



The Global Financial Crisis and South Africa:  
What has Been the Impact on the Labor Market?

Sher Verick  
International Labour Office & IZA

27 - 29 October 2010  
Indaba Hotel and Conference Centre  
Johannesburg  
South Africa

Hosted by



# **The global financial crisis and South Africa: what has been the impact on the labor market?**

**Sher Verick\***

*International Labour Office (ILO) and IZA*

\* - I gratefully acknowledge comments and suggestions from Hielke Buddelmeyer, Duncan Campbell, Sandrine Cazes and Theo Spareboom. The views in this paper are those of the author and do not necessarily represent those of the International Labour Organization (ILO).

# **The global financial crisis and South Africa: what has been the impact on the labor market?**

## **Abstract**

The global financial crisis of 2007-2009 deeply impacted South Africa resulting in almost 900,000 (net) job losses. Rather than translating into a surge in official unemployment, the main effect of the downturn has been a rise in discouragement, particularly for uneducated black South Africans. For this reason, the key challenge for policymakers is to develop effective interventions that increase job search, especially among the unskilled. Overall, the empirical findings highlight the need to look at the impact of the crisis on all labor force states and the role of socio-economic characteristics in driving vulnerability in the labor market.

JEL Classification: G01, J21, J64

Keywords: global financial crisis, unemployment, discouraged workers, South Africa

Corresponding author:

Sher Verick  
Senior Research Economist  
Employment Analysis and Research Unit  
International Labour Office (ILO)  
4 route des Morillons  
CH-1211 Genève 22  
Switzerland  
Tel: +41 22 799 7614  
E-mail: verick@ilo.org

## 1. Introduction

Since the end of Apartheid, the South African economy has struggled to reach its potential, constrained by a range of economic and structural factors. In particular, due to weak economic performance and long-term impediments, the creation of decent jobs has not kept up with the increase in labor supply over recent decades, and consequently, a large segment of the population remains marginalized in the labor market.

The situation in the South African labor market has attracted considerable attention from both policymakers and academics, especially because of the challenges and puzzles it poses.<sup>i</sup> In this regard, the labor market is characterized by both a low employment-population ratio and the high rate of unemployment in the country. At the same time, the informal sector is relatively small, which is partly a legacy of Apartheid policies that discouraged entrepreneurship. The high rate of unemployment is in turn a reflection of the underdeveloped informal sector (OECD 2008). Overall, there is a low level of labor utilization, which has suppressed the growth potential of the country. On top of these characteristics, real wages in South Africa have either remained stagnant or fallen over the post-Apartheid period, above all for low-skilled workers.

During the global boom years of 2002-2007, unemployment in South Africa began to fall as economic conditions further improved. In this respect, the unemployment rate reached a low of 25 per cent in 2007, down from 31.2 per cent in 2003. Despite this recent trend, the persistently high level of unemployment and the lack of job opportunities in the formal economy continued to be a major challenge for the Government of South Africa, even before the recession of 2008-2009. The situation has been direr for youth, black South Africans, the less-skilled, and women, who continue to experience major barriers to participating in the labor market, especially in finding jobs in the formal economy (Banerjee et al. 2006). Youth in particular have faced considerable hurdles in the labor market:

according to the September 2007 Labour Force Survey, the unemployment rate of young people aged 20 to 24 stood at 44.7 per cent, which is globally one of the highest youth unemployment rates.

Owing to its strong links with the global economy, South Africa was hit hard by the crisis, which has come on top of the longer term structural problems in its economy and labor market. Consequently, the country fell into a recession in the fourth quarter of 2008; estimates indicate that overall GDP growth in 2009 will be -2.1 per cent.<sup>ii</sup> This severe slump has largely been driven by a contraction in the manufacturing sector, along with a fall in output in the mining, financial, real estate and business services, and wholesale and retail trade sectors (Statistics South Africa 2009, South Africa Reserve Bank 2009). The South African government recognized the severity of the downturn and responded with a loosening of monetary policy and a fiscal stimulus package that aimed to support demand and create jobs.<sup>iii</sup>

Real GDP growth was 0.9 per cent in the third quarter of 2009, suggesting that the South African economy has technically emerged from recession. This trend was largely due to a return to positive growth in the manufacturing sector, followed by general government, construction and personal services sectors (Statistics South Africa 2009). In spite of this improvement in the economy, the situation in the South African labor market is, however, unlikely to improve rapidly because of the typical lag between economic and employment recovery.<sup>iv</sup> Moreover, the global downturn of the last two years has already demonstrated that translating the aggregate economic impact to outcomes in the labor market is complex and is influenced by a number of factors, not only the magnitude of the economic contraction. For this reason, a micro-level analysis of the labor market is crucial to provide policymakers with insights into how the South African labor market has been affected and which segments have been hit hardest. To this end, the focus of this paper is on consequences of the 2008-2009 downturn in terms of changes to labor force status in South Africa and how this varies across the population.

The remainder of the paper is structured as follows: section 2 summarizes the data and definitions used in the paper. Next, section 3 presents the empirical strategy, preliminary statistics and micro-estimates of the determinants of labor force status before and after the global financial crisis of 2007-2009, including

the role of gender, race and education in driving vulnerability to poor outcomes in the labor market. Finally, section 4 concludes.

## **2 Data and definitions**

Data used in this paper is sourced from Statistics South Africa's Quarterly Labour Force Survey (QLFS), which is a household-based survey of individuals aged 15 years or older.<sup>v</sup> Statistics South Africa revised its previous biannual survey (LFS) and launched the QLFS in 2008. The QLFS is conducted as a rotating panel with households remaining in the panel for four consecutive quarters. The sample size for the QLFS is approximately 30 000 dwellings and these are divided equally into four rotation groups, i.e. 7 500 dwellings per rotation group. The sampling weights take into account the original selection probabilities, adjustment for non-response, and benchmarking to known population estimates from the Demographic Division of Statistics South Africa. The sample used in this paper for both deriving preliminary statistics and estimating the multinomial logit model consists of all individuals aged between 15 and 64 (i.e. the working age population) (including those in agriculture). All figures and estimates presented below are population weighted.

The analysis below focuses on five labor force states: formal sector employment; informal sector employment; unemployment; discouragement; and other out-of-the-labor force. As per Statistics South Africa, the definition of informality is based on the size of the firm and whether the employer is registered for VAT and income tax. In addition, employment in a private household is also categorized as informal sector employment. A person is defined as unemployed if they: a) were not employed in the reference week; b) actively looked for work or tried to start a business in the four weeks preceding the survey interview; and c) would have been able to start work or would have started a business in the reference week. A discouraged individual is jobless but has given up job search (i.e. criteria b)). Those classified as other out-of-the-labor force include individuals in education, retirement or those with caring responsibilities.<sup>vi</sup>

## 3 Results

### 3.1 Preliminary statistics

Table 1 summarizes the key individual and household variables used in the econometric analysis. These figures indicate that there are significant disparities in labor force status by gender, household size, education, marital status, and race, which have been well documented in the literature (see, for example, Banerjee et al. (2006)). In particular, those working in the formal sector tend to be older, male, better educated, married, and have a smaller family. Black South Africans are over-represented in the informal sector, unemployment, discouragement and other forms of inactivity. For this reason, these characteristics are included in the empirical specification used below.

During the crisis-induced recession of 2008-2009, the subsequent impact on labor force status in South Africa was multifaceted and in some respects unexpected. Overall, the number of South Africans employed has fallen from 13,729,000 in the second quarter of 2008 to 12,855,000 in the third quarter of 2009 (a drop of 6.1%), which has been driven by layoffs particularly in the wholesale and retail trade, manufacturing, and agricultural sectors. As a result, the employment-population ratio dropped from 44.7 per cent (2008Q2) to 41.3 per cent (2009Q3).

