

Involuntary underemployment as a component of part-time work in South Africa: Evidence from national household surveys, 1995-2003.

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Abstract

Using the data available in national household surveys, this paper explores part-time work in South Africa in detail, with the key objective of identifying what factors distinguish individuals who choose to work part-time from those part-time workers who are willing to work for longer hours (the *involuntarily underemployed*).

The paper first briefly examines, in a univariate context, what factors distinguish individuals who work full-time from those that work part-time. Following the recommendations of the 16th International Conference of Labour Statisticians the second part of the paper questions whether it is appropriate to treat part-time workers as a homogenous group. The third section then explores, in both a univariate and a multivariate context, whether individuals who work part-time voluntarily are different to those that desire longer working hours. The final section looks at trends in part-time work.

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Introduction

Since the mid-1990s, labour force participation in South Africa has risen dramatically. Casale *et al* (2004:989), for example, show that based on a broad definition of unemployment (which includes the non-searching unemployed), the total economically active population grew by more than 6.5 million individuals from 1995 to 2003. Less than one-third of these individuals found employment, however, with the result that South Africa's high rates of unemployment have continued to escalate.

In an attempt to explain high and rising rates of unemployment, South Africa's official statistical agency, Statistics South Africa (SSA) has made a concerted effort to improve both the quality and the quantity of labour market information captured in national household surveys, which are the primary source of labour market data in the country. These data have produced a wealth of research attempting to address the unemployment concern (see for example Dias, 2002; Kingdon and Knight 2000, 2001; Klasen and Woolard 1999). Unemployment statistics alone, however, may understate the extent to which the country's labour is underutilised. Individuals with jobs may not work full-time, for example, and in some cases these workers may desire longer working hours.

The data available in South Africa's national household surveys permit a distinction not only between full-time and part-time workers, but also between part-time workers who are 'content' to work part-time and those who would prefer full-time employment. Using these data, this paper explores part-time work in South Africa in detail, with the key objective of identifying what factors distinguish individuals who choose to work part-time from those part-time workers who are willing to work for longer hours.

The first section recognises that part-time workers are likely to differ from individuals who work full-time and attempts to determine, in a univariate context, what factors distinguish these groups of workers. The second section questions whether it is appropriate to treat individuals who work part-time as a homogenous group. Various meetings of the International Labour Organisation's International Conference of Labour Statisticians have suggested that some part-time workers may be *involuntarily underemployed*, as they are willing to work longer hours than what they are currently working. The third section of this paper explores, in both a univariate and a multivariate context, possible individual, household and occupational characteristics that might distinguish people who choose to work part-time from those that would prefer extra hours of work. The final two sections are concerned identifying the possible implications of changing data collection for measuring trends in part-time work and, improvements in data capture notwithstanding, with determining whether there has been an expansion in part-time work and in involuntary underemployment in particular.

The first part of the analysis uses data from one of South Africa's more recent national household surveys, the September 2003 Labour Force Survey (LFS 2003:2), while data from the 1995, 1997 and 1999 October Household Surveys (OHS), as well as the LFS 2003:2 are used to examine trends in part-time work.

1. Who are South Africa's part-time workers?

While there has been very little (if any) research on part-time employment in South Africa, the international literature has focused on explaining why individuals may work part-time rather than full-time, and on explaining the growth in this work over time. While part-time jobs often “pay less in total and hourly income, provide less security and advancement opportunity, and give fewer benefits” (Rosenfeld and Birkelund (1995:111) part-time work offers individuals with home or schooling responsibilities, or health considerations more flexibility than typically found in a full-time work schedule (Williams, 1995:36).

Research has shown that part-time workers are often women, and in particular married women with access to alternative income sources and benefits from their spouse's employment. Gwartney-Gibbs (1988) suggests that working part-time allows a woman to ‘keep her hand in’ while raising children, and perhaps makes it easier to return later to a full-time job (c.f. Rosenfeld and Birkelund, 1995:111). Older individuals are more likely to work part-time, using this work as a transition to retirement or to supplement pension income (Williams, 1995:36). Part-time work may also be preferred to full-time jobs amongst young individuals who are currently studying.

Not all individuals prefer part-time work, however. New (or young) labour market entrants, who may lack the skills, experience and/or training required for some full-time jobs could be forced to work part-time as a means of gaining work experience or while obtaining formal qualifications. In addition, as firms move toward more flexible work practices, the number of full-time jobs offered may be reduced. Firms often prefer to employ workers on a part-time basis, as providing fewer (if any) fringe benefits and reduced overtime pay means lower production costs (Tilly, 1991:13). In addition, some jobs are “well-suited to part-timers, with an emphasis on daily or weekly peak hours and on flexible schedules, as are low skilled jobs with routine and repetitive tasks” (Williams, 1995:36).

Using data from the LFS 2003:2, this section explores, in a univariate context, what characteristics distinguish South Africa's full-time workers from those that work part-time. Part-time workers are employed for less than 35 hours² during the week, while the full-time employed are defined as those individuals working 35 hours or more a week (but fewer than 113 hours in total³). The estimates presented reflect the number of individuals who *actually* worked part-time in their main job in the week preceding the interview⁴.

² The “fewer than 35 hours a week” criterion is based largely on the definitions of part-time work adopted in the international literature (see, for instance, Long and Jones, 1981; Wilkins 2004). South Africa has no precise definition of part-time employment – for example, the Interviewers' Manual for the LFS 2003:2 indicates that there are “different definitions of what constitutes part- and full-time work” (SSA, 2003:61). To assume that working fewer than 35 hours a week constitutes part-time employment appears reasonable, however. The OHSs prior to 1999, for example, make explicit reference to this figure when identifying whether respondents should report information on individuals' preference for extra working hours.

³ Individuals working in excess of 16 hours a day over a 7-day week were excluded from the analysis due to the possibility that their reported hours of work were inaccurate.

⁴ Using information on the number of hours individuals' *usually* work is likely to provide a better indication of the individuals who consistently work part-time. Nonetheless, this study uses actual

Table 1⁵ shows that in South Africa in 2003, the employed worked on average 44 hours a week (including overtime) in their main jobs. Disaggregating by gender suggests that women work significantly fewer hours than men, on average. This is indicative, perhaps, of a significantly larger portion of South Africa's women working part-time as compared to men.

