Is there evidence of a wage penalty to female part-time employment in South Africa?

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Abstract

In this paper, we investigate female part-time employment in South Africa. Using household survey data for South Africa from 1995 to 2004, we show that women are over-represented in part-time employment, and that the growth in part-time work has been an important feature of the feminisation of the labour force. In contrast to many studies of part-time work in other countries, however, we find evidence of a significant wage premium to female part-time employment. The premium is robust also to fixed effects estimations using Labour Force Survey panel data from 2001 to 2004, where controlling for unobservable differences increases its size. The premium persists with different hourly thresholds defining part-time employment and when we account for possible reporting errors in hours worked.

JEL Classification: J21; J22; J31

1 Introduction

Three findings common to the international literature on part-time employment are that most people who work part-time are women; the increase in part-time employment has been an important part of women's growing share of employment more generally; and controlling for a range of individual and job characteristics, hourly earnings are lower in part-time wage employment than they would be if employment was full-time (Long and Jones 1991, Ermisch and Wright 1993, Rosenfeld and Birkelund 1995, Manning and Robinson 1998, Bardasi and Gornick 2000).

In this paper we investigate female part-time employment in South Africa. We use nationally representative, cross-sectional household survey data to show that women are over-represented in part-time work, and that with the feminisation of the labour force from 1995 to 2004, female part-time employment has grown considerably. However, when we control for a range of measurable characteristics in the wage equation, we find no evidence of an hourly wage penalty to female part-time employment. Rather, there is a significant wage premium. The size of this premium increases considerably when we control also for the nature of employment, suggesting that part of the estimated premium reflects the lack of security and fewer benefits associated with part-time work.

Differences in unmeasured attributes of part-time and full-time workers may be introducing bias in the wage estimations. However, if part-time employment is associated with lower unmeasured

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skills or labour market attributes, then we would expect the nature of the bias to reinforce rather than reduce the premium to part-time employment. We re-estimate our earnings equations using available panel data in South Africa, the Labour Force Panel (2001 – 2004), and we find that as expected, the size of the estimated premium increases when we control for individual fixed effects.

We further test the robustness of our results to the definition of part-time employment and to reporting errors in working hours. We show that the premium remains robust to raising the threshold for part-time employment from 34 to 39 hours a week, as well as to lowering it to 28 hours worked. Furthermore, although the over- or under-reporting of working hours by full-time and part-time workers respectively may bias the premium upwards, the premium remains robust and significant when we account for possible reporting errors in hours worked.

In the next section, we outline key questions and findings from the international literature on part-time employment. In section 3, we discuss the data and the definition of part-time employment used in this study, we describe changes in part-time employment in South Africa, and we compare individual and labour market characteristics of our samples of women with part-time and full-time employment. We also review protective labour legislation in South Africa, and its application to part-time and full-time employment. In section 4, we elaborate on the estimation methods used to compare returns to part-time and full-time employment, and present the key results. In the conclusion we briefly review the findings of our study.

1.1 Context

Part-time employment typically is work performed by women, providing women with a means to reconcile paid work and household work (and particularly the care of children). In many industrialised countries, the growth in part-time employment, notably through the expansion in the service sector, has been an integral component of women's increasing share of total employment (Rosenfeld and Birkelund 1995, Bardasi and Gornick 2000).

A key question that dominates the literature on part-time employment concerns whether women are penalised for working part time. There are a number of reasons why a part-time wage penalty may be expected. First, employers incur fixed labour costs of hiring (associated with recruiting and training workers for example), which are proportional to the number of workers rather than the number of hours worked. This therefore increases the average hourly costs of part-time jobs compared to full-time jobs (Hirsch 2004, Rodgers 2004). Second, part-time workers may have more limited mobility because they are secondary breadwinners in the household. This makes it possible for employers to practice monopsonistic discrimination, paying lower wages for part-time employment (Ermisch and Wright 1993, Hardoy and Schøne 2006). Third, employers may be reluctant to provide training to part-time workers whose labour force attachment is expected to be weaker than that of full-time workers (Owen 1978).

Studies have tested for a wage gap between full-time and part-time employment estimating standard wage equations, with log hourly wages as the dependent variable, and human capital variables (education and work experience) as well as job and labour market characteristics as explanatory variables. The size and nature of the wage differential is decomposed using the Oaxaca-Blinder decomposition technique to establish how much of the wage gap can be explained by differences in the observable characteristics of part-time and full-time workers, and what portion is "unexplained", reflecting differences in the returns to characteristics and in the intercept of the earnings functions.