In addition to considering the aggregate adjustment in employment, it is also important to look at changes to employment in informal and formal sectors.<sup>vii</sup> It is usually assumed that the urban informal sector absorbs workers who are unable to find a job in the formal sector, though the literature increasingly views the sector as consisting of both survivalists and entrepreneurs who chose to operate informally.<sup>viii</sup> During a downturn, particularly one that is driven by a global, synchronized crisis, it is expected that employment in a developing country will fall in the formal sector, accompanied by a rise in employment in the informal sector.

However, informal sector employment in South Africa has surprisingly fallen during the crisis, from 17 per cent of total employment in 2008Q2 to 15.5 per cent in 2009Q3. Altogether, the number of workers in the informal sector fell by 347,000. At the same time, formal sector employment has increased its share of total employment from 68.6 per cent in 2008Q2 to 70.6 per cent in 2009Q3 (though in absolute numbers, employment in the formal sector fell from 9,415,000 to 9,073,000). Over the period 2008Q2 to 2009Q2, the informal sector accounted for 64 per cent of job losses in comparison to 16 per cent in the formal sector (the rest occurred in private households and the agricultural sector). In the last quarter (2009Q3), this situation has reversed, and now the majority of job losses took place in the formal sector (55% versus 23% in the informal sector). This suggests that adjustment in the informal sector has been more rapid while employers in the formal sector are only more recently resorting to layoffs to cope with reduced demand.

The fall in employment levels in South Africa did not initially translate to an increase in official unemployment. In fact, the unemployment rate for the whole population only increased from 23.1 per cent in 2008Q2 to 23.6 per cent in 2009Q2. More recently, however, the situation has deteriorated further and the rate has since jumped to 24.5 per cent in 2009Q3 (Figure 1). The unemployment rate of youth increased by 3.9 percentage points over this period (from 44.5% in 2008Q2 to 48.4% in 2009Q3) compared with 3.0 percentage points for prime-age men and a fall of 0.3 percentage points for prime-age women.<sup>ix</sup> Reflecting the long-term inequalities present in the labor market, unemployment has increased more for black and colored South Africans.

**< INSERT FIGURE 1 HERE >**

Since employment has fallen while unemployment has remained relatively static (at least in the initial stages of the downturn), the change in labor force status during the crisis must be reflected by movements in inactivity. Indeed, the percentage of the working-age population that was classified as inactive or out-of-the-labor force (OLF) increased from 41.9 per cent in 2008Q2 to 45.2 per cent in 2009Q3. Delving further into inactivity reveals that the largest change has been for discouraged workers, i.e. those who are unemployed but have given up job search. This category accounted for 7.7 per cent of

the inactive (including retirees, those in education, etc) prior to the crisis but has since increased to 11.6 per cent. Altogether, the number of discouraged workers increased from 1.08 million in 2008Q2 to 1.63 million in 2009Q3.

These trends indicate that the impact of the 2008-2009 recession on the South Africa labor market is best reflected by a broader definition of unemployment, which includes discouraged workers. This is plotted in Figure 1, which illustrates the increase over the crisis period cited above, particularly since the first quarter of 2009.

**< INSERT TABLE 1 HERE >**

In summary, reviewing the aggregate labor force statistics reveals a number of unexpected labor market outcomes as a consequence of the global financial crisis and the ensuing South African recession. Firstly, while employment levels have fallen, this did not at first translate into a substantial rise in unemployment, but rather into a surge in discouragement. Secondly, workers were initially leaving the informal sector at a greater rate, which is consistent with the view that the informal sector in South Africa does not act as an absorber of laid-off workers who do not have any form of income support and the means to find alternative employment in the formal sector (see, for example, OECD (2008)). These findings are further explored in the empirical analysis presented in section 3.2.

**3.2 Estimates from a model of labor force status: rising unemployment or discouragement?**

To identify the labor market impact in the South African context, this section estimates a model of labor force status separately for before and after the onset of the crisis (2008Q2 versus 2009Q2 and 2009Q3). The model of labor force status is estimated using a multinomial logit specification, which has the following response probabilities (see, for example, Wooldridge (2002)):

$$P(y = j | x) = \frac{\exp(x\beta_j)}{1 + \sum_{h=1}^J \exp(x\beta_h)}, \quad j = 1, \dots, J$$

where  $y$  is the outcome variable (labor force status),  $x$  is a  $1 \times K$  vector of explanatory variables,  $\beta_j$  is  $K \times 1$  vector of coefficients. In the context of this paper, the dependent variable consists of five labor force states ( $J=5$ ): formal sector employment; informal sector employment (including private households); unemployment; discouraged workers; and other forms of inactivity. Formal sector employment is used as the normalized outcome. The model is conditioned on age, education, marital status, household size, population group and province. Due to differences in labor force participation, the model is estimated separately for women and men. To ease interpretation of the results, average partial effects (APEs) are estimated, which provide more consistent estimates than marginal effects at the mean (Bartus 2005).<sup>x</sup>

**< INSERT TABLES 2 AND 3 HERE >**

The estimated averaged partial effects for females indicate that a range of individual and household characteristics drive labor force status (Table 2). Based on the average partial effect at the mean age (34.6 years), an additional year would increase the probability of both formal and informal sector employment, while it would lead to a decrease in the likelihood of unemployment and other forms of inactivity.<sup>xi</sup> The impact of an additional year on the probability of discouragement is not consistent over the crisis period.

Education plays a dominant role in differences across labor force status of South African women. In particular, the less education a woman has, the less likely she is to be employed in the formal sector and the more likely she is employed in the informal sector, unemployed, discouraged and inactive. Most striking is the situation for females with at most a primary education: they have a much lower probability of formal sector employment than those with a tertiary education (a difference of more than 52 percentage points in 2008Q2).

Turning to different population groups, the estimates confirm the disparities that have long been present in the South African labor market. In comparison to whites, black South African women are more likely

to be informally employed, unemployed and discouraged, while they are less likely to be formally employed or inactive for other reasons. Colored women are more likely to be employed in the informal sector (only since the onset of the crisis) and unemployed, and less likely to be out of the labor force than white women. Finally, Indian/Asian women have a lower probability of being employed in the formal sector (only significant since 2009Q2) and informal sector (only pre-crisis). At the same, Indian/Asian women have a higher probability of unemployment and other forms of inactivity.

The specification used in Table 2 also includes two variables reflecting household status. Firstly, being married or cohabiting decreases the likelihood of formal sector employment, unemployment and other forms of inactivity for women, while its impact on other states is not significant. Secondly, there is a significant correlation between household size and labor force status. That is, a larger household is associated with a lower probability of employment of women (in both the formal and informal sector) but a higher chance of being unemployed, discouraged or out of the labor force. This result suggests that intra-household transfers are likely to play an important role in helping South African women who are jobless, an issue returned to below when investigating the reasons behind discouragement.

Similar to the findings for women, education has the largest average partial effect on the probability of being in a labor force state for men, though the APEs tend to be smaller than for females (Table 3). Having less education (compared to tertiary education) reduces the likelihood of formal sector employment, while it increases the likelihood of all other states. Like the estimates for females, this result is strongest for South African men who have at most a primary education: the probability of formal sector employment for these individuals is 35 percentage points lower than those with a tertiary education.

In general, the estimates of the effect of race on male labor market outcomes are broadly in line with the results for women. More specifically, being a black South African man reduces the probability (in comparison to white males) of formal sector employment and other forms of inactivity, while it raises the likelihood of informal sector employment, unemployment, and discouragement (only significant at

the 10% level). The results for colored South African males are similar to those found for black males, though the APEs are mostly smaller.

In comparison to women, marital status appears to have a much larger association with labor market outcomes for South African men. In particular, being married or cohabiting increases the probability of formal sector employment by 12.7 percentage points in 2008Q2, which increases to 17.5 percentage points in 2009Q3 (i.e. well into the crisis period). At the same time, this characteristic reduces the likelihood of unemployment, discouragement and other forms of inactivity. The impact of household size on the probabilities is similar to the findings for women.

