

Why high open unemployment and small informal sector in South Africa?

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Abstract

Unemployment in South Africa is so widespread that it demands an explanation. This paper examines why the unemployed do not enter the informal sector, as is common in other developing countries. The findings provide little support for the idea that unemployed people choose to be unemployed: the unemployed are substantially worse off, and less satisfied with their quality of life, than they would be if informally employed. Various impediments to entry into the informal sector appear to increase open unemployment.

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1. Introduction

Unemployment in South Africa is remarkably high. In 1998 it was officially measured at 39% on the broad definition and 26% on the narrow definition (StatsSA, 2000). Moreover, it had risen steadily in the preceding years. Unemployment is potentially a matter of serious concern - for its effects on economic welfare, production, erosion of human capital, social exclusion, crime, and social instability. However, its potential costs depend on the nature of the beast. The question we address is this. Is much of the unemployment in South Africa largely voluntary in the sense that people choose not to enter free-entry informal sector employment? The answer has important ethical and policy implications. If unemployment is largely by choice, its cure can be downgraded as a policy concern. Interest groups and ideologues have taken predictable stances but the issue has not been addressed rigorously in South Africa.

Although the theoretical distinction between voluntary and involuntary unemployment is entrenched in the literature, the notion that one can judge whether unemployment is voluntary or involuntary has been questioned (Layard, Nickell, and Jackman, 1991). Their argument can be illustrated in Figure 1. For simplicity, the total labour force - the employed plus the unemployed - is assumed to be constant and equal to LL' on the horizontal axis. All workers are willing to work in the primary sector. The demand D_1 for primary sector employment is a function of the primary sector wage, set at W_1 by efficiency wages or union bargaining. Thus primary sector employment is shown by LN_1 . This leaves N_1L' workers available for the secondary sector. The curve D_2 shows the demand for labour in the secondary sector as a function of the wage in that sector. The secondary sector labour market is competitive, so that the wage adjusts to clear the market: N_2L' workers are employed at wage W_2 . This leaves N_1N_2 workers unemployed. These people are willing to work in the primary sector at the going wage W_1 but cannot find work there, but they are unwilling to work in the secondary sector at the going wage, W_2 . They are thus both involuntarily and voluntarily unemployed in this segmented labour market.

Notwithstanding the theoretical difficulties, Clark and Oswald (1994) and Theodossiou (1998) approach this question in the psychologists' tradition by examining the utility levels of the jobless. They find that unemployed persons in various developed countries have much lower levels of happiness or well-being than those in work, and accordingly reject the

hypothesis that unemployment is the outcome of choice. A number of economists refute the notion advanced by Benjamin and Kochin (1979) that a good proportion of interwar unemployment in Britain was voluntary and based on generous unemployment benefits (see papers by Cross; Collins; Metcalf, Nickell and Floros; and Ormerod and Worswick, in the *Journal of Political Economy*, 1982). Crafts (1987) argues that much of interwar unemployment in Britain was involuntary long-term unemployment which was not associated with high replacement ratios, with being well-off or with voluntary search: the lack of search was, for the most part, a result of discouragement - a choice made under duress.

The dominant view of unemployment in developing countries is that much open unemployment is due to search and is voluntary (Harris and Todaro, 1970; Harris and Sabot, 1982). Probabilistic models of rural-urban migration produce an equilibrium level of urban unemployment. The equilibrium condition is that, with the urban formal sector wage above the competitive level, the 'expected wage' (the formal sector wage multiplied by the probability of obtaining formal sector employment) equals the rural supply price. It might appear that the existence of a free-entry urban self-employment sector rules out the possibility of there being equilibrium unemployment. However, positive unemployment can arise because self-employment income is too low (as in Figure 1), or because the probability of securing wage employment is higher if search is conducted from open unemployment than from self-employment, or because self-employment is regarded with disdain. If formal sector job-search from unemployment is more efficient than from informal employment, those able to afford unemployment remain openly unemployed. However, the poor cannot afford to do so. If most unemployment in the economy is of this voluntary search variety, the inter-household relationship between unemployment and income is likely to be positive insofar as the informal sector would absorb the poor.

2. Unemployment and informal employment in South Africa

Consider the choice between self-employment and unemployment. In what circumstances would a worker be unemployed rather than self-employed? More specifically, why do unemployed workers in South Africa choose to remain unemployed and to search, or to wait, rather than join the free-entry informal sector? This informal sector might be an end in itself or a means to wage-employment, *i.e.* a base from which to search, or wait, for wage-employment. We shall adduce evidence to show that income from wage-employment greatly

exceeds income from self-employment. This suggests that wage-employment is the preferred state. However, income from self-employment will be shown to exceed income while unemployed. Why then do the unemployed not choose to search from the self-employed state? One possible explanation is that job-search is more efficient if undertaken while unemployed. In that case, unemployment might properly be regarded as voluntary. However, for many workers access to those informal sector activities which offer non-negligible income may be prevented by barriers to entry. In that case, there might be no viable alternative to unemployment for such people, and it would be misleading to label them as voluntarily unemployed.

Our concern in this paper is to pose the broad question: why do the unemployed not enter self-employment – is it voluntary or are they prevented by barriers to entry? In a sense, economic behaviour is always voluntary: economic agents invariably have at least some room for manoeuvre and choice. The real question is whether the available set of options is so limited as to render unemployment involuntary for practical and policy purposes.