Table 1: Average hours worked by the employed, 2003

	Average actual hours in main job
Total employed	44.0 (0.15)
Male	45.9 (0.17)
Female	42.5 (0.20)

Table 2, which compares selected individual, household and occupational characteristics of part-time and full-time workers, supports the suggestion that South African women are more likely to work part-time than South African men. While the majority of the country's 10 million full-time workers (almost 60 percent) are men, part-time employment is largely the domain of women, who comprise approximately 60 percent of part-time work. Overall, a smaller portion of part-time workers are married than are full-time workers, but a significantly greater proportion of the part-time employed are married women (nearly 30 percent) as compared to full-time (fewer than 10 percent).

A significantly greater portion of part-time workers is self-employed, while full-time workers tend to be employed by others. Individuals who work part time are also likely to live in households with significantly more children than full-time workers, and in particular, in households with more children aged 7 to 14 years. Furthermore, while individuals working full-time live in households with significantly fewer other employed members, these members earn significantly more on average than those living with individuals who work part-time. This suggests that not only do part-time workers help to supplement household income, but also that the flexibility offered by part-time work is likely to enable part-time workers to perform various childcare responsibilities (such as taking and collecting children from school, doing homework) and to reduce child-minding costs for the household.

Not only does part-time work suit individuals with household responsibilities in need of flexible working hours (particularly mothers), but also individuals who may desire a more flexible work schedule as they near retirement, or who need to supplement their own or their spouses retirement income. In comparison to individuals who work full-time, a significantly greater portion of part-time workers are older. In particular,

working hours to ensure consistency in the estimates presented throughout the paper – the 1995 OHS, for example, does not question respondents on the number of hours individuals usually work.

⁵ All estimates presented in this paper have been weighted using available population census weights. Unless otherwise noted, standard errors of estimates are presented in parentheses.

Table 2. Comparison of characteristics of part-time and full-time workers, 2003⁶.
(estimates reflect column percentages unless otherwise indicated)

	Full time employed	Part time employed
Total number of workers	10 029 100	1 738 700
Individual characteristics		
Female	41.8 (0.4)	60.6 (0.9)
Married	57.8 (0.4)	51.6 (1.0)
Married women	19.8 (0.3)	29.8 (0.8)
African	66.2 (0.4)	75.2 (1.1)
Coloured	12.0 (0.2)	0.7 (0.8)
Indian	4.3 (0.2)	2.5 (0.6)
White	17.5 (0.3)	11.6 (0.8)
Mean age	38.1 (0.08)	40.1 (0.27)
15-29	24.7 (0.3)	24.6 (0.9)
30-44	47.6 (0.4)	39.3 (1.0)
45-59	24.4 (0.3)	27.8 (0.8)
60+	3.3 (0.1)	8.2 (0.5)
Mean number of years of schooling	9.6 (0.03)	8.2 (0.09)
Matric	27.5 (0.4)	18.1 (0.8)
Employee	85.9 (0.3)	59.9 (0.9)
Household characteristics		
Mean household size	3.9 (0.02)	4.5 (0.06)
Mean number of children younger than 7 years in household	0.5 (0.01)	0.6 (0.02)
Mean number of children aged 7-14 years in household	0.6 (0.01)	0.8 (0.02)
Mean number of other employed in household	0.7 (0.01)	0.8 (0.03)
Mean number of unemployed in household	0.5 (0.01)	0.5 (0.02)
Mean other household income from employment (2003 Rands)	2 153 (46.20)	1 714 (92.01)
Occupational characteristics		
Mean hourly wage in main job (2003 Rands)	17.27 (0.25)	14.58 (0.63)
Benefits*	72.0 (0.4)	44.6 (1.4)
Union member*	33.6 (1.4)	18.8 (1.1)
Permanent*	80.3 (0.5)	51.2 (1.4)
Fixed period contract*	3.9 (0.2)	3.3 (0.4)
Temporary/Casual/Seasonal*	15.7 (0.4)	45.6 (1.4)

* Note that these categories are applicable to employees only.

⁶ Estimates of earned income (household income from employment, hourly wages) presented in this table, and in Table 3, are problematic. In most household surveys, including the LFS, not all respondents reported people's specific salary amounts. To reconcile different earnings estimates individuals whose earnings were reported in a category were assigned the midpoint value of that category, with the exception of the highest, open-ended income category. Here the distribution was truncated – for the category 'R6 929 or more' the individual was allocated an earnings value of R6 929. As Casale *et al* (2004:991) also note, this may bias average earnings downwards.

almost 40 percent of part-time workers are aged 45 years and older as compared to fewer than 30 percent of the full-time employed.

Part-time workers are more likely to be African, and have, on average, significantly fewer years of schooling than full-time workers. A significantly greater proportion of full-time workers (almost 30 percent) have a matric level education (Grade 12) as compared to part-time workers where only about 18 percent possess a matric, indicative, perhaps, of part-time jobs requiring fewer skills than full-time occupations. This may explain (in part) why part-time workers earn, on average, a significantly lower hourly wage than individuals who work part-time. Full-time jobs are also typically more secure than part time jobs, with more than eight out of every 10 full-time employees reported to have a permanent employment contract with their employer, as compared to only 5 out of every 10 part-time employees. In addition, a significantly greater percentage of full-time employees belong to a union, and are reported to receive benefits in the form of pension fund contributions, and/or medical aid contributions for themselves and/or their families, and/or paid leave.

The results of the descriptive analysis presented above would suggest that part-time jobs are likely to be low-skilled, offering lower pay and fewer (if any) benefits than full time work. Nonetheless, flexible working hours may offer individuals the opportunity to supplement household income while still fulfilling various household responsibilities. It is possible, however, that some of the individuals who work part-time would prefer not to, and are willing to supply additional hours of work to the labour market. These workers are typically referred to as the '*involuntary underemployed*'.

The next section explores international recommendations regarding how to identify individuals who are underemployed, and (recognising the limitations of data available in South Africa) adopts a suitable definition of involuntary underemployment. Section three then explores, in both a univariate and a multivariate context, what factors distinguish individuals who voluntarily work part-time from those that desire longer working hours.

2. Defining underemployment

2.1 International guidelines:

The International Labour Organisation first addressed the problem of defining and measuring underemployment in 1925 at the 2nd International Conference of Labour Statisticians (ICLS) (Görg and Strobel, 2001:4). However, it was only in 1966 that the 11th ICLS adopted the first international statistical definition of underemployment and established the foundations for current guidelines. Since then, the guidelines have undergone several revisions, most recently in October 1998 where a new resolution regarding the measurement of underemployment and other inadequate employment situations was adopted at the 16th ICLS.