In most countries, a wage penalty to part-time employment is observed, in the order of between

ten and thirty percent. When estimations take into account that part-time workers may have less education and work experience, and may be concentrated in certain kinds of jobs, the size of the penalty falls but typically remains negative. Two exceptions are Sweden and Norway where the adjusted wage differential is positive, a finding attributed to low levels of wage dispersion and protective labour legislation in these labour markets (Bardasi and Gornick 2002, Hardoy and Schøne 2006).

Part-time and full-time workers may differ not only in terms of measurable attributes but further on the basis of unobserved characteristics, such as motivation and commitment, which are also correlated with labour market outcomes. Most studies that estimate the part-time wage gap make use of cross-sectional data, and control for non-random selection into part-time employment by estimating two-stage Heckman selection models (Simpson 1986, Bardasi and Gornick 2000, Rodgers 2004, Hardoy and Schøne 2006). Selection controls are found to reduce, and sometimes eliminate, the wage penalty to part-time employment. One of the difficulties of the Heckman approach, however, is unearthing instruments that are correlated with part-time status but not with the wage for reliable identification of the selection equation.

Panel data techniques tend to be a preferred means in the micro-econometric literature more broadly, of controlling for selection on the basis of unobservable characteristics. For a study of the part-time wage gap, a within transformation of the panel data would remove the time-invariant component of the composite error term in the wage regression, and the estimation would test the effect of a change in part-time status on a change in log hourly wages. Only a few studies, however, have analysed the part-time wage gap using longitudinal data (see, for example, Hirsch 2004). To our knowledge, there is also no research on part-time employment and wages in South Africa (whether based on cross-sectional or panel data). This study seeks to address this lacuna, making use also of the first national panel data set, recently made available to researchers, in South Africa.

2 Data and descriptive statistics

2.1 Data and definitions

We analyse both cross-sectional and panel household survey data to explore part-time employment in South Africa. To measure the growth in part-time employment from 1995 to 2004, we use the nationally representative October Household Surveys (OHS) conducted in 1995 and 1999 and selected September Labour Force Surveys (LFS) introduced in 2000.

To compare the characteristics and returns to part-time and full-time female employment, we start with the September 2003 LFS (LFS 2003:2), which collects comprehensive labour market information, including information on employment benefits. Although the LFSs are released as cross-sectional data sets, the survey has been designed as a rotating panel of dwellings, with a twenty percent rotation of the sample in each six monthly wave. To estimate earnings equations controlling for individual fixed effects,[1] we use the LFS Panel (2001 – 2004) pre-released by Statistics South Africa (StatsSA) in January 2007. The unit of analysis of the panel is the individual and because individuals cannot be linked to their households, there are no household-level variables (such as number of children) which can be used in the analysis. The panel data set made available to researchers also contains a smaller set of information on employment benefits. Although the

[1] As in many other studies, our ability to control for unobservable characteristics using a Heckman-type estimation method was hindered by the lack of appropriate instruments in the LFS 2003:2.

period of the panel is relatively short, approximately eight percent of our sample changed between part-time and full-time status over the period (amounting to about 2 500 switchers).

There appears to be no formal (statistical or statutory) definition of part-time employment in South Africa. StatsSA has adopted different working-hour thresholds in different surveys. In the Survey of Total Employment and Earnings, for example, part-time employment is defined as normally working "less than 35 hours per week". In the Quarterly Employment Statistics, part-time employees are defined as "those ... who usually work less than 40 hours per week". Although minimum wage determinations, which we discuss below, may distinguish different wage schedules for those working less than 28 hours a week, this threshold is not identified legally as defining part-time employment.

Internationally, the definition of part-time work differs across countries, but the convention seems to be fewer than 35 or 30 hours a week. For example, surveys in both the United Kingdom and Canada typically use 30 hours as the cut-off, while most surveys in the United States define part-time workers as those who usually work less than 35 hours a week (Hirsch 2004, Hardoy and Schøne 2006). Some surveys ask individuals directly to identify whether their employment is full-time or part-time and studies may adopt this self-definition of part-time employment rather than a fixed threshold (cf. Bardasi and Gornick 2002).