Two definitions of the labour market are most frequently used in South Africa – the narrow (or ‘strict’) and the broad (or ‘expanded’). By the narrow definition, a jobless person is unemployed if she wants a job and searched for it in the previous week; by the broad definition, a jobless person is unemployed if she wants a job even if she did not search for one in the previous week. While the narrow concept has been adopted as the official definition of unemployment in South Africa since 1998, we prefer the use of the broad definition which dispenses with the search criterion. This is because our research suggests that search may take the form of waiting to hear of job opportunities from employed relatives and friends (i.e. search may be passive) and because we find evidence that lack of job-search is due to constraints such as poverty, high cost of job search from remote areas, and discouragement due to long duration of joblessness and to high local unemployment rates (Kingdon and Knight, 2000).

Whereas in the past, the absence of reliable nationally representative household-level data has prevented empirical analyses of such issues in South Africa, the recent availability of rich household survey data collected by the South African Labour Research Unit (SALDRU) and the Central Statistical Service (now known as Statistics South Africa) allows us to explore these issues. We use household survey data collected in 1993, 1994, and 1997 described in Kingdon and Knight (2001).

3. Why do the unemployed not enter the informal sector?

Employment in the informal sector is of course jointly determined by the supply and demand functions for labour (corresponding to the curves S_2 S_2 and D_2 D_2 respectively in Figure 1). It is nevertheless helpful to distinguish them. One possible reason why the unemployed do not enter the informal sector is that they prefer leisure and can afford it (the supply side). The other is that the unemployed are deterred from entering by barriers to entry (the demand side). The former suggests that unemployment is voluntary, and the latter that it is involuntary. In this section, we explore the relationship between labour market states (unemployment or informal employment), on the one hand, and poverty and perceived quality of life, on the other, in order to choose between the alternative hypotheses.

While there is no commonly agreed definition of ‘informal sector’, for present purposes we take informal workers to be those not in regular employment, that is, workers who are in casual wage employment, domestic service, or agricultural/non-agricultural self-employment¹. Table 1 shows that the informal sector absorbs only a very small proportion of the workforce by developing country standards (19% of the total labour force in 1993 SALDRU data) and that open unemployment is more common².

It turns out that this may be a generous estimate of the size of the informal sector. According to the definition of the informal sector employed by the Central Statistical Office (the predecessor of Statistics South Africa) – which includes own account workers, persons involved in both own account and formal sector activities, domestic workers and persons whose sector of work is unspecified – the informal sector absorbed only 10-12% of the total labour force in the years 1994-1999 according to the October Household Surveys (Table 2). Even by an expanded definition of the informal sector, the maximum size of the informal sector in South Africa in the October Household Survey was only 16.6% of the workforce in 1999 (StatsSA,

¹ Since domestic service is low-paid and was until very recently unprotected (often exploitative) employment, we consider domestic servants as informal workers even if they report themselves as ‘regular’ employees, as some of them do. Self-employed professionals are excluded from the definition of the informal sector and are assumed to be regular, formal sector workers.

² It is sometimes argued that the size of the informal sector in South Africa is underestimated and the unemployment rate overestimated because some people engaged in casual, small-scale self-employment or in illegal activities may not report these and they are counted as unemployed instead (Schlemmer and Levitz, 1998). However, the October Household surveys ask a detailed set of questions, making such underestimation of self-employment and over-estimation of unemployment unlikely (Bhorat, 1999). Moreover, it is not clear that illegal activity such as theft (information on which is indeed likely to be suppressed) should be counted as employment. Such activity is to some extent endogenous, *i.e.*, the effect of unemployment and of consequent destitution, an income transfer rather than a productive activity.

2000), as seen in Table 2³. Recent estimates of the percentage share of informal sector employment in the *non-agricultural* labour force have been collated for 30 developing countries by Charmes (1996). These are presented in Table 3. The average figure for 14 African countries was 65%; for 5 Asian countries (excluding the city states of Hong Kong and Singapore), 40%; and for 9 Latin American countries, 32%⁴. The South African figure of 16.6% is well below the figures for any of these countries other than South Korea (21%) and Turkey (17%). If cross-country data were generally available on the ratio of informal sector employment to unemployment, no doubt South Africa's ratio in 1999 (0.46) would be remarkably low. It is an important question: why is South Africa such an international outlier?

The probability distributions of monthly earnings of informal and formal sector workers in 1993 SALDRU data show that the distribution of informal earnings lies to the left of the distribution of formal earnings (Figure 2). The ratio of their geometric mean individual earnings (291 and 1017 rands per month) is 1 : 3.5. It might be argued that the lower earnings in informal work may be because of inferior characteristics of informal sector workers. We fitted earnings functions for formal sector workers (both OLS and selectivity-corrected ones) and used these to predict earnings of informal sector workers on the hypothetical basis that they faced the formal sector earnings equation. The results showed that a large part of the formal-informal earnings difference remained after controlling for characteristics, irrespective of whether we used the OLS or the selectivity-corrected earnings functions. The unexplained part (*i.e.* the difference due to coefficients) was 50% of the actual difference in mean earnings between the two sectors when we used OLS and 64% when we used selectivity-corrected earnings equations. This suggests that part of the reason why formal sector earnings are higher than those in the informal sector is that returns to characteristics are higher in the former.

Table 4 presents evidence on the relationship between labour market status and both poverty and wider measures of deprivation. It shows that, on virtually every indicator of wellbeing, unemployed people are very substantially worse-off than the informally employed. For example, per capita monthly household income (expenditure) of the unemployed is only

³ In 1997, Statistics South Africa expanded the definition of the informal sector to include wage-employed persons working for informal employers (thus re-classifying as informal sector workers some persons who were previously considered formal sector workers). The effect was to raise the proportion of the labour force absorbed by the informal sector from 12.5% in 1997 to 16.6% in 1999, as seen in Table 2.

