



Private Enterprise Development in Low-Income Countries

Exploring dynamics in South African firms: small firms, large firms and labour market rigidity

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Firm-level survey data for the period 2005-2011 in South Africa suggest that large firms have higher rates of net job creation than small firms and that there is a relatively high reallocation of employment across South African firms. We discuss the potentially important policy implications of these rather surprising results relative to existing beliefs about the South African labour market.

Researchers have accumulated substantial knowledge about the South African labour market from household and labour force surveys. We now know a good deal about who is employed and who is not, as well as who earns what. What has been missing, however, is an analysis of labour demand emanating from firms: we know little about the effects of firm growth and entry and exit patterns on job creation and destruction in South Africa.

A new look at firm-level employment data

We are now able to fill part of this knowledge gap using firm-level panel data from the Quarterly Employment Survey (QES) data collected between 2005 and 2011. While not a census, the QES data cover a large sample of South African enterprises from the business register. The three samples we use cover roughly 15,000, 17,000 and 18,000 enterprises, which represent around 10% of the total number of enterprises in the sample frame; and around 50% of total employment in firms in the sample frame. The dataset excludes all agricultural and mining enterprises – as well as firms that are not registered (informal firms).

We explore demand in the labour market by looking at rates of job creation and destruction, i.e. the percentage of existing jobs that have been created by expanding firms or new entrants ('births') in a 12 month period, as well as the percentage of jobs that have been lost (or 'destroyed') by shrinking firms or firms that shut down ('deaths').

There are, however, some limitations to the QES data. First, we only have information on the *total* employment numbers in each enterprise. This means we do not see changes in employment at the plant or sub-enterprise (i.e. the establishment) level. As a result, we are underestimating the (gross) number of jobs created and jobs destroyed at the establishment level. For example, if a manufacturing enterprise opens one plant with 100 employees and closes another employing 100, there would be no change in its employment in the QES. In addition, if a manufacturing enterprise hires 10 new lawyers and fires 10 production workers, we measure no change in employment. Second, the QES data are also weak in terms of measuring employment created by the birth of firms, since the panel is not refreshed after its inception and new firms can only be included when a new sample is taken. This means the number of jobs created by births (which tend to involve small firms) is likely to be underestimated.

Overall rates of job creation and job destruction

We find that around 10% of existing jobs are destroyed each year, while the number of new jobs created each year accounts for around 9.5% of existing employment. This implies that at least 20% of the total of formal jobs outside agriculture and mining are either created or destroyed in each year (this is a lower bound on the *gross reallocation rate*).



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Since the available data indicate that we underestimate the number of jobs created by births and reallocation within enterprises, this reallocation rate is likely comparable to or even higher than those found in other countries. For example, Haltiwanger et al (2008) find job reallocation rates of 25% in OECD economies and 30% in Latin American economies.

Our estimates are also not inconsistent with the analysis of household survey data by Banerjee et al (2008), who find a high level of mobility at the individual level when considering changes in the workers' state of employment. For example, using the Labour Force Survey panel data from between 2001 and 2004, they find that of those with formal sector employment, 16% changed into another employment state (e.g. informal employment or unemployment) after six months.

Large versus small firms

Our results suggest that large firms have the highest rates of net employment creation. Table 1 shows that, in enterprises with 5,000 or more employees, job creation rates are nearly 3 percentage points higher than job destruction rates. By contrast, in enterprises with 0-19 employees, we find the reverse: job destruction rates are approximately 4 percentage points higher than job creation rates.

When they are translated into actual employment numbers, these results mean, for example, that in the period between 2005 and 2011 the category of smallest firms contributed about 75,000 jobs to yearly job creation, but around 110,000 jobs to yearly job destruction. The largest firms contributed around 60,000 jobs to job creation per year on average – but only 37,000 per year to job destruction. A firm size of 500 employees seems to have been the threshold for positive net employment creation in this period.