Self-definition is not available in the surveys we use for South Africa and we therefore distinguish full-time and part-time employment according to the number of weekly hours worked. Figure 1, which plots the kernel density of usual weekly working hours in wage employment in 2003, shows a large spike at 40 hours, and a smaller one at 35 hours. For purposes of comparability with international studies, we use 35 hours a week as the cut-off defining full-time employment, but as we show later, our analytical findings on earnings differences are robust to alternative thresholds at 40 or 28 weekly working hours.

2.2 Describing female wage employment

Over the past decade, much of the increase in employment in South Africa has reflected the growth in female employment (Casale and Posel 2002, Casale 2004). Table 1 describes trends in employment from 1995 to 2004 for salaried workers (i.e. excluding the self-employed). Total wage employment grew by some 1.3 million jobs over the period, with almost ninety percent of this increase deriving from the change in female employment. In 1995, 35 percent of all those with wage employment were women; by 2004, this had risen to 41 percent. Over the same period, part-time wage employment increased by just over 200 000 jobs, almost all of which is accounted for by the rise in female part-time employment. Although from a low base, the growth in female part-time employment greatly exceeded that in total female wage employment, and consequently the proportion of employed women who work part-time increased, from 9.9 percent in 1995, to 12.1 percent in 2004. In contrast, male part-time employment remained relatively constant over period, accounting for about five percent of total male wage employment.

There are clear differences in the measurable characteristics of women with part-time and full-time wage employment. We illustrate these differences using the LFS 2003:2. Table 2 shows that female part-time workers tend to be older and to have significantly lower levels of educational attainment on average than female full-time workers. Women who work part-time are also more likely to be living with children in the household suggesting greater non-market demands on their time.

Figure 2 reveals marked differences also in the characteristics of part-time and full-time female

wage employment by sector and occupational category. Part-time employment is over-represented in the informal sector: more than half of all women working part-time are employed in unregistered businesses, compared to less than thirty percent of women with full-time employment. Part-time employment clearly predominates in domestic services which accounts for almost fifty percent of all female part-time wage employment.

The Basic Conditions of Employment Act (BCEA) of 1997 provides a minimum standard of rights and protection for all the employed in South Africa who work at least 24 hours a month with a single employer (Department of Labour 1997). The BCEA, which entitles workers to paid leave, a written contract with employers and notice prior to dismissal, was recently extended to cover domestic workers (Department of Labour 2002). Research suggests that although there has been some improvement in the terms of employment for domestic workers since 2002, compliance among employers remains low (Hertz 2005).

Table 3 describes very large differences in the conditions of employment for part-time and full-time work.[2] Women who work part-time are significantly less likely to have permanent employment or to receive any benefits (such as pension, unemployment or medical aid contributions from employers, or paid leave), and a significantly smaller percentage reports being union members. Conditions of employment among domestic workers are inferior to those for workers overall. Furthermore, among domestic workers, women with part-time employment receive significantly lower non-wage benefits compared to women with full-time employment.

Although there is no national minimum wage in South Africa, the BCEA also permits the Minister of Labour to determine minimum wages for employees by sector (Department of Labour 1997). Minimum wage determinations are now in place in the domestic services, contract cleaning, private security, wholesale and retail trade, agricultural, civil engineering, forestry, hospitality, and taxi sectors. Minimum wages stipulated vary by sector; and within sector, by location of work and often by occupation.

In some sectors, higher minimum hourly wages are specified for those with lower working hours. In the domestic services sector, for example, employees who work less than 28 hours a week are entitled to an hourly wage which is approximately ten percent higher than that earned by employees working longer hours (Department of Labour 2002). In the wholesale and retail sector, the minimum hourly wage for individuals working fewer than 28 hours a week can be 25 percent higher than the relevant hourly wage specified in the sectoral determination for their occupation (Department of Labour 2003). A possible motivation for these higher hourly wages may be to offset the lower level of benefits received by those working fewer hours a week.

In Table 4 we describe average wages and hours worked for women with wage employment in 2003. Although average hourly wages for women employed full-time are higher than for women employed part-time, the difference is not significant. The table illustrates also that minimum wage determinations by sector were relatively low compared to average hourly wages reported for both full-time and part-time employment.

[2] We include here conditions which are not regulated by the BCEA – medical insurance, pension fund contributions and collective rights of workers.

3 Estimating wage differences

3.1 Econometric framework

To explore wage differences between part-time and full-time employment in South Africa, we first use Ordinary Least Squares (OLS) to estimate two separate wage regressions for women who work part-time and full-time:

$$\ln(W_i^P) = \alpha^P + \beta X_i^P + \varepsilon_i \tag{1}$$

$$\ln(W_i^F) = \alpha^F + \beta X_i^F + \varepsilon_i \tag{2}$$

where W_i represents hourly wages of individual i, X_i is a vector of individual, job and industry parameters, and ε_i is the error term.