⁴ Since much of the agricultural labour force in developing countries is engaged in small-scale or subsistence agriculture, the share of the informal sector in the *agricultural* labour force is expected to be even greater than that in the *non-agricultural* labour force reported in Table 3. For example, for India, the share of the informal sector in the non-agricultural labour force is 79% but its share in the total labour force is 92% (Kulshreshtha and Singh, 1998).

31.2% (48.2%) of the corresponding figure for the informally employed. Living conditions are also far worse for the unemployed than for the informally employed - in terms of living space, access to drinking water, and the availability of sanitation, electricity, *etc.* Insofar as the unemployed take account of their own individual income rather than household income per capita, it is notable that unemployment insurance is very limited in scope, that benefit entitlement lasts for only the first six months, and that only 1.3% of the unemployed received any unemployment benefit at the time of the survey.

Table 5 presents the average predicted earnings of unemployed people in informal employment. It presents these separately for people in informal self-employment and in informal wage employment, *i.e.* among domestic servants and those in other casual wage employment. It shows that, depending on the model used, their predicted earnings in such employment are between 1.44 and 2.35 times their income in unemployment, *i.e.* their average per capita household income (of R 186 per month, as seen in Table 4)⁵.

It is arguable that when predicting earnings in informal self-employment we overestimate the return to labour by failing to isolate the return to capital in self-employment. In order to identify the marginal return to labour (MRL), we fitted a Cobb-Douglas production function for the sample of the self-employed. For those self-employed persons who reported having no capital (the very smallest-scale self-employed operations), their net income from the enterprise is taken as their MRL. The median (mean) MRL per month for this group is R 160 (447). For self-employed persons who use any capital, the median (mean) MRL calculated

⁵ The coefficients of earnings functions fitted on informal sector workers (self-employed and casual waged workers separately) were used to predict earnings of unemployed persons. The selection term lambda was significant at the 1% level in both the informal and casual earnings equations, and it was well identified through use of household demographic variables in the first stage probit. Selectivity-corrected earnings functions gave higher average predicted earnings from informal employment than did OLS earnings functions, irrespective of whether the selectivity term lambda was included in the prediction or not. Both approaches have been used in the literature. The lambda-inclusive approach is typically justified in studies that use it on the grounds that the dot product of all the regression variable means and their respective coefficients gives the mean of the observed wage. Some studies also include lambda owing to the erroneous belief that lambda is a measure of unobserved characteristics. The lambda-exclusive approach is used in many studies on the grounds that the role of the inclusion of lambda is simply to correct the bias in the remaining coefficients in an OLS regression and that constructed lambda itself is not a variable but rather a part of the error term. While the choice of model in Table 3 does not alter our inference - namely that predicted earnings in informal employment greatly exceed unemployed income - we would tend to favour the lambda-exclusive model since lambda is not a measure of unobserved characteristics: it is simply a monotonically decreasing function of the probability of being in informal employment. For individuals who have a high probability of being in informal employment, lambda is given a value close to zero, irrespective of their unobserved characteristics; for individuals who have a low probability, lambda is assigned a high value. Thus, while one might infer something about a person's unobserved traits from the value of lambda at low values of the observed variables, one cannot infer anything about unobserved traits at high values of observed variables. For a review of the two approaches see Schaffner (1998) and Vella (1988). Also see Manski (1989) and Johnston and DiNardo (1997) for a critique of the sample selection methodology.

from the production function is R 188 (1273). Thus, the median return to labour in informal self-employment - with or without capital- is significantly greater than a person's median income in unemployment (R 104 per month in Table 4); the same is true of mean values (Table 6). The unemployed are clearly worse off, on average, than they would be in the informal sector. This is also true of the majority of unemployed individuals. We used selectivity-corrected earnings functions fitted for self-employed persons to predict the individual self-employment earnings of the unemployed sample. We then compared these with their individual unemployment income, i.e. their household per capita income, and found that for 87.5% of the unemployed individuals, predicted monthly informal sector earnings exceeded monthly household per capita income. Some part of the difference may be necessary to compensate for the disutility of effort involved in informal sector employment. Nevertheless, it would be remarkable if the unemployed chose to remain so deprived. It appears that the limited opportunities for entering the informal sector provide no real alternative to unemployment for most of the unemployed.

The voluntary unemployment hypothesis can be further tested following the approach of Clark and Oswald (1994), di Tella *et. al.* (1998), Theodossiou (1998), and Blanchflower and Oswald (1999) described earlier. Their evidence – coming from the US and Europe - indicates that the unemployed are substantially and significantly less happy than the employed and it is used to suggest that unemployment must be involuntary because people would not choose to be unhappy⁶. Following this literature, we extend the notion that comparing well-being levels across individuals can shed light on the nature of their unemployment. We pose the question: are unemployed people any happier than informally employed people? If they are, then it might be possible to argue that their unemployment is the result of choice, and hence voluntary, rather than due to limited opportunities for informal sector work.