To highlight the changes over the crisis period, it is more illustrative to consider these results in terms of average predicted probabilities based on the estimates of the multinomial logit model (tables 2 and 3). In this part, the focus is on the predicted probabilities of unemployment, discouragement and informal sector employment by education status and race to highlight the most significant changes (holding all other explanatory variables at their mean).

Overall, the predicted probabilities for females suggest that there has been little change over the crisis period (Table 4). The only significant changes are for black females (the probability of informal sector employment fell for these women from 14.8% in 2008Q2 to 12.8% in 2009Q3) and those with less education. In the latter case, the likelihood of discouragement increased by 1.6 percentage points for women with less than a year 12 education (and more than a primary level), while the probability of informal sector employment fell by 3 percentage points for women with at most primary education. One explanation for the fall in informal sector employment is that these women were working in sectors that were badly hit, namely, the manufacturing and wholesale and retail trade sectors.

**< INSERT TABLE 4 HERE >**

Turning to the average predicted probabilities for men, the results indicate that changes over the crisis period were stronger in comparison to females (Table 5). However, most of the significant changes are

evident in the case of the probability of discouragement. More specifically, the likelihood of being in this state has increased for black males and those with less than a tertiary education. Mirroring the results discussed above, the largest change was for South African males with at most a primary education. In this case, the average predicted probability of discouragement rose from 4.2 per cent in 2008Q2 to 7 per cent in 2009Q3. The likelihood of informal sector employment fell for black South African men from 13.9 per cent to 12.1 per cent.

**< INSERT TABLE 5 HERE >**

To further underscore the changes since the onset of the recession in South Africa, it is useful to view the predicted probabilities for females and males in a graphical form (now only focusing on discouragement) and plotting them against age. Age is used because of the known disparities facing young people in the labor market and the overall changes in employment status over the life-cycle. This is done for all three waves, 2008Q2, 2009Q2 and 2009Q3, holding other characteristics constant. To highlight the strongest impact of the crisis, the different effects of race, education status along with marital status are combined to demonstrate the situation for one of the most vulnerable groups in the South African labor market (uneducated, unmarried black South African females and males).

In line with the findings presented above, the most prominent change in labor force status over the crisis period has been in terms of discouragement. The change in predicted probabilities of discouragement displayed in Figure 2 illustrate that the likelihood of being in this state has increased for both men and women who are uneducated, unmarried, and black. The rise has been larger for men though the predicted probabilities for males in this group still remain less than for their female equivalents. The maximum probability of discouragement for women in this vulnerable group increased from 10.0 per cent in 2008Q2 (reached at an age of 30 years) to 12.0 per cent in 2009Q3 (at 31 years). For men, the peak in the probability of discouragement rose by a greater amount, from 7.4 per cent prior to the crisis to 11.5 in the latest quarter (2009Q3).

**< INSERT FIGURE 2 HERE >**

In summary, these estimates generated from the multinomial logit specification confirm that the impact of the crisis in South Africa is mainly evident in an increase in discouragement, which has important gender, education and racial dimensions.

### **3.3 Explaining rising discouragement over the crisis period**

The rise in discouragement in South Africa during the global financial crisis of 2008-2009 is both surprising and disconcerting, especially for policymakers. Being discouraged implies that individuals of working age are no longer actively searching for a job due to the costs of job search or belief that it is not worth looking for employment. The discouraged do not, therefore, include individuals who are voluntarily inactive because of education, family responsibilities, retirement, etc. Thus, discouraged workers would like to work but just have given up searching (this can be called a marginal attachment to the labor force). To elicit further insights, this section investigates the characteristics of discouraged workers in South Africa in comparison to the unemployed and how these individuals are able to survive outside the labor market. This exercise also illustrates whether unemployed and discouraged individuals are indeed different in terms of individual and household characteristics.

Table 6 reports the forms of income support reported by discouraged and unemployed individuals, before and since the onset of the crisis. These population weighted figures indicate that the main form of income support for both the unemployed and discouraged is provided overwhelmingly by other persons in the household. 74.8 per cent of discouraged workers received such support prior to the onset of the crisis, which has increased to 80.8 per cent in 2009Q2, before dropping again to 78.3 per cent in 2009Q3. The number of unemployed receiving this type of support is at a similar level but has decreased over the crisis period. Support from persons not in the household and child support/foster care grants are also important sources but have not been increasing in a consistent manner since the start of the recession in South Africa. Savings are a minor form of support for those without a job.

**< INSERT TABLE 6 HERE >**

The other forms of support are only reaching a very small minority of the population of discouraged and unemployed workers. In general, only around a quarter of discouraged individuals receive social security payments (child grants, benefits from the Unemployment Insurance Fund (UIF), pension, plus welfare grants). This situation has not changed significantly over the crisis.<sup>xii</sup>

Looking beyond the receipt of support, it would be inaccurate to view both unemployed and discouraged workers as idle. Indeed, the data reveals that these individuals are engaged in a number of activities (farming, fetching water, producing household goods, doing construction, and catching food). For instance, 6.7 percent of the unemployed and 10.5 per cent of the discouraged reported that in the last week, they undertook work on their own or the household's plot or farm. 12.2 per cent of the unemployed and 21.7 per cent of the discouraged also indicated that they fetched water. There is, however, no indication that these non-market activities have changed significantly over the crisis period.

The next step is to estimate the impact of receiving such forms of support on the probability of being discouraged (as opposed to being unemployed and actively searching for a job – the key difference is thus job search). As reported in tables 7 (females) and 8 (males), a range of individual and household characteristics are associated with being discouraged. However, most of the average partial effects reported are small.

**< INSERT TABLES 7 AND 8 >**

Using the base specification for females (columns 1 to 3 of Table 7), the estimates suggest that, prior to the start of the recession in South Africa, being poorly educated, married and living in a large household increased the probability of discouragement over unemployment. Surprisingly, there isn't a consistently strong impact of race (after controlling for age, gender, education, etc). Increasing the age by one year (from the mean) implies a marginal fall in the likelihood of discouragement over unemployment.

Moving to the crisis period (2009Q2/Q3), the most significant change in the average partial effects is for the education dummies. In particular, compared to females with a tertiary education, having at most a primary education increases the probability of discouragement over unemployment by 18.6 percentage points in 2008Q2. This figure increases to 21.4 percentage points in 2009Q3 after the onset of the crisis. A similar rise is evident in the effects of the other education dummies. This suggests that the worst educated were more likely to give up job search during the recession in South Africa. This finding is consistent with observations made in previous studies such as Banerjee et al. (2006) that there has been a structural shift in the South African labor market towards more skilled workers. This would increase discouragement for the unskilled, which in turn has accelerated during the recent economic downturn.

In terms of regional variation (APEs not reported in tables 7 and 8), the estimates indicate that the probability of discouragement over unemployment has changed more in certain provinces. In particular, the probability of discouragement for women has increased in Eastern Cape, Free State, KwaZulu-Natal, Mpumalanga, and Limpopo, while it has decreased in Western Cape. For example, women in the KwaZulu-Natal province had a higher probability of discouragement of 2.1 percentage points in 2008Q2 (over those in Gauteng province). Since the onset of the recession, this has increased to 15.7 percentage points (2009Q3).

The estimates for the male subsample are broadly similar to those for females (Table 8). The largest increase is also for the education dummies: having at most a primary education reduced the likelihood of discouragement over unemployment 7.2 percentage points in 2008Q2, which surged to 21.6 percentage points in 2009Q3. There are similar province effects: for example, in 2008Q2, men in Eastern Cape had an increased likelihood of discouragement in comparison to those in Gauteng province (by 4.5 percentage points), which has since risen to 19.6 percentage points (2009Q3).