We then decompose the part-time/full-time wage differential, using the standard Oaxaca-Blinder decomposition technique:

$$\overline{\ln(W^F)} - \overline{\ln(W^P)} = \sum_i \beta^F (\overline{X}_i^F - \overline{X}_i^P) + \{(\alpha^F - \alpha^P) + \sum_i \overline{X}_i^P (\hat{\beta}^F - \hat{\beta}^P)\} \tag{3}$$

The first term on the right-hand side of equation (3) represents the portion of the wage differential that can be explained by differences in the observable characteristics of the two samples. The remaining terms reflect the "unexplained" part of the wage differential, captured by differences both in intercepts of the two wage equations and in the estimated coefficients (or returns to observable characteristics).

Coefficients estimated in the cross-sectional regressions, however, may be biased by individual fixed effects. If women who would do better in the labour market are also selected into full-time employment, for example, then the returns to individual endowments of full-time workers will be biased upwards. To estimate the effects of unmeasured characteristics on the estimated coefficients, we make use of panel data. We pool the six waves of the Labour Force Panel (LFS) to provide a benchmark for comparison, estimating:

$$\ln(W_{it}) = \alpha + \varphi P_{it} + \beta X_{it} + \delta_i + \nu_{it} \tag{4}$$

where P_{it} is a dummy-variable equal to 1 if individual i had part-time employment in time t, and 0 if employment in that period was full-time. The composite error term comprises the time-invariant component δ_i, representing individual-specific characteristics, and the time-varying, or idiosyncratic, component v_{it}. To remove δ_i we estimate the fixed effects transformation:

$$\ln(W_{it}) - \ln(W_i) = \varphi^{FE}(P_{it} - P_i) + \beta^{FE}(X_{it} - X_i) + \nu_{it} - \nu_i \tag{5}$$

where for any variable Z, Z_i represents the mean value for individual i over the t periods in the panel.

3.2 Results

The results of our OLS estimations of wage equations for women with part-time and full-time employment are reported in Table 5. Two sets of estimations for 2003 are described: the first set includes individual, job, locational, industry, and household characteristics as controls; in the second set, variables capturing conditions of employment (whether employment is permanent and what benefits are received) are added.

The unadjusted wage differential is small and negative, implying a "raw" wage penalty to part-time employment of between three and four percent. Women who work full-time, however, have a significant advantage in individual and job characteristics over part-time workers. When we adjust for differences in endowments, the wage penalty to part-time employment becomes positive, indicating an hourly wage premium to working part-time of about 34 percent, or 40 percent when we control also for working conditions. The source of this premium derives from the shift coefficient. Although full-time workers receive significantly higher returns to endowments, this is more than offset by a considerably larger constant for those with part-time employment.[3]

A key concern with OLS estimations of wage equations for different groups of workers is that omitted variables, such as unmeasured labour market skills and motivation, may produce biased and inconsistent coefficients. Studies of wage differentials between part-time and full-time employment typically have found a significant penalty to part-time employment. If there is negative selection into part-time employment, then the estimated penalty would be overstated. In the case of a wage premium to part-time employment, however, we would expect bias in the other direction. If part-time workers have "inferior" unobserved characteristics, then controlling for these unobservables should increase the size of the premium.

We investigate this, also as a way of testing the robustness of our results, in the fixed effects estimations reported in Table 6. The first column reports the estimated coefficients when we ignore the panel structure of the data and simply pool the waves of the LFS Panel (2001 – 2004). Consistent with our cross-sectional results for the LFS 2003:2, we find a large and positive premium to female part-time employment in the pooled regression, after controlling for a wide range of observable characteristics. The second column reports the fixed effects estimates for the time-demeaned panel data. As expected, the size of the coefficient on part-time employment *increases* when we estimate the within transformation, suggesting negative correlation between unobserved effects and part-time employment status.[4] (In contrast, the positive coefficients for formal employment, union status and currently or previously married all fall when we control for individual fixed effects.)