The resolution makes recommendations regarding the measurement of *time-related underemployment* specifically⁷. According to the resolution time-related underemployment “exists when the hours of work of an employed person are insufficient in relation to an alternative employment situation in which the person is willing and available to engage” (ILO, 1998:2), and comprises all individuals in employment who exhibit the following characteristics:

a) Are *willing to work more hours than they are currently working*.

This may include individuals who want to work extra hours in their current job, persons who are willing to take on an additional job to increase their total working hours, or workers who would prefer a different job with longer working hours.

b) Are *available to work additional hours*.

This implies that individuals should be ready to work additional hours within a specified time period. ICLS guidelines recommend that the time period chosen should reflect national circumstances as well as the time typically taken for an individual to change jobs.

c) *Worked less than a threshold relating to working time*

This suggests that individual’s *actual* hours of work in all jobs during the reference period (as defined in international guidelines) should fall below some threshold chosen according to national circumstances.

2.2 Applying ICLS guidelines in South Africa

Using national household survey data, it is possible to contribute to current research on the underutilisation of labour in South Africa by measuring the magnitude of time-related (involuntary) underemployment, as well as the characteristics of the workers concerned. Not only do these surveys capture information on the number of hours individuals work, but also on their preference for additional working hours. On the basis of these data, and using the recommendations outlined in the 16th ICLS, it is possible to derive the following definition of time-related underemployment for South Africa:

Underemployment occurs when employed persons who work part-time (fewer than 35 hours a week) would like to work more hours than they are currently working.

This definition of underemployment is broadly consistent with ICLS recommendations, but it does have a number of limitations. First, the definition may overestimate the magnitude of underemployment as individuals (such as students

⁷ Underemployment also includes issues such as the underutilisation of individuals’ skills or qualifications as well as earnings and income adequacy. Measuring and analysing these additional aspects of underemployment is problematic, however, as the necessary data are often difficult to come by (OECD, 1990:179). The South African national household surveys, for instance, do not capture the information necessary to quantify these issues. In addition, the 16th ICLS notes that the statistical concepts required to describe these additional situations of underemployment are currently underdeveloped, and therefore does not make recommendations on how to define them (ILO, 1998:2).

working part-time⁸, for instance) who desire additional working hours, but who are not available to work these hours, will be included⁹. Second, this definition may overstate the extent of labour underutilisation resulting from underemployment, as it potentially includes individuals with a preference for additional working hours, but only at higher wage rates than are on offer. None of South Africa's household surveys question respondents regarding what wage individuals would require to take on extra working hours. Third, the definition excludes full-time workers who may wish to work longer hours. While this is not inconsistent with ICLS recommendations on how to define the underemployed (the ICLS recommends that for a person to be classified as underemployed their actual hours worked need to be less than some 'threshold' (here 35 hours a week)), excluding these workers will reduce the measure of labour underutilisation¹⁰.

3. Who are the involuntarily underemployed?

Earlier, it was shown that part-time workers are typically individuals who are likely to prefer a flexible work schedule to full-time employment. Not all part-time workers are content to work part-time, however, and those who are willing to work longer hours may be termed 'involuntarily underemployed'. The involuntarily underemployed may include workers who have less financial support from both present and/or absent household members than others, and thus need to supplement low (or non-existent) household earnings, individuals whose employment contracts are not permanent, as well as workers who receive low returns to their work and/or receive fewer benefits. The involuntarily underemployed are also likely to be younger, on average, than the voluntarily underemployed, perhaps lacking the experience and/or skills required to obtain full-time jobs.

3.1 Descriptive statistics

Table 3 uses data from the LFS 2003:2 to contrast the characteristics of the involuntarily underemployed with those of other part time workers (the voluntarily underemployed).

⁸ Note, though, that surprisingly few students are reported to work part-time in South Africa's national household surveys. Despite prompts instructing respondents to report all activities undertaken in the past week, even those for only one hour, only 468 000 out of almost 12 million employed workers were currently studying in September 2003, and only about one quarter of these individuals were working part-time. It is possible that many people who are furthering their education and who work part-time are captured as economically inactive in household surveys. In the LFS 2003:2, more than 2.5 million individuals older than 17 who are currently studying were reported as economically inactive according to the strict definition of unemployment (i.e. where individuals not searching for employment are excluded).

⁹ Since the introduction of the LFS in 2000 respondents have been required to answer questions regarding individuals' availability for additional work. Due to comparability concerns for the trends analysis in section 6 this criterion was not used to define underemployment in this study. In 2003, approximately 8 percent of involuntarily underemployed workers were reportedly unable to start additional work within 4 weeks.

¹⁰ For example, the Interviewers' Manual for the LFS 2003:2 indicates that the 'less-than-35-hour-a-week' criterion used to identify which workers would distinguish part-time from full-time workers was removed from the household survey questionnaires as "even people working full-time may want to work more hours, either to earn more or for some other reason" (SSA, 2003:61).

Table 3. Comparison of characteristics of involuntary and voluntary underemployed workers, (estimates reflect column percentages unless otherwise indicated)

	Involuntary underemployed	Voluntary underemployed
Total	509 200	1 229 500
Individual characteristics		
Female	61.2 (1.7)	60.3 (1.1)
African	83.0 (1.3)	71.9 (1.0)
Coloured	10.4 (1.0)	10.8 (0.6)
Indian	1.3 (0.4)	3.0 (0.4)
White	5.2 (0.8)	14.8 (0.8)
Mean age	37.4 (0.39)	41.2 (0.30)
15-29	29.9 (1.6)	22.4 (0.9)
30-44	42.2 (1.7)	38.1 (1.1)
45-59	25.5 (1.5)	28.7 (1.0)
60+	2.4 (0.5)	10.7 (0.7)
Married	45.6 (1.8)	54.1 (1.1)
Married women	26.4 (1.6)	31.1 (1.0)
Mean number of years of schooling	8.1 (0.14)	8.3 (0.10)
Matric	17.4 (1.4)	18.4 (0.9)
Urban	62.8 (1.7)	54.0 (1.1)
Employee	62.7 (1.7)	58.8 (1.1)
Household characteristics		
Mean household size	4.5 (0.10)	4.6 (0.06)
Mean number of children younger than 7 years in household	0.7 (0.03)	0.6 (0.02)
Mean number of children aged 7-14 years in household	0.8 (0.03)	0.8 (0.02)
Mean number of unemployed in household	0.6 (0.03)	0.5 (0.01)
Mean number of other employed in household	0.7 (0.04)	0.8 (0.02)
Mean other household income from employment (2003 Rands)	1 115 (104.67)	1 972 (103.59)
Occupational characteristics		
Mean hourly wage in main job (2003 Rands)	10.95 (0.79)	16.15 (0.72)
Mean total monthly income in main job (2003 Rands)	838 (50.52)	1 737 (71.52)
Mean 'actual' hours worked per week in main job	17.7 (0.34)	18.6 (0.22)
Benefits*	21.6 (1.9)	54.7 (1.4)
Union member*	9.0 (1.3)	23.2 (1.2)
Permanent*	24.9 (2.0)	62.7 (1.6)
Fixed period contract*	2.3 (0.7)	3.7 (0.5)
Temporary/Casual/Seasonal*	72.8 (2.1)	33.6 (1.6)

* Note that these categories are applicable to employees only.