The expanded specification, which include dummies for the type of support received by individuals (columns 4 to 12 of Table 8), reveals that there is some evidence of an impact of receiving transfers on the decision to give up job search. More specifically, receiving intra-household transfers reduces the

probability of discouragement for females, but has weakened in magnitude over the crisis period. For men, the APE of intra-household transfers switches from negative in 2008Q2 to positive in 2009Q2. The dummy for child grants is positively and significantly correlated with the probability of discouragement for females (and for males in 2008Q2); though the average effect is small (receiving the grant increases the probability by 1.9 per cent in 2009Q3). Overall, these estimates indicate that these forms of support have an impact on discouragement, but there isn't a significant trend over the crisis period.

## **4 Conclusion**

The global financial crisis of 2007-2009 has deeply impacted South Africa due to its financial and trade links with the rest of the world. As a consequence, Africa's largest economy was in recession from the third quarter of 2008 to the second quarter of 2009. Although almost 900,000 jobs have been lost, the results presented in this paper reveal that the impact of the global financial crisis on the South African labor market is more evident in terms of rising discouragement, rather than a surge in official unemployment. Indeed, the main effect of the downturn in South Africa has been a rise in the number of discouraged individuals, from 1.08 million in the second quarter of 2008 to 1.63 million in the third quarter of 2009. Drawing on the micro estimates, discouragement has increased more for uneducated black South Africans. In general, these findings stress the importance of looking at the impact of the crisis on all labor force states, not just unemployment, and of analyzing the role of socio-economic characteristics in driving vulnerability in the labor market using micro-data.

Even though the South African economy has emerged from recession late in 2009, the main challenge for policymakers is to ensure that interventions are effective in tackling discouragement, especially for the unskilled. In this respect, the Government of South Africa should continue to address this problem by increasing demand for the less-skilled through appropriate industrial and macroeconomic policies (i.e. supporting the growth of labor-intensive sectors that would absorb this segment of the population). At the same time, more efforts are required to improve education and training for all South Africans in order to increase the overall skills level and reduce a mismatch between skills demanded by employers

and those supplied by prospective workers. In addition, more needs to be done to increase mobility of job-seekers through investment in public transport and subsidies to encourage individuals away from urban centers to travel in search of employment. These measures would reduce job search costs (and reservation wages), and hence, help reduce discouragement. While these recommendations are not new for the South African context, the findings of this paper stress the importance of tackling these issues over both the short term during a crisis and the longer term.

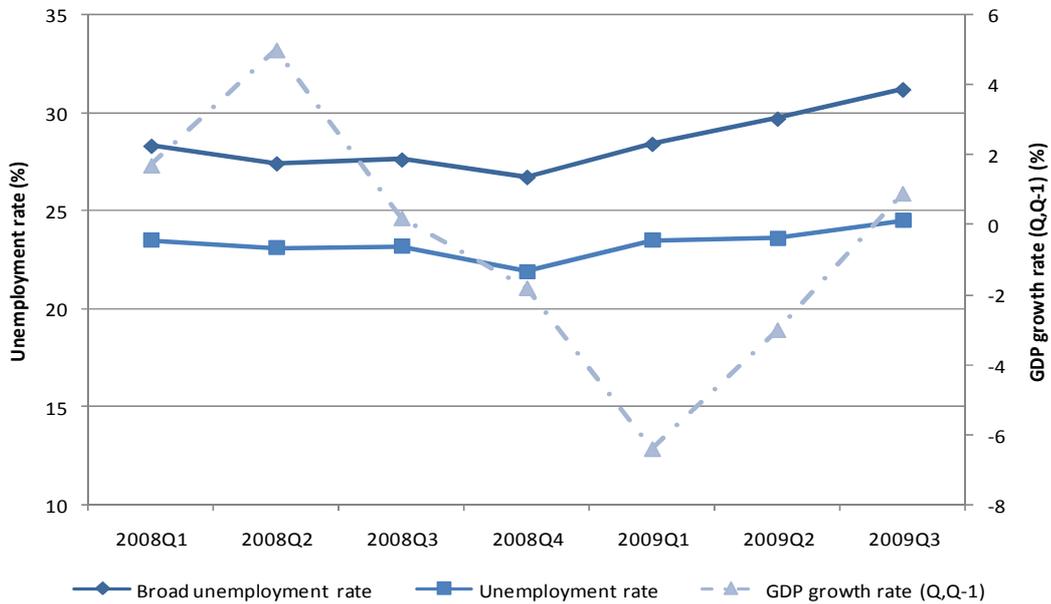
## References

- Banerjee, A., Galiani, S., Levinsohn, J. and I. Woolard. "Why has unemployment risen in the new South Africa?" CID Working Paper, No. 134, October 2006.
- Bartus, T. "Estimation of marginal effects using `margins`", *The Stata Journal*, Vol. 5, No. 3, 2005, pp. 309-329.
- Bhorat, H. and R. Kanbur (eds.). *Poverty and Policy in Post-Apartheid SA*. Human Sciences Research Council Press, Pretoria, South Africa, 2006.
- Bhorat, H., Leibbrandt, M., Maziya, M., Van der Berg, S., and I. Woolard. *Fighting poverty – Labour Markets and Inequality in South Africa*. UCT Press, Cape Town, South Africa, 2001.
- Cazes, S., Verick, S. and C. Heuer. "Labour market policies in times of crisis", *Employment Working Paper*, No. 35, 2009.
- Devey, R., Lebani, L. Skinner, C. and I. Valodia. "The Informal Economy", In: Kraak, A. and K. Press (eds.). *Human Resources Development Review 2008: Education, Employment and Skills in South Africa*, Human Sciences Research Council Press, Pretoria, South Africa, 2008.
- International Labour Organization (ILO). *Protecting People, Promoting Jobs: a Survey of Country Employment and Social Protection Policy Responses to the Global Economic Crisis*, An ILO report to the G20 Leaders' Summit, Pittsburgh, 24-25 September 2009. ILO, Geneva, 2009.
- International Monetary Fund (IMF). "From recession to recovery: how soon and how strong?" In: IMF. *World Economic Outlook (WEO) Crisis and Recovery*, April 2009. Chapter 3, IMF, Washington, D.C., 2009.

- Jutting, J. and J. R. de Laiglesia (eds.). *Is Informal Normal? Towards more and better jobs in developing countries*. OECD Development Centre Studies, Paris, 2009.
- Kingdon, G. and J. Knight. "Unemployment in South Africa, 1995-2003: causes, problems and policies", *Journal of African Economies*, Vol. 16, No. 5, 2007, pp. 813-848.
- Organisation for Economic Co-operation and Development (OECD). "Realising South Africa's employment potential", In: OECD. *Economic Assessment of South Africa 2008*. Chapter 3, OECD, Paris, 2008.
- Padayachee, V. (ed.). *The Development Decade? Economic and Social Change in South Africa, 1994-2004*. Human Sciences Research Council Press, Pretoria, South Africa, 2006.
- Reinhart, C. and K. Rogoff. *This Time is Different: Eight Centuries of Financial Folly*. Princeton University Press, Princeton and Oxford, 2009.
- South Africa Reserve Bank. "September 2009", *Quarterly Bulletin*, No. 253, 2009.
- Statistics South Africa. "Gross domestic product – third quarter: 2009", *Statistical Release*, P0441, available at: [www.statssa.gov.za](http://www.statssa.gov.za), 2009.
- Valodia, I. *The Informal Economy in South Africa: Issues, Debates and Policies: Reflections after an Exposure Dialogue Programme with Informal Workers in Durban, South Africa*. Research Report, No. 75, March 2007.
- Valodia, I., Lebani, L. and C. Skinner. "Low-waged and informal employment in South Africa", *Review of Labour Markets in South Africa*, Human Sciences Research Council, Pretoria, South Africa, 2005.
- Verick, S. "Who is hit hardest during a financial crisis? The vulnerability of young men and women to unemployment in an economic downturn", *IZA Discussion Paper*, No. 4359, 2009.
- Wooldridge, J.M. *Econometric Analysis of Cross Section and Panel Data*. The MIT Press, Cambridge, Mass, 2002.