We test the hypothesis for South Africa by examining the impact of the household unemployment rate and the household informal-employment rate on the household's perceived quality of life and poverty, controlling for other factors. The SALDRU survey (SALDRU93) asked households the question: 'Taking everything into account, how satisfied is this household with the way it lives these days?' The five possible responses were 'very satisfied', 'satisfied',

⁶ It is possible to argue - given the cross-section nature of the data used in these studies - that causality may run the opposite way: unhappy people are less desirable to employers so that low well-being might be the cause of joblessness rather than its effect. While this objection is hard to overturn conclusively, Clark and Oswald (1994) cite longitudinal evidence collected by psychologists that sheds doubt on this reverse causality interpretation (see Warr, Jackson and Banks, 1988).

‘neither satisfied nor dissatisfied’, ‘dissatisfied’, or ‘very dissatisfied’. In order to investigate the impact of unemployment and informal sector employment on perceived quality of life, an ordered probit model was used, with ‘very dissatisfied’ given the value of 0; ‘dissatisfied’ 1; ‘neither satisfied nor dissatisfied’ 2; ‘satisfied’ 3; and ‘very satisfied’ 4. Thus, the dependent variable can be interpreted as an index of happiness or of satisfaction with life.

The analysis was carried out using household-level data since the quality-of-life code is available only at the household and not at the individual level⁷. The unemployment variable is the household unemployment rate, *i.e.* the percentage of labour force participants aged 16-64 within the household who are unemployed⁸. Other variables in this regression are household variables, cluster variables, or aggregated individual variables averaged across all household members (*e.g.* average age of all labour force participant members of the household, percentage of household members with higher education, *etc.*).

Table 7 presents the ordered probit equation for the quality of life (or happiness) index fitted on SALDRU93 data. It shows that, in general, happiness increases with income and education, as found in European and US studies, and is lower for each of the race groups African, coloured and Indian, than for whites. Whereas the household unemployment rate significantly lowers household happiness - controlling for household per capita income and other factors - the household informal employment rate does not depress it. To the extent that earned income is mediated by employment status, the association of unemployment and happiness is likely to be greater than that seen in Table 7. When household income dummies were excluded (results not reported), the marginal effect of unemployment on happiness fell from -11 percentage points to -16 percentage points.

In summary, the unemployed are substantially disadvantaged *vis a vis* the informally employed in terms of income and expenditure, and also feel less happy. This casts doubt on the luxury unemployment hypothesis and implies that the unemployed have little choice but to remain disadvantaged. It suggests that the informal sector is not generally a free-entry sector in South Africa, and that there may be barriers which prevent many of the unemployed from

⁷ When using individual-level data in the initial runs, the household’s quality-of-life code was assigned to each member in the household. The results were very similar to those reported in Table 5, and are available from the authors.

⁸ For example, in a household with three labour force participants where one is unemployed, the household unemployment rate is 33%. Thus, the household unemployment rate takes values such as 0, 0.20, 0.25, 0.33, 0.40, 0.50, 0.67, 0.75, 0.80, or 1.0 for most households.

entering much of this sector. Several authors note that many activities in the so-called informal sector of developing countries are highly stratified, requiring skills, experience and contacts, with identifiable barriers to entry. For example, petty trading often has highly structured labour and product markets with considerable costs of entry. Banerjee (1986) found that in urban India, entry into the self-employment sector is not easy. Even when skill and capital are not required, entry can be difficult because of the presence of cohesive networks which exercise control over location and zone of operation.

There is a paucity of evidence on whether the informal sector is a free-entry sector and on why it is relatively small in South Africa. However, there are pointers. Historically the apartheid system repressed the informal activities of black South Africans through such restrictive legislation as the Group Areas Act, harsh licensing, strict zoning regulations, and effective detection and prosecution of offenders (Rogerson, 1992). Bouts of slum clearance and other periodic attacks on the illegal spaces within which informal enterprise thrived, served to rid South African cities of black-dominated informal sector niches that were construed as hazardous to public health and stereotyped as unsightly and unsanitary (Rogerson 1992). While these restrictions have been progressively lifted since the mid-1980s, there were lingering licensing controls and restrictive bye-laws in many urban centres at the time of the surveys⁹. Moreover, repression and disempowerment of Africans under apartheid would have inhibited the development of entrepreneurial and social skills and of social networks. These factors are important for confidence in entering the self-employed sector and for success in it¹⁰.

Labour market institutions such as Industrial Councils (now called Bargaining Councils) and Wage Boards set sectoral minimum wages and stipulate working conditions in many industries in South Africa. These minimum wages and stipulations are applied to all firms in the industry and region, irrespective of size, *via* the 'extension' provision. There are serious penalties for flouting the agreements of these institutions. Such provisions impose a burden of high labour costs on small firms and it is likely that they would seriously inhibit the entry and

⁹ A 1999 government document titled 'Ideas Paper No. 1: South African Labour Market and Job Creation' states that many local governments still put obstacles in the way of the self-employed and informal sector, or fail to provide the planning support and facilities needed for them to thrive.

¹⁰ Maluccio, Haddad and May (1999) using panel data from Kwazulu-Natal find that social capital - as measured by the frequency of group membership - had increased very substantially between 1993 and 1998 following the dramatic political changes that occurred early in that period. While such increases in social networks should perhaps have increased the size of the informal sector since 1993, the available data suggest no marked expansion. For example, between OHS94 and OHS98, the size of the informal sector (for comparability across years, defined as own-account workers and excluding domestic workers and employees working in informal units) remained roughly constant over the four-year period, being 10.1% in 1994 and 9.5% in 1998 (StatsSA Statistical Releases, various years), though this is a very inadequate definition of the informal sector.

growth of such firms (Black and Rankin, 1998, p461). This is one explanation for the large average size of firms in South Africa. These institutional features may inhibit small firms but should not inhibit individual entrepreneurship, i.e., owner-operators. Self-employment may be hampered by capital/land/credit constraints as well as by lack of infrastructure in black townships (Kaplinksy, 1995, p188). Moreover, both small firms and owner-operators are likely to suffer from the prevalence of violence and insecurity in the informal sector (Kaplinksky, 1995; Manning and Mashigo, 1993).