The results show that less than a third of South Africa's part-time workers are reported to want longer working hours, with women comprising approximately 60 percent of both involuntary and voluntary underemployment. A significantly greater percentage of involuntarily underemployed are African as compared to the voluntarily underemployed. In particular, Africans constitute more than 80 percent of involuntarily underemployment, but only about 70 percent of the voluntarily underemployed. In addition, a greater portion of the voluntarily underemployed is either married, or married women, in comparison to the involuntarily underemployed, reinforcing the view that individuals with household obligations may prefer part-time work.

The age profile of these two groups of part-time workers suggests that the voluntarily underemployed are older, on average, than those part-time workers who want longer working hours. An examination of the distribution of workers by age category reveals that almost 30 percent of the involuntarily underemployed are aged 15-29 years as compared to a significantly smaller portion of voluntarily underemployed workers. It is possible that these younger individuals have taken on part-time jobs as they lack the skills and/or experience to obtain full-time work (perhaps having been forced to find employment at an earlier age than expected due to family considerations, such as retrenchments or HIV/AIDS.) In contrast, the voluntarily underemployed comprise a much greater proportion of older workers than amongst the involuntarily underemployed. This is consistent with individuals using part-time employment as a 'bridge' into retirement and with supplementing their own or their spouses' retirement income.

Although a significantly greater portion of involuntarily underemployed work for others in comparison to the voluntarily underemployed, it is surprising to find that approximately 40 percent of the involuntarily underemployed are self-employed. Presumably individuals who work for themselves are free to choose how many hours they work. It is possible, though, that while the self-employed may want to work longer hours and perhaps expand their businesses, that family considerations prevent them from doing this.

With respect to the location of workers, amongst part-time workers a significantly smaller proportion of the voluntarily underemployed (54 percent) are found in urban areas as compared to the involuntarily underemployed (more than 60 percent). This may be the result of urban areas attracting job seekers who, in the face of competition for the jobs available, are unable to obtain full-time employment and reluctantly take on part-time work.

Despite there being no significant difference in the average number of hours worked by the voluntarily and involuntarily underemployed, nor in their average educational qualifications, the involuntarily underemployed receive, on average, a significantly lower hourly wage than the voluntarily underemployed. Furthermore, the voluntarily underemployed are likely to work in occupations which are more secure and which offer more benefits than the occupations of the involuntarily underemployed. For example, more than six out of every ten voluntarily underemployed employees are reported to have a permanent contract with their employers, while about five out of ten are reported to receive benefits. In contrast, only one fifth of involuntarily underemployed employees are reported to receive benefits or have a permanent

contract, while more than seven out of ten work on a temporary, casual or seasonal basis. In addition, there is no significant difference in the average number of hours worked by the involuntarily and voluntarily underemployed.

Amongst part-time workers there appears to be little difference in the average number of children living in the household. Furthermore, there is no significant difference in the average number of employed, the average number of unemployed, or the average household size of these individuals. It is clear, however, that the involuntarily underemployed typically live in households with access to significantly less earned income than the voluntarily underemployed. This points to the possibility that the involuntarily underemployed may want to work longer hours due to a lack of sufficient income support from other household members.

The results of this descriptive analysis suggest that both supply-side (individual and household characteristics) as well as demand side (occupational characteristics) factors may explain why some individuals are ‘content’ with part-time employment while others are not. To obtain a more textured understanding of the predictors of involuntary versus voluntary underemployment, the next section explores in a multivariate context what factors distinguish involuntary part-time workers from those that do not desire additional working hours. The focus is on supply-side determinants only, as introducing certain occupational characteristics into the multivariate analysis reduces the sample to employees only, and also introduces problems of collinearity amongst these variables.

3.2 The supply-side determinants of involuntary versus voluntary underemployment: A multivariate analysis

A probit model that takes the following form is used to test the determinants of involuntary versus voluntary underemployment:

$$\Pr (y_i = 1 \mid X_i) = \Phi (\alpha, X_i)$$

X_i is a vector of observed characteristics for individual i , y is a binary categorical variable which takes the value of 1 if the individual is involuntarily underemployed, and Φ is the standard cumulative normal distribution.

The regression comprises variables that control for individual characteristics – dummy variables reflect the gender, population group, employment type (employee or self-employed) and marital status of the individual, and variables affecting the individual’s potential productivity are also included, namely age and education level dummies. A dummy variable, indicating whether the individual resides in an urban area takes into account the potential influence of locational characteristics.

The effects of household composition are captured by including variables for the number of children under seven years of age in the household as well as the number of children aged seven to fourteen years. A number of variables were also included to account for individual’s access to both earned and unearned income within the household. These include total household income generated through employment (other than the individuals’ employment), dummy variables equal to one if the person lives in a household where at least one member is reported to receive a grant, or to

have taken a loan, and a variable indicating the total number of migrants who remit at least once a year to the household.

For this regression the omitted or reference category is a person with the following characteristics: An unmarried African woman, aged between 44 and 60 years old with a matric level education who resides in an urban area. She is self-employed, with no access to any unearned sources of income (such as grants or loans).

The results of the estimation, taking into account weighting, clustering and stratification of the LFS 2003:2 sample are shown in Table 4 below.