Size category	Initial number of firms (unweighted)	Weighted empl share (%)	JC (%)	JD (%)	Birth contrib. to JC (%)	Death contrib. to JD (%)
1-19	7450	16.2	10.0	14.3	12.7	34.4
20-49	3678	15.6	11.7	12.2	12.2	33.3
50-99	2600	11.2	9.8	13.0	7.2	22.3
100-249	2513	10.3	9.7	11.3	8.7	28.3
250-499	993	6.2	10.7	10.9	12.3	26.9
500-999	526	5.9	11.3	8.6	11.5	16.0
1000-2499	243	7.3	10.8	8.3	9.6	16.9
2500-4999	91	6.4	12.5	6.9	11.0	11.8
5000+	77	20.9	6.7	4.0	10.3	7.1

Table 1 – Average Job Creation (JC) and Job Destruction (JD) by employment size category

If this is a long-term trend, it would suggest that large firms are becoming an ever more important source of formal sector employment – although further studies would be required to consolidate this conclusion given the limitations of the QES data. (Indeed, if we had more accurate data on 'births', gross job creation rates would likely be relatively higher in smaller firms, where births occur more frequently.)

The final two columns of table 1 show the percentage contributed to gross job creation and destruction by firm births and deaths respectively. Firm births and deaths have a smaller role in determining employment over time than organic expansion and shrinkage. For example, of the 110,000 jobs lost annually in the smallest firm category, only a third has been due to firm closures (deaths). But firm death as a cause of job destruction is stronger among smaller firms: only 7% of the 37,000 job losses of the largest firms have been due to closures, as against 34% for the smallest firm category. (This 34% entails thousands of small firms.)

Sectoral and size patterns

Exploring the manufacturing sector in particular, we mostly find higher rates of job destruction than job creation in the period 2005 to 2011. Table 2 shows that only the food and beverage manufacturers had positive net employment creation rates over that period, whilst the highest rates of net job destruction come from the textile industry. This is unsurprising, given the woes of textile firms that appear to be unable to compete with imports from China and elsewhere.



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Sector (2-digit SIC)	Initial number of firms (unweighted)	JC (%)	JD (%)	Birth contrib. to JC (%)	Death contrib. to JD (%)
Food, beverages and tobacco	441	9.7	7.4	7.9	16.1
Textiles	669	6.5	12.7	8.1	26.1
Wood and paper	765	6.8	10.1	8.5	30.0
Petroleum and rubber	561	7.5	7.9	5.7	22.4
Non-metallic minerals	229	8.2	11.8	12.8	26.8
Metals	1777	10.0	9.8	11.0	23.6
Electrical machinery	342	8.6	8.6	1.1	28.9
Communication and medical	361	8.7	8.7	9.8	22.5
Transport equipment	565	8.1	9.6	8.0	26.0
Miscellaneous	665	8.4	12.1	7.5	27.9

**Table 2 – Average yearly job creation (JC) and destruction (JD)
in manufacturing sectors**

However, our data also shows that South African enterprises are very large when compared to Indian and Mexican plants. The median worker (according to the size of the enterprise) works in an enterprise of 156 employees; whilst the figure (for plants) is 5 in India, 24 in Mexico and 900 in the US.

Possible policy implications

Our most important finding is that, between 2005 and 2011, net employment growth came mainly from large firms in South Africa. This is a highly policy-relevant result as the National Planning Commission's National Development Plan envisages that the majority of the 11 million jobs that it hopes will be created by 2030 will be in small and medium-sized firms. Our research indicates that this is unlikely to occur unless regulation or policy changes fairly dramatically to create a more enabling environment and higher rates of birth, survival and growth for MSMEs.

Another result with potential policy implications is the relatively high amount of reallocation of employment across firms. This suggests that rigidities in the South African labour market may be lower than is sometimes believed (especially with reference to the effects of labour legislation).

Moving Forward...

One important focus for future research would be to explore why the net rate of job creation is so low amongst small firms in South Africa, as this is a pattern that has not been found in any other economy in which research on job creation and destruction has been undertaken (as far as we are aware). Explanations for this phenomenon could include bargaining council legislation that compels small firms to pay the same wages as large firms, credit constraints and crime (Kingdon et al 2004).

In the shorter term, our next steps will be towards engaging South African government departments about making firm-level data more widely available. One of the authors (Andrew Kerr) is involved in discussions to start a centre for firm survey data analysis, based in South Africa but working on obtaining and analysing firm-level data for a number of African countries.