Our results are suggestive of a "wage floor" in part-time employment, possibly created by minimum wages, below which wages cannot drop. We tested the robustness of these results to different definitions of part-time employment, raising the threshold to 40 hours a week, and lowering it to 28 hours. The pooled OLS and fixed effects coefficients for part-time employment (controlling for all other characteristics) are reported in Table 7. The premium to part-time employment remains robust and large for all definitions. Furthermore, the size of the premium increases considerably when the threshold defining part-time status is lowered, a result consistent with minimum wage determinations which specify higher hourly wages for those working fewer than 28 hours a week.

There are a number of sources of bias that may confound this comparison of part-time and full-time wages. Information on hourly wages is not collected directly in our datasets and we use

[3] The premium to female part-time employment exists also for a restricted sample that excludes all domestic workers.

[4] A Hausman test of whether there is systematic difference in the coefficients between a random and a fixed effects model generated a χ^2 of 3835.28, suggesting that the fixed effects estimator is more appropriate.

working hours to convert weekly or monthly wages into hourly figures. Our hourly wage estimates therefore are vulnerable to problems caused by division bias (Manning and Robinson 2004). If full-time and part-time workers overstate and understate their working hours respectively, then hourly wages for full-time employment will be deflated while those for part-time employment will be inflated. Approximately ten percent of our sample of female employees reported working sixty hours or more a week (25 percent of whom were working eighty weekly hours or more). In Table 7 we also report the coefficients for part-time employment when we truncate our sample to the employed with 'credible' working hours. The premium declines when we remove outliers from the working-hours distribution, but it remains large and significant throughout. The premium is also robust when we compress rather than truncate the working-hours distribution. The last row in Table 7 reports the estimated coefficients for part-time employment when we inflate, or deflate, working hours by twenty percent for those working less than 20 hours a week, or more than 45 hours a week, respectively.

A remaining source of bias in the wage estimation derives from the possible endogeneity of part-time employment status. If higher wage growth induces employed women to work part-time (or if it induces employers to reduce working hours), then our estimations will overstate the premium to part-time employment, even after controlling for unobservable characteristics. There are no household level variables available in the LFS panel, however, and we can find no individual level instrumental variables, which are both exogenous to the wage equation and highly correlated with part-time employment status, with which to address this endogeneity.

4 Conclusion

In common with many other countries in the world, the majority of part-time workers in South Africa are women, and part-time employment forms a growing share of women's total wage employment. Female part-time employment is usually associated with a wage penalty that persists after controlling for individual, job and labour market characteristics. In contrast, we find no evidence of a wage penalty to female part-time employment in South Africa. Rather, our estimations indicate a wage premium to part-time employment which increases when we control for unobservable characteristics using fixed effects estimation with panel data. The part-time wage premium remains robust to different working-hours thresholds defining part-time employment, and to controls for possible measurement error in reported hours worked.

Our results are consistent with there being a wage floor below which wages for part-time workers cannot fall (regardless of worker and job characteristics). This wage floor could derive from minimum wage determinations, which are higher for those working fewer hours across a number of sectors, or given imperfect adherence to these determinations, from some minimum subsistence level. Part of the estimated wage premium to part-time employment may also serve to offset the significantly lower levels of security and non-wage benefits which characterise female part-time employment.

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Table 1. Changes in wage employment[1] by gender in South Africa

	1995[3]	1999	2001	2003	2004
Total female wage employment	2 829	3 662	3 830	3 914	3 947
	(29)	(37)	(48)	(49)	(56)
Female part-time[2] wage employment	279	503	506	520	479
	(10)	(16)	(20)	(19)	(20)
Proportion of part-time wage employed who are women	51.5	62.5	64.0	65.9	64.0
	(1.3)	(1.2)	(1.5)	(1.5)	(1.7)
Proportion of employed women who work part-time	9.9	13.7	13.2	13.4	12.1
	(0.3)	(0.4)	(0.5)	(0.5)	(0.5)
Total male wage employment	5 325	5 033	5 351	5 510	5 579
	(36)	(42)	(55)	(60)	(67)
Male part-time wage employment	263	301	284	269	269
	(10)	(13)	(14)	(15)	(16)
Proportion of employed men who work part-time	4.9	6.0	5.3	4.9	4.8
	(0.2)	(0.2)	(0.3)	(0.3)	(0.3)

Source: OHS 1995 and 1999; LFS 2001:2; LFS 2003:2; LFS 2004:2.

Notes to table: The data are weighted and counts are in thousands. Standard errors are in parentheses. 1. All employment estimates (total and part-time) are for employed individuals aged 15 years and older and for whom information on hours worked is neither missing nor zero. Individuals who reported working in excess of 112 hours a week were also excluded from the sample. 2. Individuals have part-time wage employment if the number of weekly hours *usually* worked in their main job is less than 35. 3. In 1995 only *actual* hours worked are available.