Table 4. Regression results

Number of observations	3406	
F-statistic	6.91*	
	Coefficient	t-statistic (absolute value)
constant	-0.5764097*	5.86
Individual characteristics		
_15_29	0.3004282*	3.53
_30_44	0.1582407**	2.30
_60	-0.6917453*	4.59
male	-0.0474383	0.88
coloured	-0.2392411*	2.65
indian	-0.7103437**	2.59
white	-0.5161054*	3.65
yrsed	-0.0119059	1.48
married	-0.021812	0.35
urban	0.4050154*	5.71
empee	-0.0532281	0.83
Household characteristics		
nunder7	0.0350237	1.01
n_7_14	-0.03741	1.18
granthh	-0.0373533	0.56
loans	0.1606851*	2.70
othhinc	-0.000032*	3.10
nmremtyr	-0.1387455***	1.78

* significant at the 1 percent level
 ** significant at the 5 percent level
 *** significant at the 10 percent level

The results of the multivariate analysis confirm the findings of the descriptive statistics, which suggested that part-time workers are not a homogenous group. In particular persons younger than 44 years have a greater probability of being involuntarily rather than voluntarily underemployed, while amongst individuals aged 60 years and older the probability of being voluntarily underemployed is greater. Africans who work part-time are more likely to want to work longer hours, as are part-time workers who live in urban areas.

It is evident that household income in particular has a significant impact on the probability of involuntarily rather than voluntary underemployment. Living in a household where at least one member has taken a loan significantly raises the probability of the part-time worker wanting to work longer hours. This suggests that some of the involuntarily underemployed perhaps live in households where loans have been taken to intermittently solve financial difficulties. To help repay these loans

(and to avoid future financial trouble) individuals who otherwise may not have worked may take on any job available, including part-time work, until full-time work is available.

Living in households where at least one member receives a grant has no significant impact on the probability of involuntary versus voluntary underemployment¹¹. An individual's access to earned income is highly significant, however. In particular as the number of migrants who remit at least once a year to the household increases, the probability of involuntary underemployment decreases, suggesting that the receipt of regular remittances by households enables individuals to voluntarily take on work with reduced working hours. In addition, the probability of part-time workers desiring longer working hours decreases as the value of other earned income in the household rises. This suggests that part-time workers who do not desire longer working hours tend to work part-time because they can afford to do so.

So far the results of the analysis have suggested that not only are part-time workers likely to be different from individuals who work full-time, but also that part-time workers comprise individuals with distinguishing characteristics. In particular, individuals who work part-time and who want to work longer hours are likely to be Africans younger than 44 years of age, who live in urban areas and who have little access to earned income support from household members. They are also more likely to live in a household that has incurred debt as compared to individuals who are content with part-time employment.

The remainder of this analysis seeks to identify whether part-time employment, and in particular involuntary underemployment, is a growing phenomenon in South Africa. International research has shown that remarkable growth in part-time work is often associated with an increase in labour force participation, particularly among women (Tilly, 1991:10-11; Rosenfeld and Birkelund, 1995:114). While there is clear evidence of a feminisation of the labour force in South Africa (see Casale, 2003), there has thusfar been no research documenting trends in part-time employment.

4. Data Concerns

As mentioned earlier, national household surveys (notably the OHS and LFS) provide a reliable source of labour market data in South Africa and are commonly used by analysts to measure trends in both employment and earnings. Nonetheless, a number of concerns relating to the capture of employment data, the collection of information used to distinguish the underemployed from other employed workers, as well as the weighting of the data, warrant mention.

Most importantly, in an attempt to improve the collection of data on employment, SSA modified the questions that relate to an individual's employment status over the years. With the changeover to the LFS in 2000, for example, respondents have been provided with much more information regarding what activities constitute work, with the aim of capturing information on individuals irregular and informal work activities more comprehensively than in the OHS (Casale *et al* 2004:981). In addition

¹¹ Living in households where at least one person receives a grant is a crude measure of an individual's access to non-earned household income. Unfortunately, the LFS surveys do not question respondents on how many individuals in the households receive the various grants, nor on how much is received.

respondents are now required to report individual's paid and unpaid work (such as in a household business) even if these activities only occupied *one hour* of their time during the previous week.

Changes were also made to the latter OHSs that are likely to complicate the comparability of these data sets. Up until and including 1995, neither a definition of work nor a description of the types of activities that should be considered as work was provided in the OHSs (Muller and Posel, 2004:5). From 1996 onwards, however, the surveys were clearer, asking respondents to report all activities undertaken for "pay, profit or family gain", such as formal work, informal work and casual work. The descriptions of work provided were also more comprehensive – with formal work being described as "work for a salary, wage or profit" and examples of informal work being given, for example "making things for sale, selling things or providing a service, work on a farm or land, whether for a wage or as part of the household's farming activities".

The implication of these improvements in data capture is that the latter household surveys (the LFSs and also the latter OHSs) are likely to include individuals who, in prior surveys, would have been captured either as unemployed or as economically inactive. This is of particular concern for a study of trends in part-time work, and for research examining employment more broadly. Low and possibly irregular working hours, as well as dissatisfaction with minimal working hours, could mean that some workers' activities were not reported as employment in earlier surveys. As a result, any finding of an upward trend in underemployment (involuntary or voluntary) and therefore in total employment could reflect better data capture rather than real growth.

Not only have changes in survey design affected the capture of information on workers' activities, but differentiating between involuntarily underemployed workers, other part-time workers and the full-time employed consistently using national household surveys is also complicated by changes to the survey questionnaire over time. Typically, these workers would be distinguished using the information obtained in questions asking respondents to report the number of hours individuals work, and whether or not they want to work additional hours. However, questions capturing information on people's working hours have changed over the years.

In the earlier OHSs (up until 1996) respondents were only required to report individuals' actual working hours. Furthermore, no direction was provided to respondents regarding whether the hours of work reported should include overtime, or work done outside of the main job. From 1997 to 1999, respondents for the OHS were required to report separately both individuals' actual hours of work and their usual working hours, but were still not prompted to include or exclude overtime hours, or working hours from secondary employment. As a result, it is likely that estimates of working hours obtained from the OHSs reflect hours worked in the main job only, and, depending on respondents' interpretation of the questions, these estimates could either include or exclude overtime. With the introduction of the LFS, the instructions to respondents on how to report working hours have become clearer. Using the LFS it is possible to distinguish between the number of hours individuals actually work and usually work (including overtime) in both their primary job as well as in any other employment. It is not possible to identify exactly how many hours of overtime individuals worked, however.