In sum, while it is possible that formal-work aspirations, greater effectiveness of search from the unemployed than from the informally employed state, and access to non-earned income are reasons why some persons choose to remain unemployed, the evidence of much greater deprivation associated with unemployment than with informal sector employment tells against the idea that much unemployment in South Africa is voluntary. It suggests that barriers-to-entry into the informal sector are a powerful factor in explaining high unemployment.

A possible objection to this inference is that unemployed formal-sector job-search is an investment in future higher incomes and people may be willing to endure temporary poverty and deprivation in order to engage in full-time job-search. If the unemployed are indeed engaging in such an inter-temporal optimisation strategy, then being in unemployment and poverty may still be consistent with voluntary search unemployment. However, data on hours spent in job-search by the unemployed and data on duration of unemployment cast doubt on this interpretation. Only 9% of the narrowly unemployed searched full-time (35 or more hours) for work in the reference week, and the vast majority (68%) spent no more than 10 hours in job-search. Thus, it would have been possible for most of the searching unemployed persons to combine job-search with informal sector work.

While the SALDRU93 survey did not ask a question on unemployment duration, the October Household Surveys include a question for unemployed persons on the duration of their uncompleted spell of unemployment. The answers are recorded in categorised form rather than as a continuous variable. The categories in OHS97 are 'less than 1 month', 'between 1 and 6 months', '6 months to 1 year', '1 to 3 years' and 'greater than 3 years'. By assigning midpoints of the categories, a duration-of-unemployment variable 'number of months' has been created. For those who were unemployed for more than 3 years, an arbitrary value of 48 months was

assigned¹¹. The survey also asked individuals whether they had ever worked previously. Table 8 gives the distribution of duration of unemployment. It shows very long duration of unemployment (>3 years) for 37% of the unemployed. A further 29% were unemployed for between 1 and 3 years, so that about two-thirds of all jobless workers were unemployed for more than a year. The mean uncompleted duration of unemployment in 1997 was about 2 years and 2 months and the median was 2 years. The distribution of unemployment duration and its long mean and median, together with the earlier evidence of poverty and lack of wellbeing among the unemployed, casts doubt on the notion that a high proportion of the jobless are unemployed by choice.

Finally, an ordered probit of duration of unemployment (not presented) was fitted as a function of variables which would influence employability and the cost of search, using the OHS97 data. Even standardising for these variables, we found a negative relationship between per capita household expenditure and unemployment duration. A Smith-Blundell test failed to reject the exogeneity of the per capita expenditure variable¹². This evidence suggests that poverty increases unemployment duration, perhaps by inhibiting search. This is consistent with Kingdon and Knight's (2000) results which show that poverty deters job search activities in South Africa. It is also consistent with the observations of Wilson and Ramphela (1989) who provide substantial anecdotal evidence that poverty inhibits job-search in South Africa. These findings cast doubt on the hypothesis that unemployment while in poverty is a chosen search strategy, and they support the hypothesis that unemployment is involuntary.

4. Conclusion

Unemployment in South Africa is so widespread that it demands an explanation. This paper has examined the question: why do the South African unemployed not enter the informal sector?

¹¹ The mid-point values attached to the 5 duration categories 'less than 1 month', 'between 1 and 6 months', '6 months to 1 year', '1 to 3 years' and 'greater than 3 years' were 0.5, 3.5, 9.0, 24, and 48 months respectively. It is unfortunate that the last category is truncated at 3 years since a high proportion of all unemployed people fall in this category and many of them may suffer unemployment for much longer periods than 3 years. There is a loss of information and of variability in the duration variable because of this truncation. However, this is better than the duration information available in the OHS94 dataset where the truncation occurs at 1 year and where more than two-thirds of the unemployed were unemployed for more than 1 year!

¹² When log of per capita household expenditure is instrumented by household assets, the coefficient on the instrument is close to zero. In other words, there is no positive relationship between prosperity and unemployment duration. These results are available from the authors.

The findings provide little support for the idea that unemployed people choose to be unemployed. The unemployed are, on average, substantially worse off than the informally employed - in terms of income, expenditure and well-being. This contradicts the luxury unemployment interpretation of joblessness, whereby higher household income reduces the incentive to become employed in the informal sector and increases the incentive to consume more leisure. It might be contended that, given the disutility of work, some people prefer to substitute leisure for higher monetary income, so that their apparent deprivation cannot be used to argue that they are constrained to be unemployed. However, if their unemployment is to be interpreted as voluntary, such people should be happier (or less unhappy) than employed people. Our findings show that the unemployed are very substantially and significantly less satisfied with their quality of life than informally employed people. They suggest that unemployment arises not through choice but through impediments to entry into informal work, and they are at odds with the notion that unemployment is the outcome of choice. Although this important issue deserves more research, we find various plausible reasons why the informal sector has been inhospitable to newcomers in South Africa.