Table 2. Characteristics of female part-time and full-time wage employed, 2003

	Part-time	Full-time
Mean age	38.93*	37.01
	(0.43)	(0.17)
Older than 59 years	0.03	0.02
	(0.01)	(0.00)
Years of education	8.53*	9.87
	(0.16)	(0.06)
Matric or equivalent	0.19*	0.29
	(0.01)	(0.01)
Postsecondary education	0.15*	0.20
	(0.01)	(0.01)
Married or living together	0.50	0.49
	(0.01)	(0.01)
Widowed or divorced	0.15	0.14
	(0.01)	(0.00)
Never married	0.35	0.37
	(0.02)	(0.01)
White	0.14	0.17
	(0.01)	(0.01)
African	0.68	0.64
	(0.02)	(0.01)
Urban	0.65*	0.73
	(0.01)	(0.01)
Children < 7 years	0.71*	0.61
	(0.04)	(0.01)
Children 7-14 years	0.81*	0.67
	(0.04)	(0.01)

Source: LFS 2003:2

Notes: The sample is restricted to women older than 15 years with wage employment, who reported non-zero working hours of less than 113 hours a week and for whom earnings information is not missing. The data are weighted. Standard errors are in parentheses. * Means for part-time and full-time workers are significantly different at a 95% confidence level.

Table 3. Conditions of employment, 2003

	Part-time	Full-time
Proportion of all workers		
Work is temporary or casual	0.51*	0.17
	(0.02)	(0.01)
Receive pension fund contribution	0.21*	0.52
	(0.02)	(0.01)
Receive medical insurance contribution	0.12*	0.33
	(0.01)	(0.01)
Receive paid leave	0.29*	0.62
	(0.02)	(0.01)
UIF contribution	0.36*	0.64
	(0.02)	(0.01)
Member of a trade union	0.12*	0.29
	(0.01)	(0.01)
Domestic workers		
Work is temporary or casual	0.59*	0.36
	(0.03)	(0.02)
Receive pension fund contribution	0.06*	0.11
	(0.01)	(0.01)
Receive medical insurance contribution	0.01	0.01
	(0.00)	(0.00)
Receive paid leave	0.14*	0.25
	(0.22)	(0.02)
UIF contribution	0.21*	0.32
	(0.02)	(0.02)
Member of a trade union	0.01*	0.02
	(0.01)	(0.00)

Source: LFS 2003:2

Notes: The sample is restricted to women older than 15 years with wage employment, who reported non-zero working hours of less than 113 hours a week and for whom earnings information is not missing. The data are weighted. Standard errors are in parentheses. * Means for part-time and full-time workers are significantly different at a 95% confidence level.

Table 4. Average wages and working hours for part-time and full-time female employment, 2003

	Part-time	Full-time
Reported		
Monthly wage	R1351.49	R2987.01
	(77.10)	(69.81)
Hours worked	21.84	45.99
	(0.31)	(0.14)
Hourly wages	14.80	15.96
	(0.81)	(0.37)
Minimum wage determinations[1]		
Domestic work	4.87	4.42
Clerk/shop assistant	11.74	9.39

Source: LFS 2003:2; Department of Labour (2002 and 2003).

Notes: 1. Wages are for those employed in metropolitan areas in South Africa.

The sample of reported earnings and is restricted to women older than 15 years with wage employment, who reported non-zero working hours of less than 113 hours a week and for whom earnings information is not missing. The data are weighted.