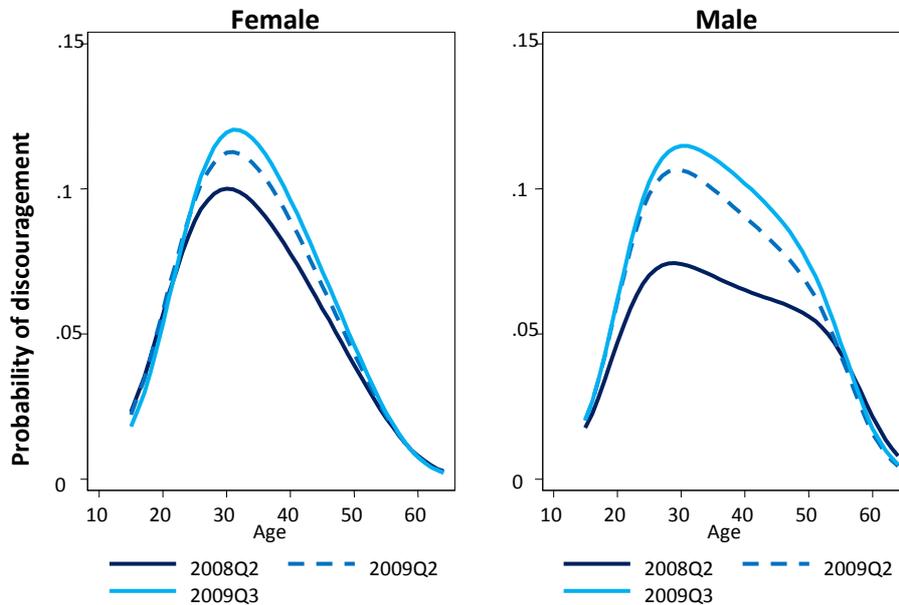
## Figures

**Figure 1: Rising discouragement best describes the impact of the crisis in South Africa**



Source: Statistics South Africa Quarterly Labour Force Survey 2008Q2, 2009Q2 2009Q3 and Gross Domestic Product, Third Quarter 2009; author's calculations. All figures are population weighted.

**Figure 2: Predicted probability of discouragement rises for both men and women**



Source: Statistics South Africa Quarterly Labour Force Survey, 2008Q2, 2009Q2, 2009Q3; author's calculations.

Notes: The predicted probabilities derived from the multinomial logit estimates are graphed on age by gender for uneducated, unmarried black/Africans. All other variables are held at their means.

## Tables

**Table 1: Summary statistics by labor force status, average for 2008Q2, 2009Q2, 2009Q3**

Variable	Labor force status					Total
	F	I	U	D	OLF	
Age (years)	37.2	38.2	30.0	30.7	30.1	33.3
Female (% of sample)	40.3	56.7	51.1	58.4	60.6	52.3
Number of household members	4.1	4.4	5.3	6.0	5.6	5.0
Married (% of sample)	55.1	45.9	27.8	27.9	25.4	37.6
Primary school or no education (% of sample)	9.1	27.0	11.7	22.5	20.8	16.1
Less than year 12 education (% of sample)	32.3	52.6	50.6	54.2	61.7	49.5
Year 12 education (% of sample)	35.0	17.4	32.4	21.5	15.1	24.3
Tertiary education (% of sample)	23.6	2.9	5.2	1.8	2.5	9.6
Black/African (% of sample)	63.2	88.7	86.6	94.5	81.2	77.6
Colored (% of sample)	13.0	7.4	9.4	3.5	8.2	9.6
Indian/Asian (% of sample)	4.3	1.1	1.6	0.8	2.9	2.9
White (% of sample)	19.6	2.8	2.4	1.2	7.8	10.0

Source: Statistics South Africa Quarterly Labour Force Survey, 2008Q2, 2009Q2, 2009Q3; author's calculations.

Notes: F = Employed in the formal sector; I = Employed in the informal sector; U = Unemployed; D = Discouraged; OLF = Other out-of-the-labor force. All figures are population weighted.

**Table 2: Multinomial logit estimates (average partial coefficients) – female labor force status before (2008Q2) and since the onset of the crisis (2009Q2 and 2009Q3)**

Variables	Formal sector employment			Informal sector employment			Unemployment			Discouragement		
	2008Q2	2009Q2	2009Q3	2008Q2	2009Q2	2009Q3	2008Q2	2009Q2	2009Q3	2008Q2	2009Q2	2009Q3
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Age	0.033*** (0.001)	0.037*** (0.001)	0.036*** (0.002)	0.023*** (0.001)	0.022*** (0.001)	0.024*** (0.001)	0.025*** (0.001)	0.023*** (0.002)	0.023*** (0.001)	0.005*** (0.001)	0.008*** (0.001)	0.010*** (0.001)
Age <sup>2</sup>	-0.0004*** (0.0000)	-0.0004*** (0.0000)	-0.0004*** (0.0000)	-0.0002*** (0.0000)	-0.0002*** (0.0000)	-0.0003*** (0.0000)	-0.0004*** (0.0000)	-0.0004*** (0.0000)	-0.0004*** (0.0000)	-0.0001*** (0.0000)	-0.0001*** (0.0000)	-0.0002*** (0.0000)
Primary school or no education (ref: tertiary education)	-0.520*** (0.009)	-0.500*** (0.009)	-0.499*** (0.009)	0.066*** (0.010)	0.046*** (0.008)	0.042*** (0.007)	0.017*** (0.006)	0.014** (0.006)	0.014** (0.007)	0.012*** (0.003)	0.007*** (0.002)	0.016*** (0.005)
Less than year 12 education	-0.358*** (0.008)	-0.343*** (0.008)	-0.342*** (0.007)	0.058*** (0.010)	0.054*** (0.009)	0.046*** (0.008)	0.012* (0.006)	0.008* (0.005)	0.012** (0.006)	0.007*** (0.003)	0.006*** (0.002)	0.017*** (0.005)
Year 12 education	-0.228*** (0.015)	-0.202*** (0.013)	-0.210*** (0.013)	0.031*** (0.006)	0.027*** (0.005)	0.022*** (0.004)	0.047*** (0.009)	0.033*** (0.007)	0.037*** (0.008)	0.007*** (0.002)	0.006*** (0.002)	0.013*** (0.004)
Married	-0.0555*** (0.0072)	-0.0598*** (0.0071)	-0.0630*** (0.0079)	0.0009 (0.0007)	0.0003 (0.0004)	0.0000 (0.0005)	-0.0039** (0.0016)	-0.0048*** (0.0018)	-0.0069*** (0.0020)	0.0003* (0.0002)	0.0001 (0.0001)	0.0002 (0.0002)
Household size	-0.009*** (0.001)	-0.007*** (0.001)	-0.006*** (0.001)	-0.008*** (0.001)	-0.010*** (0.001)	-0.009*** (0.001)	0.005*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.001*** (0.000)	0.003*** (0.001)	0.003*** (0.001)
Black/African (ref: White)	-0.104*** (0.018)	-0.131*** (0.018)	-0.146*** (0.020)	0.035*** (0.007)	0.031*** (0.006)	0.034*** (0.007)	0.103*** (0.019)	0.121*** (0.021)	0.128*** (0.021)	0.009** (0.004)	0.008** (0.004)	0.008** (0.003)
Colored	0.022 (0.015)	-0.000 (0.016)	-0.004 (0.018)	0.004 (0.003)	0.007*** (0.003)	0.006** (0.003)	0.040*** (0.012)	0.054*** (0.014)	0.057*** (0.016)	0.002 (0.002)	0.003 (0.002)	0.002 (0.002)
Indian/Asian	-0.0369 (0.0229)	-0.0954*** (0.0258)	-0.1136*** (0.0239)	-0.0071*** (0.0018)	0.0012 (0.0023)	-0.0012 (0.0022)	0.0411** (0.0178)	0.0325** (0.0157)	0.0475* (0.0250)	-0.0009 (0.0010)	0.0011 (0.0013)	0.0003 (0.0014)
<b>Observations</b>	31450	30313	29688	31450	30313	29688	31450	30313	29688	31450	30313	29688

Source: Statistics South Africa Quarterly Labour Force Survey, 2008Q2, 2009Q2, 2009Q3; author's calculations.