A final problem which is likely to affect the comparability of data across the LFSs in particular, is that the February and September LFSs of 2003 are the only surveys which SSA has released with weights based on the 2001 population census. The earlier LFSs all use the 1996 population census weights, and at the time of writing SSA had not completed benchmarking the earlier LFS surveys to the 2001 population census count. As Casale *et al* (2004:985) note, this may mean that employment estimates from the earlier LFSs are biased downwards, and cannot be reliably compared with estimates obtained using the 2003 LFSs.

In light of these concerns, the following section uses data from the 1995, 1997 and 1999 OHSs, as well as the September 2003 LFS (LFS 2003:2) to examine trends in involuntary underemployment for individuals aged 15 years and older. Keeping in line with the recommendations of the 16th ICLS the estimates presented in this section are based on individuals' actual working hours.

5. Trends in involuntary underemployment, 1995-2003

Disaggregated measures of employment are shown in Table 5. The 'unspecified' worker category includes workers with no response to questions on the number of hours employed, full-time workers who are reported to work more than 112 hours a week, as well as those individuals working fewer than 35 hours a week who have either a 'don't know' or 'missing' response to the question asking whether more hours of work are desired. In an attempt to ensure some comparability across the years, estimates obtained from the LFS 2003:2 reflect individuals working hours (including overtime) in their main job only.

From Table 5 it is clear that the number of individuals with jobs has grown by more than 20 percent over the period, rising from about 9.7 million individuals in 1995 to about 11.8 million in 2003. Just under half (approximately 45 percent) of this rise in employment is the result of a growing number of individuals working part-time. Despite a 14 percent decline in the number of part-time employed from 1995 to 1997¹², over the entire period the number of individuals with part-time jobs more than doubled, rising from just under 800 000 workers to more than 1.7 million. Not all of these additional workers wanted to work part-time, however. Approximately one-quarter would have preferred to work longer hours, i.e. are involuntarily underemployed¹³.

The involuntarily underemployed comprise only a small portion of total employment in South Africa, ranging from three to eight percent over the years. Nonetheless, over the nine-year period there has been some expansion in this type of work. From 1995 to 2003, the number of involuntarily underemployed grew by more than 87 percent,

¹² Note though that the number of unspecified workers in 1997 is large (more than 500 000). A significant portion of this figure (about 55%) is the result of respondents failing to report information on people's hours of work. In addition, the reported number of total employed, and of full-time employed, also declined from 1995 to 1997.

¹³ Surprisingly few part-time workers who are currently studying were captured in the household surveys. In the LFS 2003:2, for example just over 100 000 part-time workers (6 percent) were currently studying. This may be because students (and/or their families) do not consider their part-time jobs as employment, and may therefore fail to report these activities in the household surveys, resulting in a possible underestimation of this work.

rising from roughly 270 000 workers to more than 500 000 workers. This upward trend has not been stable, however. The number of part-time employed wanting longer working hours rose up to a maximum in 1999 (of over 700 000 individuals) and then declined into 2003.

Across all the years, the number of individuals working part-time by choice, i.e. who would not like to work longer hours, has generally exceeded the number of involuntarily underemployed. Furthermore, over time the growth in voluntary underemployment has surpassed that of involuntary underemployment. As a result, by 2003 there were more than two voluntarily underemployed individuals for every one part-time worker desiring longer working hours.

Table 5. Measures of employment: 1995-2003 (Individuals aged 15 years and older)

	1995 OHS	1997 OHS	1999 OHS	LFS 2003:2
Total employed	9 719 800 (52 700)	9 183 500 (53 600)	10 571 600 (64 100)	11 801 300 (72 600)
Full-time employed^a	8 926 300 (51 400)	7 970 700 (51 000)	8 922 200 (60 700)	10 029 100 (69 200)
Part-time employed	793 500 (8 100)	685 800 (7 400)	1 449 700 (13 400)	1 738 700 (14 300)
Involuntarily underemployed	272 100 (10 600)	317 600 (11 300)	718 100 (19 300)	509 200 (17 800)
Other part-time	521 400 (13 500)	368 200 (12 100)	731 600 (19 600)	1 229 500 (26 300)
Unspecified^b	0	527 000 (6 100)	199 700 (5 500)	33 500 (2 200)
Involuntary underemployment as a % of total employment	3.0	4.0	8.0	5.1
Involuntary underemployment as a % of total part-time	34.3	46.3	49.5	29.3

Of course, evidence of an upward trend in part-time work and in involuntary underemployment specifically should be treated with caution as these increases coincide with better descriptions of employment, examples of the activities constituting work being provided to respondents, as well as prompts instructing respondents to report activities that may have otherwise gone unmentioned. While it is not possible to determine exactly what proportion of the total rise in part-time work or in involuntary underemployment, represents better data capture and how much reflects a real rise in this work, the possible implications of improved data collection for estimates of part-time work are shown in Tables 6, 7 and 8 below.

Table 6 uses data from the 1995 OHS and the LFS 2003:2 to show the distribution of the actual number of hours individuals worked in the week preceding the interview. In an attempt to ensure comparability, the estimates from the LFS 2003:2 reflect actual hours worked in the main job. Note, though, that the LFS estimates include any overtime hours worked, while it is not clear whether this is the case in the 1995 OHS. Furthermore, it is not clear whether the 1995 OHS estimates include hours worked in secondary employment.

Table 6. The distribution of the employed by actual hours worked, 1995-2003

Distribution of hours worked	1995 OHS			LFS 2003:2		
	Voluntarily underemployed	Involuntarily underemployed	Total employed	Voluntarily underemployed	Involuntarily underemployed	Total employed
<6	12 400 (2.4)	9 600 (3.5)	22 000 (0.2)	192 600 (15.7)	76 600 (15.0)	269 300 (2.3)
6 to 10	77 200 (14.8)	42 900 (15.8)	120 100 (1.2)	152 400 (12.4)	64 200 (12.6)	216 500 (1.8)
11 to 15	37 800 (7.3)	18 900 (7.0)	56 800 (0.6)	134 300 (10.9)	60 600 (11.9)	194 900 (1.7)
16 to 20	66 000 (12.7)	60 200 (22.1)	126 200 (1.3)	154 400 (12.6)	84 900 (16.7)	239 300 (2.0)
21 to 25	77 800 (14.9)	50 900 (18.7)	128 700 (1.3)	226 500 (18.4)	99 000 (19.4)	325 500 (2.8)
26 to 30	210 300 (40.3)	73 800 (27.1)	284 200 (2.9)	278 500 (22.7)	98 200 (19.3)	376 800 (3.2)
31 to 34	39 800 (7.6)	15 800 (5.8)	55 500 (0.6)	90 800 (7.4)	25 800 (5.1)	116 600 (1.0)
35 to 40	-	-	4 217 186 (43.4)	-	-	3 658 400 (31.0)
41 to 45	-	-	1 953 400 (20.1)	-	-	2 104 900 (17.8)
46 to 50	-	-	1 189 400 (12.2)	-	-	1 698 300 (14.4)
51 to 55	-	-	240 100 (2.5)	-	-	465 000 (3.9)
56 to 60	-	-	694 300 (7.1)	-	-	992 900 (8.4)
>60	-	-	631 900 (6.5)	-	-	1 120 200 (9.5)
Missing	-	-	0 (0)	-	-	22 800 (0.2)
Total	521 400	272 100	9 719 800	1 229 500	509 200	11 801 300

Note: Percentage estimates are presented in parentheses; standard errors available from author on request.