Table 5. Estimating the part-time/full-time wage differential for women, 2003

	Part-time	Full-time	Part-time	Full-time
Age	0.019	0.022*	0.021***	0.020*
	(0.012)	(0.004)	(0.012)	(0.004)
Age^2	-0.000***	-0.000*	-0.000**	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
Primary education	0.123***	0.112*	0.147**	0.099***
	(0.065)	(0.030)	(0.066)	(0.030)
Incomplete secondary	0.292*	0.246*	0.312*	0.219*
	(0.072)	(0.032)	(0.074)	(0.032)
Matric	0.452*	0.455*	0.432*	0.385*
	(0.105)	(0.037)	(0.103)	(0.037)
Post-matric	0.870*	0.757*	0.829*	0.634*
	(0.136)	(0.045)	(0.132)	(0.045)
Married/cohabiting	0.034	0.048*	0.021	0.047*
	(0.053)	(0.017)	(0.052)	(0.016)
Previously married	0.096	0.081*	0.080	0.070*
	(0.068)	(0.023)	(0.069)	(0.022)
Urban area	0.254*	0.224*	0.234*	0.177*
	(0.051)	(0.020)	(0.051)	(0.019)
Formal sector	0.312*	0.412*	0.277*	0.298*
	(0.105)	(0.040)	(0.103)	(0.038)
Large firm	-0.035	0.077*	-0.037	0.027
	(0.085)	(0.019)	(0.081)	(0.018)
Union member	0.326*	0.309*	0.128	0.142*
	(0.097)	(0.020)	(0.097)	(0.020)
Length of current tenure	0.016***	0.036*	0.011	0.020*
	(0.009)	(0.003)	(0.009)	(0.003)
(Length of current tenure)^2	-0.000	-0.000*	-0.000	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
Permanent employment	--	--	-0.077	0.064*
			(0.055)	(0.021)
Medical aid contribution	--	--	0.327*	0.271*
			(0.093)	(0.021)
UIF contribution	--	--	0.006	0.059*
			(0.048)	(0.017)
Pension contribution	--	--	0.140***	0.242*
			(0.075)	(0.021)
Paid leave	--	--	0.152**	0.172*
			(0.064)	(0.019)
Constant	1.382*	0.679*	1.388*	0.713*
	(0.365)	(0.112)	(0.370)	(0.107)
Number of observations	1 064	6 865	1 035	6 661
R^2	0.62	0.74	0.65	0.77
Total (unadjusted) differential	-2.9		-3.6	
Endowments	-37.0		-43.8	
Coefficients	-36.2		-27.3	
Constant	70.3		67.5	
Adjusted differential	34.1		40.2	

Source: LFS 2003:2

Notes: The sample is restricted to women older than 15 years with wage employment, who reported non-zero working hours of less 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 education category is "no schooling". The regressions also control for population group, number of children in the household, province of residence, 9 occupation dummies and 11 industry dummies which are not reported here. *** Significant at 10% ** Significant at 5% * Significant at 1%. Note that in the decomposition analysis, the negative sign indicates an advantage to full-time workers.

Table 6. Wage estimations for female employment, 2001 - 2004

	Pooled	Fixed effects
Part-time employment	0.441*	0.466*
	(0.012)	(0.014)
Age	0.019*	--
	(0.003)	
Age^2	-0.172*	--
	(0.031)	
Primary education	0.112*	--
	(0.016)	
Incomplete secondary	0.278*	--
	(0.016)	
Matric	0.445*	--
	(0.019)	
Post-matric	0.741*	--
	(0.022)	
Married/cohabiting	0.045*	0.035
	(0.009)	(0.027)
Previously married	0.065*	0.013
	(0.012)	(0.028)
Metropolitan area	0.204*	--
	(0.010)	
Formal sector	0.261*	0.093*
	(0.020)	(0.022)
Large firm	0.066*	0.023**
	(0.009)	(0.012)
Union member	0.223*	0.067*
	(0.010)	(0.012)
Length of current tenure	0.024*	0.009*
	(0.002)	(0.002)
$(\text{Length of current tenure})^2$	-0.001*	-0.0002**
	(0.0001)	(0.00006)
Permanent employment	0.152*	0.082*
	(0.010)	(0.013)
Medical aid contribution	0.288*	0.075*
	(0.011)	(0.012)
UIF contribution	0.083*	0.036*
	(0.009)	(0.009)
R^2	0.726	0.117 (within)

Source: LFS Panel (2001 – 2004)

Notes: The sample is restricted to women older than 15 years with wage employment, who reported non-zero working hours of less 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 regression, the omitted education category is "no schooling". The estimations also include 9 occupation, 11 industry and 6 wave dummies, not reported here; and the pooled estimation controlled further for province of residence. * Significant at the 1 percent level ** Significant at the 5 percent level *** Significant at the 10 percent level.