It is very likely that most currently unemployed workers in South Africa are involuntarily unemployed in the sense that they would accept formal sector jobs at the going wages. Although each unemployed worker may voluntarily choose not to enter free-entry activities, this may well be because incomes in the free-entry part of the informal sector are extremely low. The apparent act of choice is effectively involuntary. For as long as barriers to entry continue to restrict opportunities in much of the informal sector, this sector will be unable to absorb significantly more of the currently jobless. Unemployed workers face a high probability of remaining unemployed, whatever their search activity. A graphic example is provided by the 39,000 applications for 35 permanent jobs as gardeners and cleaners which were advertised by the University of Cape Town¹³. The need for policies that would reduce unemployment in South Africa is compelling. So also is the need for research that would compare South Africa with similar developing countries which have avoided high unemployment.

¹³ *Monday Paper*, 16, 3, March 3-10, 1997, University of Cape Town, "Applications Stream in for Workers' Posts".

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Table 1
Distribution of the labour force in South Africa,
by gender, region, and race
SALDRU 1993 data

	Unemployed (a)	Informally employed (b)	Formally employed (c)	Total (a + b + c) %	N
Rural					
males	35	13	52	100	3038
females	48	25	27	100	2671
total	41	18	41	100	5754
Urban					
males	21	15	64	100	4121
females	27	26	47	100	3441
total	24	20	56	100	7562
Rural+urban					
males	27	14	59	100	7204
females	36	25	38	100	6112
total	31	19	50	100	13316
Race					
African	39	21	40	100	9578
Coloured	21	15	64	100	1302
Indian	11	15	73	100	451
White	5	14	81	100	1985
total	31	19	50	100	13316

Table 2
Distribution of the labour force in South Africa
(October Household Survey: 1994 - 1999)

	'Broad' labour force	Unemployed	Informal worker	Formal worker
A. Original definition of informal sector				
1994				
- '000	11643	3672	1174	6797
- (%)	(100.0)	(31.5)	(10.1)	(58.4)
1995				
- '000	11390	3321	1162	6907
- (%)	(100.0)	(29.2)	(10.2)	(60.6)
1996				
- '000	11787	4197	979	6611
- (%)	(100.0)	(35.6)	(8.3)	(56.1)
1997				
- '000	12100	4551	1217	6332
- (%)	(100.0)	(37.6)	(10.1)	(52.3)
1998				
- '000	15024	5634	1429	7961
- (%)	(100.0)	(37.5)	(9.5)	(53.0)
1999				
- '000	16251	5882	1892	8477
- (%)	(100.0)	(36.2)	(11.6)	(52.2)
B. Expanded definition of informal sector (includes persons working for someone else who operates in the informal sector)				
1997				
- '000	14449*	5202	1804	7443
- (%)	(100.0)	(36.0)	(12.5)	(51.5)
1998				
- '000	15024	5634	2065	7325
- (%)	(100.0)	(37.5)	(13.7)	(48.8)
1999				
- '000	16251	5882	2705	7664
- (%)	(100.0)	(36.2)	(16.6)	(47.2)

Source: Statistics South Africa (1998) "Employment and Unemployment in South Africa: October Household Survey 1994-1997", Statistical Release PO317.10, for 1994-1997 figures. Statistical Release P0317, on <http://www.statssa.gov.za> dated 18 May 2000 for 1997, and 1998 figures; Statistical Release P0317 on the same website dated 31 July 2000 for 1999 figures.

Note: The original definition of 'the informal sector' is as used in the Statistical Releases of Statistics South Africa up to 1996. It includes own account workers, persons involved in both own account and formal sector activities, domestic workers and persons whose work sector is unspecified. The broader definition of the informal sector (used by StatsSA since 1997) takes away from the 'formal sector' and assigns to the 'informal sector' persons working for someone else who operates in the informal sector. This definition is used in Section B of the Table.

*The 1997 figures in section B of the table (the bottom rows) differ from the 1997 figures in section A. The reason is explained in the Statistical Release P0317 dated 18 May 2000, page 4 which states that in the earlier 1997 OHS Statistical Release, those working in the mining sector were excluded from the calculations of labour force statistics, since the sampling frame did not adequately cover mining hostels and that, as a result, the labour market statistics given for OHS97 in the current release may differ from those given in the original 1997 statistical release.

Table 3
Estimates of informal sector employment as a share of the non-agricultural labour force,
by continent and country

Country	Year	Percentage
<u>Africa</u>		
Algeria	1985	26
Benin	1993	93
Burkina Faso	1985	70
Chad	1993	74
Egypt	1986	65
Guinea	1991	75
Kenya	1990	61
Mali	1989	79
Mauritania	1988	75
Morocco	1982	57
Niger	1977	63
Senegal	1980	76
Tunisia	1989	39
Zaire	1983	60
<u>Latin America</u>		
Argentina	1985	29
Brazil	1985	30
Colombia	1985	35
Costa Rica	1985	28
Chile	1985	37
Guatemala	1985	34
Mexico	1985	30
Peru	1985	35
Venezuela	1985	26
<u>Asia</u>		
Hong Kong	1981	10
India	1988	79
Indonesia	1980	39
Iran	1986	45
Korea, Republic of	1980	21
Singapore	1980	12
Turkey	1990	17

Source: Charmes (1996).