Notes: Standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Dummies for province were also included in all specifications but are not reported here. The average partial effects (APEs) are based on a multinomial logit regression where the dependent variable is labor force status. The APEs are presented as percentage point changes in the probability of an outcome.

... Continued on the next page

**Table 2: continued**

Variables	Other OLF		
	2008Q2 (13)	2009Q2 (14)	2009Q3 (15)
Age	-0.086*** (0.001)	-0.090*** (0.001)	-0.092*** (0.001)
Age <sup>2</sup>	0.0011*** (0.0000)	0.0012*** (0.0000)	0.0012*** (0.0000)
Primary school or no education (ref: tertiary)	0.425*** (0.016)	0.433*** (0.014)	0.427*** (0.015)
Less than year 12 education	0.282*** (0.015)	0.274*** (0.014)	0.268*** (0.015)
Year 12 education	0.143*** (0.016)	0.136*** (0.014)	0.138*** (0.015)
Married	0.0581*** (0.0064)	0.0641*** (0.0066)	0.0696*** (0.0073)
Household size	0.011*** (0.001)	0.011*** (0.001)	0.009*** (0.001)
Black/African (ref: White)	-0.043*** (0.008)	-0.029** (0.012)	-0.023* (0.012)
Colored	-0.069*** (0.008)	-0.063*** (0.011)	-0.061*** (0.012)
Indian/Asian	0.0036 (0.0154)	0.0605*** (0.0220)	0.0670*** (0.0237)
<b>Observations</b>	31450	30313	29688

**Table 3: Multinomial logit estimates (average partial coefficients) – male labor force status before (2008Q2) and since the onset of the crisis (2009Q2 and 2009Q3)**

Variables	Formal sector employment			Informal sector employment			Unemployment			Discouragement		
	2008Q2	2009Q2	2009Q3	2008Q2	2009Q2	2009Q3	2008Q2	2009Q2	2009Q3	2008Q2	2009Q2	2009Q3
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Age	0.044*** (0.002)	0.041*** (0.002)	0.039*** (0.002)	0.014*** (0.001)	0.014*** (0.001)	0.012*** (0.001)	0.014*** (0.001)	0.017*** (0.001)	0.020*** (0.002)	0.002*** (0.001)	0.005*** (0.001)	0.006*** (0.001)
Age <sup>2</sup>	-0.0005*** (0.0000)	-0.0005*** (0.0000)	-0.0005*** (0.0000)	-0.0002*** (0.0000)	-0.0002*** (0.0000)	-0.0001*** (0.0000)	-0.0002*** (0.0000)	-0.0003*** (0.0000)	-0.0003*** (0.0000)	-0.0000*** (0.0000)	-0.0001*** (0.0000)	-0.0001*** (0.0000)
Primary school or no education (ref: tertiary education)	-0.347*** (0.019)	-0.355*** (0.016)	-0.352*** (0.016)	0.058*** (0.011)	0.065*** (0.012)	0.042*** (0.009)	0.020** (0.008)	0.029*** (0.010)	0.027*** (0.009)	0.006** (0.002)	0.018*** (0.007)	0.030*** (0.011)
Less than year 12 education	-0.274*** (0.015)	-0.270*** (0.014)	-0.262*** (0.014)	0.055*** (0.012)	0.077*** (0.014)	0.041*** (0.009)	0.017** (0.008)	0.026*** (0.009)	0.024*** (0.009)	0.003* (0.002)	0.011** (0.005)	0.022** (0.009)
Year 12 education	-0.146*** (0.020)	-0.160*** (0.017)	-0.135*** (0.020)	0.024*** (0.006)	0.035*** (0.008)	0.018*** (0.005)	0.030*** (0.008)	0.052*** (0.010)	0.038*** (0.009)	0.002* (0.001)	0.007* (0.003)	0.015** (0.006)
Married	0.1274*** (0.0055)	0.1570*** (0.0060)	0.1751*** (0.0068)	-0.0005 (0.0009)	-0.0018** (0.0008)	-0.0014* (0.0008)	-0.0249*** (0.0013)	-0.0252*** (0.0015)	-0.0252*** (0.0017)	-0.0005*** (0.0001)	-0.0024*** (0.0003)	-0.0020*** (0.0002)
Household size	-0.015*** (0.002)	-0.014*** (0.002)	-0.017*** (0.002)	-0.003*** (0.001)	-0.005*** (0.001)	-0.004*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.002*** (0.000)	0.003*** (0.000)	0.004*** (0.001)
Black/African (ref: White)	-0.111*** (0.022)	-0.122*** (0.021)	-0.107*** (0.021)	0.027*** (0.006)	0.019*** (0.005)	0.021*** (0.005)	0.113*** (0.022)	0.117*** (0.024)	0.130*** (0.023)	0.008* (0.004)	0.008* (0.004)	0.005* (0.003)
Colored	-0.052** (0.024)	-0.045** (0.022)	-0.012 (0.022)	0.016*** (0.006)	0.012*** (0.004)	0.012** (0.005)	0.092*** (0.023)	0.075*** (0.020)	0.080*** (0.020)	0.003 (0.002)	0.001 (0.002)	0.002 (0.002)
Indian/Asian	-0.0376 (0.0272)	-0.0132 (0.0293)	-0.0059 (0.0315)	0.0077 (0.0058)	0.0036 (0.0046)	0.0052 (0.0045)	0.0629*** (0.0221)	0.0591** (0.0234)	0.0754*** (0.0268)	0.0012 (0.0016)	0.0011 (0.0026)	0.0000 (0.0019)
<b>Observations</b>	26024	25260	24346	26024	25260	24346	26024	25260	24346	26024	25260	24346

Source: Statistics South Africa Quarterly Labour Force Survey, 2008Q2, 2009Q2, 2009Q3; author's calculations.

Notes: Standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Dummies for province were also included in all specifications but are not reported here. The average partial effects (APEs) are based on a multinomial logit regression where the dependent variable is labor force status. The APEs are presented as percentage point changes in the probability of an outcome.

... Continued on the next page

**Table 3: continued**

Variables	Other OLF		
	2008Q2 (13)	2009Q2 (14)	2009Q3 (15)
Age	-0.075*** (0.001)	-0.077*** (0.001)	-0.078*** (0.001)
Age <sup>2</sup>	0.0010*** (0.0000)	0.0010*** (0.0000)	0.0010*** (0.0000)
Primary school or no education (ref: tertiary)	0.264*** (0.025)	0.243*** (0.022)	0.254*** (0.025)
Less than year 12 education	0.199*** (0.022)	0.156*** (0.019)	0.174*** (0.023)
Year 12 education	0.090*** (0.021)	0.067*** (0.017)	0.063*** (0.022)
Married	-0.1016*** (0.0050)	-0.1276*** (0.0054)	-0.1465*** (0.0062)
Household size	0.009*** (0.001)	0.010*** (0.001)	0.009*** (0.001)
Black/African (ref: White)	-0.037*** (0.012)	-0.023* (0.014)	-0.050*** (0.015)
Colored	-0.059*** (0.013)	-0.043*** (0.016)	-0.080*** (0.017)
Indian/Asian	-0.0342* (0.0190)	-0.0506** (0.0205)	-0.0747*** (0.0234)
<b>Observations</b>	26024	25260	24346