The results suggest that improvements in data capture over the years are likely to have had a substantial impact on the total number of individuals reported as employed, and in particular, on those captured as part-time workers. While the total number of employed has increased more or less across the entire distribution of working hours, the significant rise in the number of individuals reported to work for only a few hours is concerning. For example, from 1995 to 2003 the total number of workers reported to work less than six hours a week grew in excess of 1000 percent (more than 260 000 individuals). More than 70 percent of this increase is the result of more individuals being reported as voluntarily underemployed; accounting for approximately one-quarter of the total growth in voluntary underemployment over the period. An increasing number of involuntarily underemployed reported to work fewer than 6 hours a week accounts for almost 30 percent of the total rise in this type of work. The total number of individuals working six to 10 hours a week (i.e. those who are presumably employed on average one day a week) as well as 11 to 15 hours has also increased significantly over the years.

Not only is it likely that better data capture has resulted in an growing number of individuals who work very few hours being captured as employed in latter surveys, but these improvements have also resulted in more individuals involved in survivalist activities (such as subsistence farming and informal self-employment, for example) being reported as working (Muller and Esselaar, 2004, Muller and Posel, 2004). Table 7 uses data from the 1995 OHS and the LFS 2003:2 to categorise both full-time and part-time employment by sector, and suggests that while total employment and part-time work has increased across all sectors of work, more than 50 percent of the

recorded growth in voluntary underemployment, and almost 60 percent of the growth in involuntary underemployment, is associated with more of these individuals making work for themselves, either in the informal sector or in subsistence agriculture.

**Table 7. Employment categories: 1995 and 2003
(Number and percentage of individuals aged 15 years and older)**

1995 OHS				
	Total employment	Full-time employed	Voluntarily underemployed	Involuntarily underemployed
More than one job	140 700 (1.4)	125 100 (1.4)	9 500 (1.8)	6 000 (2.2)
Domestic worker	716 900 (7.4)	584 000 (6.5)	77 200 (14.8)	55 800 (20.5)
Subsistence agriculture	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Other agriculture	1 023 800 (10.5)	979 700 (11.0)	33 700 (6.5)	10 400 (3.8)
Informal self-employed	444 000 (4.6)	350 000 (3.9)	53 300 (10.2)	40 700 (15.0)
Formal self-employed	210 700 (2.2)	202 000 (2.3)	7 900 (1.5)	800 (0.3)
Employees	7 183 500 (73.9)	6 685 300 (74.9)	339 800 (65.2)	158 400 (58.2)
LFS 2003:2				
	Total employment	Full-time employed	Voluntarily underemployed	Involuntarily underemployed
More than one job	115 000 (1.0)	92 100 (0.9)	13 700 (1.1)	9 200 (1.8)
Domestic worker	1 024 700 (8.7)	740 500 (7.4)	171 500 (14.1)	112 700 (22.5)
Subsistence agriculture	274 600 (2.3)	64 400 (0.6)	176 400 (14.5)	33 800 (6.8)
Other agriculture	1 201 000 (10.2)	1 063 700 (10.6)	91 800 (7.5)	45 500 (9.1)
Informal self-employed	1 250 900 (10.7)	842 100 (8.4)	266 500 (21.7)	142 400 (28.0)
Formal self-employed	449 200 (3.8)	400 900 (4.0)	42 300 (3.4)	6 000 (1.2)
Employees	7 417 600 (63.2)	6 801 200 (68.0)	460 800 (37.5)	155 600 (30.6)

Note: Percentage estimates in parentheses; standard errors available from author on request. Estimates may not sum to the totals presented in Table 5 due to missing values.

No subsistence farmers were captured in the 1995 OHS (see also Casale *et al*, 2004:985). In 2003, however, more than 270 000 subsistence farmers were recorded, of which nearly 180 000 were reported to voluntarily work part-time, while a further 30 000 were reported to work part-time and desire longer working hours. No distinction has been made between formal and informal employees, as it is impossible to distinguish between formal and informal employees in the 1995 OHS (Muller and Posel, 2004:11). Estimates of the informal self-employment have increased substantially over the years, however. From 1995 to 2003 the total number of informally self-employed grew by more than 180 percent, rising from less than 400 000 to more than one-and-a-quarter million. Of this increase more than one quarter was the result of a growing number of individuals voluntarily making informal work for themselves, while more than 10 percent is the result of rising involuntary underemployment amongst the self-employed. Overall, the number of voluntarily underemployed who were reported to make work for themselves in the informal sector grew by more than 385 percent, rising from fewer than 60 000 workers to more than 265 000 workers. Amongst the involuntarily underemployed, informal self-employment also rose substantially, from fewer than 45 000 workers in 1995 to more than 140 000 workers in 2003 (an increase of almost 250 percent).

Despite the large documented increase in the number of individuals working only a few hours, as well as significant increases in the number of these individuals working in informal self-employment and in subsistence agriculture, it is highly unlikely that all of the documented increase in part-time work (and in total employment) is the artefact of better data collection alone. In an attempt to obtain a conservative estimate of the growth in part-time work, and in involuntary underemployment, Table 8 presents estimates of total part-time work, voluntary underemployment and involuntary underemployment along with estimates for these categories of all individuals involved in subsistence farming or informal self-employment, as well as any additional individuals who worked fewer than 6 hours a week.

Table 8. Estimates of part-time work, voluntary and involuntary underemployment, 1995 and 2003.