Table 4
Labour market status and Socio-economic situation
SALDRU93 data

	Unemployed	Informally employed	Formally employed
Household unemployment rate	0.751	0.134	0.105
Per capita household income:(Rand/month)			
- mean	185.68	594.50	989.90
- median	104.26	200.00	549.25
Per capita household expenditure: (Rand/month)			
- mean	221.02	458.55	772.15
- median	147.30	242.02	440.53
Other indicators:			
Remittance income/total income	0.17	0.07	0.01
Other non-earned income/total income	0.26	0.10	0.04
Below international poverty line of \$1 a day	0.45	0.30	0.08
Number of assets*	3.16	4.11	5.25
Years of education	7.06	6.66	8.51
African	0.90	0.78	0.58
Household size	7.01	5.38	4.70
Perception of well-being:			
Dissatisfied or very dissatisfied with life	0.73	0.57	0.46
Thinks that the most important help by govt would be help with jobs	0.65	0.51	0.44
Living conditions:			
Lives in a house/part of house	0.50	0.56	0.66
Number of household members per room	1.95	1.61	1.27
Dwelling has corrugated iron roof	0.65	0.60	0.45
Piped water within or tap in yard	0.43	0.61	0.75
Has to fetch water daily	0.53	0.36	0.22
Distance to water (meters)	260.90	174.14	83.61
Dwelling has flush toilet	0.33	0.50	0.68
Dwelling has electricity connection	0.35	0.52	0.71
Community characteristics:			
Urban	0.43	0.58	0.65
Homeland	0.59	0.41	0.24
Number of facilities in community	2.90	3.43	5.80
Distance to facilities from home	98.89	74.37	65.17
Community has tarred roads	0.15	0.28	0.43
Roads impassable at certain times of year	0.51	0.43	0.27
N (% of labour force)	4154 (31%)	2542 (19%)	6620 (50%)

Notes: Apart from 'years of education' and community characteristics, all above variables are coded at the household level in the dataset. For the purposes of this table, however, we have assigned the value of the household variable to each individual member of the household. Then we take the sub-sample of persons in each labour market 'state' and average the variables across individuals in that state. Similarly, the community variables are assigned to each individual living in that community before averaging across unemployed individuals in a given state. The very high household unemployment rate in the first column indicates that unemployed people are likely to live in households where other members are unemployed as well. *Number of assets owned by the family from among the following list: motor vehicle, bicycles, radio, electric stove, gas stove, fridge, primus cooker, TV, geyser, electric kettle, and telephone.

Table 5
Average of predicted earnings of unemployed persons

Wage equation	In informal self-employment	In casual wage employment
OLS	267	286
Selectivity corrected (λ exclusive prediction)	363	389
Selectivity corrected (λ inclusive prediction)	437	430

Table 6
Marginal product of labour in self-employment

	Marginal product of labour in self-employment		Monthly per capita income in unemployment
	With capital	Without capital	
Median	188	160	104
Mean	1273	447	186

Note: For self-employed persons whose businesses used any capital, log of (value of) output was regressed on log of (value of) input and on logs of capital and labour hours. Other variables were years of education and region (urban and homeland). The adjusted R-square was 0.695. The mean (median) marginal product of labour was calculated by multiplying the coefficient on log of labour by the mean (median) of ratio of output to labour. This yielded a MPL of R 187.91 per month on the basis of 40 hours work per week and 4.3 weeks per month.

Table 7
Impact of unemployment and informal employment on perceived quality of life
SALDRU - Household level averaged data

Variable	Coefficient	Robust t-value	Marginal effect**	Coefficient	Robust t-value	Marginal effect**
Household unemployment rate	-0.326	-6.40	-0.117	-0.307	-5.38	-0.110
HH informal employment rate				0.038	0.73	0.014
Age	-0.030	-2.79	-0.011	-0.030	-2.75	-0.011
Age square	0.000	2.71	0.000	0.000	2.67	0.000
Education : primary*	-0.017	-0.28	-0.006	-0.017	-0.28	-0.006
junior*	0.018	0.29	0.007	0.020	0.32	0.007
secondary*	0.091	1.46	0.033	0.094	1.51	0.034
higher*	0.580	5.88	0.208	0.585	5.90	0.210
Training*	-0.392	-4.55	-0.141	-0.390	-4.54	-0.140
Migrate*	0.206	1.70	0.074	0.207	1.70	0.074
HH per capita income Quartile2	0.016	0.36	0.006	0.021	0.47	0.008
Quartile3	0.242	3.73	0.087	0.252	3.87	0.090
Quartile4	0.285	3.53	0.102	0.298	3.53	0.107
Lives in owned home*	0.120	2.73	0.043	0.120	2.73	0.043
Number of children<16 in HH	0.003	0.34	0.001	0.004	0.41	0.002
Number of elderly>64 in HH	0.030	0.98	0.011	0.029	0.96	0.011
Urban*	-0.201	-2.23	-0.072	-0.205	-2.30	-0.074
Male*	-0.026	-0.56	-0.009	-0.020	-0.44	-0.007
African*	-0.935	-8.74	-0.335	-0.935	-8.74	-0.335
Coloured*	-0.432	-3.65	-0.155	-0.429	-3.63	-0.154
Indian*	-0.253	-2.33	-0.091	-0.254	-2.34	-0.091
Racial minority in community*	0.178	1.78	0.064	0.173	1.76	0.062
Homeland*	0.003	0.02	0.001	-0.002	-0.02	-0.001
Cluster controls		yes			yes	
Province dummies		yes			yes	
N		7212			7212	
LogL		-9717.66			-9716.27	
Restricted LogL		-10657.14			-10657.14	
Pseudo R-square		0.0882			0.0883	

Note: * signifies a 0/1 variable. ** signifies marginal effect of variable on the probability that the household is satisfied or very satisfied with its quality of life. Cluster controls include cluster crime rate, cluster food-price index, and a dummy for whether cluster has roads that become impassable at certain times of the year. Omitted categories are no education, no pre-employment vocational training, non-migrant, lowest household per capita income quartile, non-owned home, rural, female, white race, non-minority and non-homeland.