**Table 4: Selected average predicted probabilities of labor force states, 2008Q2, 2009Q2, and 2009Q3: females**

Independent variable	Unemployment			Discouragement			Informal sector employment		
	Predicted probabilities (%)								
	2008Q2	2009Q2	2009Q3	2008Q2	2009Q2	2009Q3	2008Q2	2009Q2	2009Q3
Black	14.0	12.6	12.8	4.8	5.5	5.9	14.8	14.0	12.8**
Colored	10.2	9.4	9.9	2.4	3.3	3.5	7.2	7.3	6.5
Indian/Asian	7.8	4.8	5.8	0.5	1.2	1.5	1.8	2.5	1.8
Primary or none	8.5	7.7	7.4	4.9	5.2	5.4	13.4	11.7	10.4**
Less than year 12	11.7	10.2	10.9	3.8	4.6	5.4**	13.0	12.8	11.6
Year 12	15.6	13.6	13.7	3.4	4.3	4.7	9.5	9.8	8.7

Source: Statistics South Africa Quarterly Labour Force Survey, 2008Q2, 2009Q2, 2009Q3; author's calculations.

Notes: Based on the estimates from the multinomial logit model, the specified independent variable is set to a certain value while the others are held at their mean. Predicted probabilities for formal sector employment and other forms of inactivity are not displayed. \*\* - Indicates that the change from 2008Q2 to 2009Q3 is significant at the 95% level.

**Table 5: Selected average predicted probabilities of labor force states, 2008Q2, 2009Q2, and 2009Q3: males**

Independent variable	Unemployment			Discouragement			Informal sector employment		
	Predicted probabilities (%)								
	2008Q2	2009Q2	2009Q3	2008Q2	2009Q2	2009Q3	2008Q2	2009Q2	2009Q3
Black	17.1	18.5	18.6	3.4	4.6	4.8**	13.9	12.1	12.1**
Colored	16.1	14.9	14.8	1.4	1.9	3.0	11.4	10.9	10.0
Indian/Asian	12.7	13.6	14.7	0.9	2.2	2.2	8.4	7.6	7.5
Primary or none	14.3	15.1	15.2	4.2	6.1	7.0**	15.9	13.7	13.6
Less than year 12	15.5	16.4	16.7	2.7	4.0	4.5**	14.3	13.2	12.5
Year 12	16.2	18.5	17.1	1.9	3.0	3.6**	9.6	9.0	8.4

Source: Statistics South Africa Quarterly Labour Force Survey, 2008Q2, 2009Q2, 2009Q3; author's calculations.

Notes: Based on the estimates from the multinomial logit model, the specified independent variable is set to a certain value while the others are held at their mean. Predicted probabilities for formal sector employment and other forms of inactivity are not displayed. \*\* - Indicates that the change from 2008Q2 to 2009Q3 is significant at the 95% level.

**Table 6: Forms of income support for the discouraged and unemployed, both sexes**

Form of support	Percentage receiving support prior to the crisis (%)		Percentage receiving support after the crisis has started (%)			
	2008Q2		2009Q2		2009Q3	
	Unemployed	Discouraged	Unemployed	Discouraged	Unemployed	Discouraged
Persons in the household	78.9	74.8	78.5	80.8	77.1	78.3
Persons not in the household	19.8	20.9	19.9	17.7	19.6	19.0
Child support/foster care grants	13.8	22.5	12.1	20.9	13.0	22.9
Savings	4.6	2.2	5.1	1.3	5.5	1.8
Unemployment Insurance Fund (UIF)	0.6	0.5	1.0	0.3	1.2	0.6
Pension	0.6	1.5	0.7	1.0	0.6	1.3
Welfare grants	0.5	0.3	0.7	0.1	0.4	0.2
Other (bursary, study loan)	0.4	0.5	0.4	0.3	0.3	0.4
Charity	0.1	0.3	0.05	0.01	0.2	0.09

Source: Statistics South Africa Quarterly Labour Force Survey, 2008Q2, 2009Q2, 2009Q3; author's calculations.

**Table 7: Drivers of discouragement before (2008Q2) and since the onset of the crisis (2009Q2 and 2009Q3) (logit model) (average partial effects) – female**

Dep. Var: discouragement	2008Q2	2009Q2	2009Q3									
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Age	-0.018*** (0.004)	-0.016*** (0.005)	-0.013*** (0.005)	-0.021*** (0.003)	-0.018*** (0.003)	-0.015*** (0.003)	-0.020*** (0.003)	-0.018*** (0.003)	-0.015*** (0.003)	-0.022*** (0.003)	-0.020*** (0.003)	-0.017*** (0.003)
Age <sup>2</sup>	0.0002*** (0.0001)	0.0002*** (0.0001)	0.0002*** (0.0001)	0.0003*** (0.0000)	0.0003*** (0.0000)	0.0002*** (0.0000)	0.0003*** (0.0000)	0.0003*** (0.0000)	0.0002*** (0.0000)	0.0003*** (0.0000)	0.0003*** (0.0000)	0.0002*** (0.0000)
Primary school or no education (ref: tertiary)	0.186*** (0.042)	0.142*** (0.034)	0.214*** (0.049)	0.218*** (0.030)	0.161*** (0.025)	0.236*** (0.035)	0.197*** (0.028)	0.153*** (0.024)	0.225*** (0.034)	0.199*** (0.029)	0.150*** (0.024)	0.216*** (0.034)
Less than year 12 education	0.122*** (0.034)	0.135*** (0.033)	0.191*** (0.046)	0.150*** (0.026)	0.159*** (0.025)	0.216*** (0.033)	0.134*** (0.024)	0.151*** (0.024)	0.206*** (0.032)	0.132*** (0.024)	0.146*** (0.024)	0.196*** (0.032)
Year 12 education	0.035** (0.017)	0.043*** (0.015)	0.072*** (0.027)	0.044*** (0.014)	0.048*** (0.011)	0.079*** (0.020)	0.037*** (0.011)	0.044*** (0.010)	0.073*** (0.019)	0.038*** (0.012)	0.044*** (0.010)	0.072*** (0.019)
Married	0.014*** (0.005)	0.007*** (0.002)	0.018*** (0.006)	0.022*** (0.004)	0.009*** (0.002)	0.023*** (0.005)	0.015*** (0.003)	0.007*** (0.002)	0.020*** (0.004)	0.016*** (0.004)	0.008*** (0.002)	0.020*** (0.004)
Household size	0.003 (0.003)	0.009** (0.004)	0.008** (0.004)	0.005*** (0.002)	0.011*** (0.003)	0.010*** (0.003)	0.004** (0.002)	0.010*** (0.003)	0.010*** (0.003)	0.003 (0.002)	0.010*** (0.003)	0.007*** (0.002)
Black/African (ref: White)	0.019 (0.024)	0.023 (0.021)	0.001 (0.019)	0.023 (0.019)	0.026 (0.016)	0.000 (0.014)	0.020 (0.016)	0.024 (0.015)	-0.000 (0.013)	0.018 (0.016)	0.023 (0.015)	-0.001 (0.013)
Colored	-0.001 (0.019)	0.012 (0.018)	-0.016 (0.015)	-0.003 (0.015)	0.014 (0.014)	-0.020* (0.011)	-0.002 (0.012)	0.013 (0.012)	-0.018* (0.010)	-0.003 (0.013)	0.013 (0.013)	-0.018* (0.010)
Indian/Asian	-0.032*** (0.011)	0.001 (0.014)	-0.028** (0.012)	-0.044*** (0.009)	0.001 (0.010)	-0.033*** (0.009)	-0.034*** (0.007)	0.001 (0.009)	-0.030*** (0.008)	-0.037*** (0.008)	0.002 (0.010)	-0.029*** (0.009)
Support: household				-0.011*** (0.003)	-0.002* (0.001)	-0.006** (0.003)						
Support: non-household							0.004 (0.003)	0.001 (0.001)	0.009** (0.004)			
Support: child grants										0.017*** (0.004)	0.006*** (0.002)	0.019*** (0.004)
<b>Observations</b>	5538	5350	5358	5538	5350	5358	5538	5350	5358	5538	5350	5358

Source: Statistics South Africa Quarterly Labour Force Survey, 2008Q2, 2009Q2, 2009Q3; author's calculations.