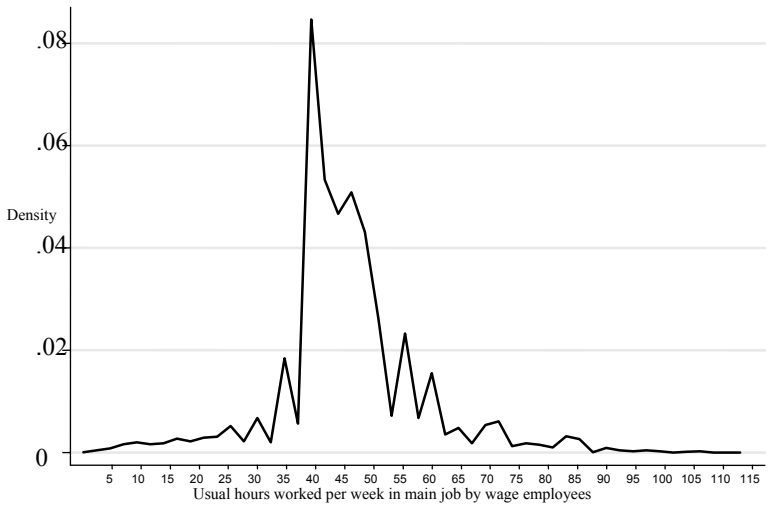
Table 7. The estimated wage premium to female part-time employment with different definitions, samples and reduced controls

	Pooled	Fixed effects
Redefining part-time employment		
- less than 40 hours a week	0.376*	0.373*
	(0.010)	(0.011)
- 27 hours or less a week	0.565*	0.595*
	(0.015)	(0.017)
Removing the tails of the weekly hours distribution		
- more than 80 hours[1]	0.426*	0.457*
	(0.013)	(0.014)
- more than 60 hours[2]	0.392*	0.437*
	(0.013)	(0.014)
- less than 20 and more than 60 hours[3]	0.227*	0.316*
	(0.013)	(0.015)
Compressing the weekly hours distribution		
- (less than 20 hours)*1.2 and (more than 45 hours)*0.8	0.316*	0.371*
	(0.012)	(0.014)

Source: LFS Panel (2001 – 2004)

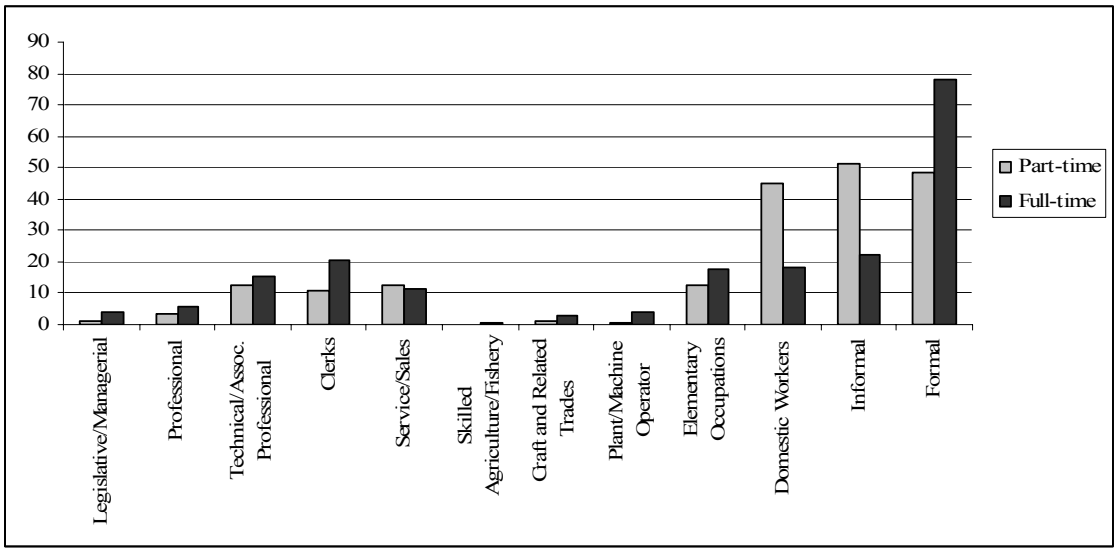
Notes: From a total sample of 28 465 employed women in the pooled waves, the sample selections reduced the total sample by: 1. 646 observations; 2. 2 274 observation; and 3. 3 170 observations. Standard errors are in parentheses. The earnings estimations also controlled for individual, job and industry characteristics. * Significant at the 1 percent level.

Figure 1. Kernel density plot of usual working hours in wage employment, 2003



Source: LFS 2003:2
Note: STATA default bandwidth used with Epanechnikov kernel. The data are unweighted.

Figure 2. Distribution of female wage employment by occupation and sector, 2003



Source: LFS 2003:2
Note: The data are weighted.