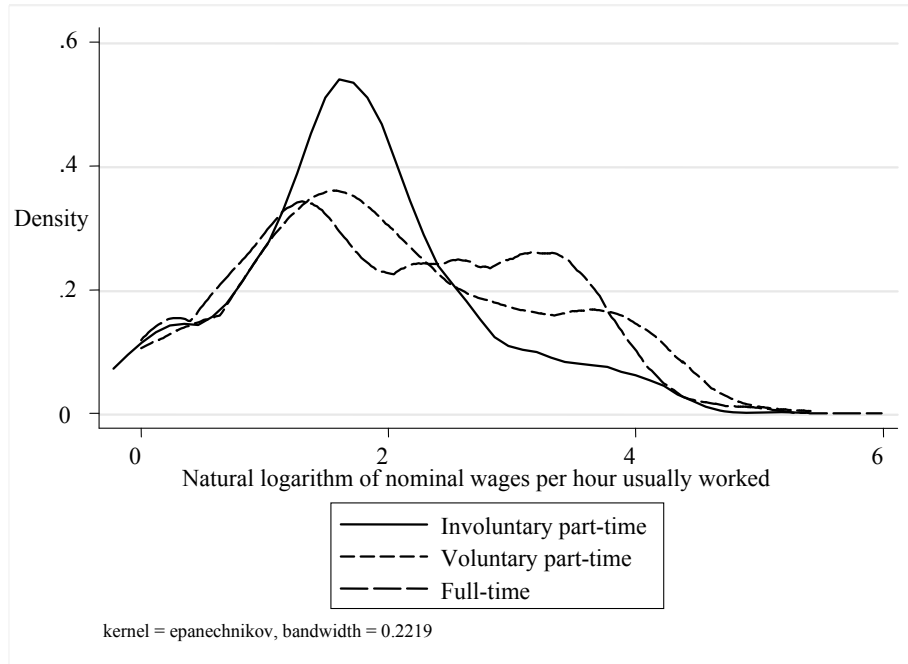


Figure 3. Kernel density plot of usual hours worked per week in main job, 2003.