	1995 OHS	LFS 2003:2
Total part-time	793 500 (8 100)	1 738 700 (14 300)
Total part-time in informal self-employment, subsistence agriculture, or who worked <6 hours	109 800 (2 900)	742 200 (8 600)
Involuntary underemployment	272 100 (10 600)	509 200 (17 800)
Involuntary underemployment in informal self-employment, subsistence farming or who worked < 6 hours	46 200 (2 200)	210 900 (10 700)
Voluntary underemployment	521 400 (13 500)	1 229 500 (26 300)
Voluntary underemployment in informal self-employment, subsistence farming or who worked < 6 hours	63 700 (1 900)	531 400 (11 700)

Table 8 clearly shows that when excluding all informal self-employment and subsistence agriculture from estimates of part-time work in both 1995 and 2003, and further assuming that any additional increase in the number of individuals working fewer than 6 hours a week over these years was the result of better data capture, the total number of individuals working part-time would still have risen by almost 40 percent (about 310 000 workers). Of this growth, only about 20 percent is due to rising numbers of involuntary underemployed, however, amounting to an increase of little more than 70 000 workers. This suggests that the real growth in involuntary underemployment over the years is likely to be quite small.

6. Conclusion

While a significant body of research has attempted to address unemployment issues in South Africa, very little (if any) has focused on other aspects of the underutilisation of labour in the country, such as part-time work.

This paper has shown that South Africa's part-time workers are a distinct group from those that work full-time. In particular, part-time workers are most likely to be individuals (often women) with household responsibilities, such as having children in

the household, as well as older individuals nearing or in retirement. While those who work part-time are likely to have access to alternative income sources, the value of this income is typically lower than for full-time workers. This suggests part-time workers are likely to supplement household income, and serve to minimise child-minding costs for the household.

Not all individuals who work part-time prefer to work fewer hours, however. In some cases individuals desire more working hours, and are thus involuntarily underemployed. The involuntarily underemployed are more likely than the voluntarily underemployed to be young, African, and to live in urban areas in households where earned income from employment is quite low. They are also more likely to live in households where at least one member is in debt. It seems, therefore, that those who are voluntarily underemployed do not want to work longer hours as they have sufficient earned income support.

Tracking changes in part-time work, and in involuntary underemployment in particular, is complicated by improvements in data capture over the years. Nonetheless there does appear to have been a small expansion in this work over the years. A conservative estimate of the real growth in part-time work (where individuals employed part-time in informal-self employment and subsistence farming, as well as any additional individuals working fewer than 6 hours a week were excluded) would suggest that the number of part-time workers has risen by more than 300 000 individuals from 1995 to 2003. Most of this increase is the result of more individuals choosing to work part-time – involuntary underemployment only accounted for about 20 percent of this growth.

It is clear from this analysis that policy makers should not just focus on unemployment figures as a measure of underutilised labour in South Africa, but also on those individuals who are currently employed part-time and who are willing to supply additional hours of work to the labour market. However, before any market interventions can be developed, further investigation of the demand side causes of involuntary underemployment is required.

References cited

- Casale, D. (2003) "The Rise in Female Labour Force Participation in South Africa: An Analysis of Household Survey Data, 1995-2001", Unpublished Ph.D thesis, University of Natal.
- , Muller, C. and Posel, D. (2004) "'Two million net new jobs?' A reconsideration of the rise in employment in South Africa, 1995-2003", *The South African Journal of Economics*, 72(5), 978-1002.
- Dias, R. (2002) "Exploring the Nature of Unemployment in South Africa: Insights from the Labour Force Survey 2000" Paper presented at the 2nd Annual DPRU/FES Conference on Labour Markets and Poverty in South Africa, 22-24 October 2002, Muldersdrift, Johannesburg.
- Fagan, C. and Rubery, J. (1996) "The Salience of the Part-time Divide in the European Union" *European Sociological Review*, 12(3), 227-249.
- Görg, H. and Strobl, E. (2001) "The Incidence of Visible Underemployment: Evidence for Trinidad and Tobago" *CREDIT Research Paper No 01/10*. University of Nottingham.
- International Labour Organisation, (1998) "Resolution concerning the measurement of underemployment and inadequate employment situations", adopted by the Sixteenth International Conference of Labour Statisticians. Available from: <http://www.ilo.org/public/english/bureau/stat/res/underemp.htm>.
- Kingdon, G., and Knight, J. (2000) "Are Searching and Non-searching Unemployment Distinct States when Unemployment is High? The Case of South Africa" *Working Paper No. WPS/2000-2*, Centre for the Study of African Economies, Department of Economics, University of Oxford.
- (2001) "Why high open unemployment and small informal sector in South Africa?" Centre for the Study of African Economies, Department of Economics, University of Oxford, October 2001.
- Klasen, S., and Woolard, I. (1999) "Levels, Trends and Consistency of Measured Employment and Unemployment in South Africa", *Development Southern Africa*, 16(1), 3-35.
- (2000) "Unemployment and Employment in South Africa, 1995-1997" Report to the Department of Finance, South Africa.
- Long, J. E. and Jones, E.B. (1981) "Married Women in Part-Time Employment" *Industrial and Labor Relations Review*, 34(3), 413-425.
- Muller, C. and Esselaar, J. (2004) "Documenting the informalisation of work in South Africa: Evidence from national household surveys, 1997-2001" *Journal of Interdisciplinary Economics*, 15(3), 229-250.
- and Posel, D. (2004) "Concerns with measuring informal sector employment: An analysis of national household surveys in South Africa, 1993-2001" *Journal of Studies in Economics and Econometrics*, 28(1), 1-20.
- OECD (1990) "Involuntary Part-Time Work as a Component of Underemployment" in Chapter 7: *Employment Outlook July 1990*, Organisation for Economic Co-operation and Development.
- Posel, D. and Casale, D. (2001) "Gender aggregates: women subsistence farmers affect the unemployment count" *Agenda*, 49, 82-88.
- Rosenfeld, R.A. and Birkelund, G.E. (1995) "Women's Part-Time Work: A Cross-National Comparison" *European Sociological Review*, 11(2), 111-134.
- Statistics South Africa (2003) Labour Force Survey 2003:2 – Interviewers' Manual.

- Tilly, C. (1991) "Reasons for the continuing growth of part-time employment"
Monthly Labor Review, 10-18, March.
- Wilkins, R. (2004) "The Extent and Consequences of Underemployment in Australia"
Melbourne Institute Working Paper No. 16/04, Melbourne Institute of Applied
Economic and Social Research.
- Williams, D.R. (1995) "Women's part-time employment: a gross flows analysis"
Monthly Labor Review, 36-44, April.