Notes: Standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Dummies for province were also included in all specifications but are not reported here. The average partial effects (APEs) are based on a logit regression where the dependent variable is labor force status. The APEs are presented as percentage point changes in the probability of an outcome.

**Table 8: Drivers of discouragement before (2008Q2) and since the onset of the crisis (2009Q2 and 2009Q3) (logit model) (average partial effects) – male**

Dep. Var: discouragement	2008Q2	2009Q2	2009Q3									
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Age	-0.011*** (0.003)	-0.013*** (0.004)	-0.017*** (0.004)	-0.014*** (0.002)	-0.015*** (0.002)	-0.020*** (0.002)	-0.014*** (0.002)	-0.016*** (0.002)	-0.020*** (0.002)	-0.014*** (0.002)	-0.016*** (0.002)	-0.020*** (0.002)
Age <sup>2</sup>	0.0002*** (0.0000)	0.0002*** (0.0001)	0.0002*** (0.0001)	0.0002*** (0.0000)	0.0002*** (0.0000)	0.0003*** (0.0000)	0.0002*** (0.0000)	0.0002*** (0.0000)	0.0003*** (0.0000)	0.0002*** (0.0000)	0.0002*** (0.0000)	0.0003*** (0.0000)
Primary school or no education (ref: tertiary)	0.072** (0.030)	0.146** (0.059)	0.216*** (0.058)	0.089*** (0.018)	0.142*** (0.030)	0.229*** (0.033)	0.080*** (0.017)	0.163*** (0.033)	0.235*** (0.033)	0.079*** (0.017)	0.160*** (0.033)	0.234*** (0.033)
Less than year 12 education	0.055** (0.027)	0.097* (0.052)	0.170*** (0.056)	0.073*** (0.018)	0.095*** (0.027)	0.188*** (0.033)	0.066*** (0.016)	0.112*** (0.031)	0.192*** (0.033)	0.065*** (0.016)	0.109*** (0.030)	0.192*** (0.033)
Year 12 education	0.015 (0.011)	0.011 (0.027)	0.066* (0.036)	0.018*** (0.007)	0.010 (0.012)	0.068*** (0.020)	0.016*** (0.006)	0.013 (0.015)	0.071*** (0.021)	0.016*** (0.006)	0.012 (0.015)	0.070*** (0.020)
Married	0.001 (0.002)	-0.013* (0.008)	-0.013* (0.006)	0.001 (0.001)	-0.012*** (0.004)	-0.013*** (0.004)	0.001 (0.001)	-0.015*** (0.004)	-0.014*** (0.004)	0.001 (0.001)	-0.015*** (0.004)	-0.014*** (0.004)
Household size	0.005** (0.002)	0.009*** (0.003)	0.011*** (0.003)	0.007*** (0.001)	0.008*** (0.002)	0.013*** (0.002)	0.005*** (0.001)	0.009*** (0.002)	0.013*** (0.002)	0.005*** (0.001)	0.010*** (0.002)	0.013*** (0.002)
Black/African (ref: White)	0.030 (0.021)	-0.012 (0.027)	-0.020 (0.020)	0.037*** (0.013)	-0.009 (0.012)	-0.021* (0.011)	0.033*** (0.012)	-0.010 (0.015)	-0.022* (0.012)	0.033*** (0.012)	-0.013 (0.015)	-0.022* (0.012)
Colored	0.002 (0.010)	-0.050*** (0.015)	-0.032 (0.020)	0.003 (0.006)	-0.045*** (0.006)	-0.035*** (0.011)	0.003 (0.005)	-0.055*** (0.008)	-0.036*** (0.011)	0.003 (0.005)	-0.055*** (0.008)	-0.036*** (0.011)
Indian/Asian	-0.001 (0.010)	-0.044** (0.021)	-0.045*** (0.015)	-0.002 (0.006)	-0.040*** (0.009)	-0.048*** (0.008)	-0.001 (0.005)	-0.048*** (0.011)	-0.050*** (0.008)	-0.001 (0.006)	-0.048*** (0.011)	-0.050*** (0.008)
Support: household				-0.002** (0.001)	0.022*** (0.007)	0.004 (0.005)						
Support: non-household							-0.001 (0.001)	-0.015*** (0.005)	-0.000 (0.005)			
Support: child grants										0.025*** (0.008)	0.006 (0.014)	0.017 (0.019)
<b>Observations</b>	4258	4543	4567	4258	4543	4567	4258	4543	4567	4258	4543	4567

Source: Statistics South Africa Quarterly Labour Force Survey, 2008Q2, 2009Q2, 2009Q3; author's calculations.

Notes: Standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Dummies for province were also included in all specifications but are not reported here. The average partial effects (APEs) are based on a logit regression where the dependent variable is labor force status. The APEs are presented as percentage point changes in the probability of an outcome.

---

<sup>i</sup> See Banerjee et al. (2006), Bhorat and Kanbur (2006), Bhorat et al. (2001), Devey et al. (2008), Kingdon and Knight (2007), OECD (2008), Padayachee (2006), Valodia et al. (2005), and Valodia (2007) for a comprehensive discussion on the South African labor market.

<sup>ii</sup> See IMF World Economic Outlook October 2009,

<http://www.imf.org/external/pubs/ft/weo/2009/02/weodata/index.aspx>.

<sup>iii</sup> The Monetary Policy Committee (MPC) of the South African Reserve Bank started reducing interest rates in December 2008. The cumulative reduction in the repurchase rate over 2008-2009 was 5 percentage points (the rate reached a low of 7 per cent) (South Africa Reserve Bank 2009). The result of tripartite negotiations, the Framework for South Africa's Response to the International Economic Crisis, outlines the main pillars of the government's action plan to respond to the crisis, including major public investment programs, see [www.info.gov.za/view/DownloadFileAction?id=96381](http://www.info.gov.za/view/DownloadFileAction?id=96381).

<sup>iv</sup> See, for example, IMF (2009), Reinhart and Rogoff (2009) and Verick (2009) for a discussion about this lag.

<sup>v</sup> See <http://www.statssa.gov.za/qlfs/index.asp>

<sup>vi</sup> See the ILO's Key Indicators of the Labour Market (KILM) for further details on definitions,

[http://www.ilo.org/empelm/what/lang--en/WCMS\\_114240/index.htm](http://www.ilo.org/empelm/what/lang--en/WCMS_114240/index.htm)

<sup>vii</sup> This is defined in terms of registration/licensing of enterprise, excluding the agricultural sector.

<sup>viii</sup> See, for example, Jutting and Laiglesia (2009)

<sup>ix</sup> This impact on young men has been also found in the case of OECD countries as highlighted by Verick (2009).

<sup>x</sup> For this reason, the Stata *margeff* command was used to calculate the average partial effects. The *svy* command in Stata was employed to take into account the use of survey data (standard errors are adjusted accordingly).

<sup>xi</sup> The combined effect of age has to take into account the squared term used in the model. This can be calculated as:  $\beta_{age} + 2 \times \text{mean}(\text{age}) * \beta_{age}^2$ .

<sup>xii</sup> At the same time, employment protection legislation (EPL) in South Africa is relatively weak (though in practice it is more difficult than suggested by the de jure measure of protection) (OECD 2008). Thus, workers are neither provided protection of jobs through EPL nor protection of income via unemployment benefits.