Table 8
Percentage distribution of duration of unemployment, OHS97

Uncompleted duration	Frequency	Percent	Cumulative percent
0 - 1 months	1012	6.3	6.3
1 - 6 months	1694	10.6	16.9
6 -12 months	2794	17.5	34.4
12-36 months	4574	28.7	63.1
>36 months	5891	36.9	100.0
All	15965	100.0	100.0

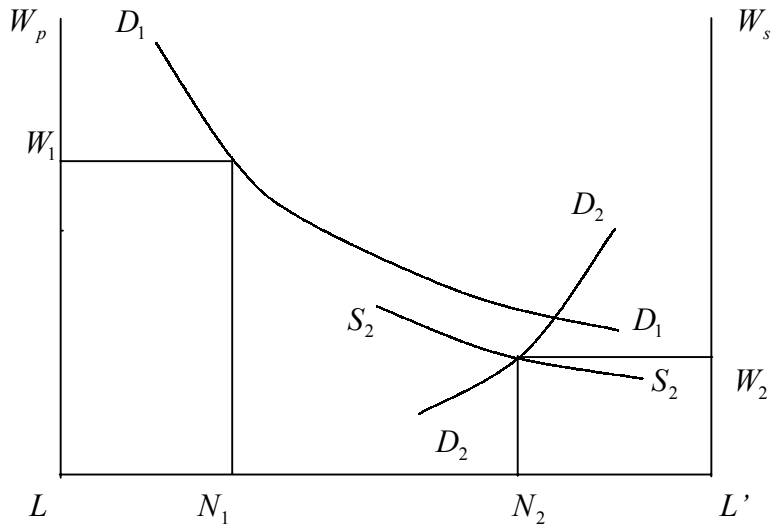


Figure 1
The formal and informal sector of the labour market

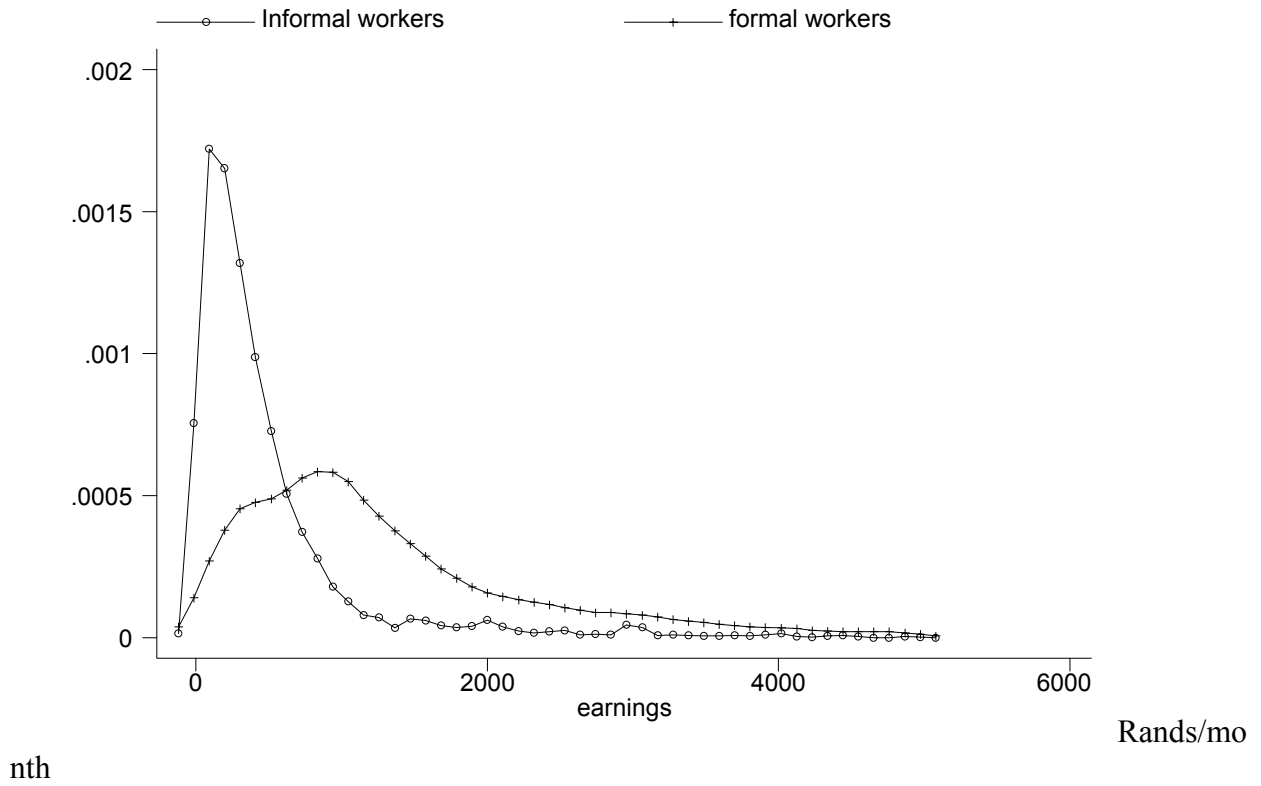


Figure 2
Epanechnikov kernel density of monthly earnings
(The area under each curve is equal to 1.0)