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What Do Fast Job Creaters Look Like?

Some Stylized Facts and Perspectives on South Africa

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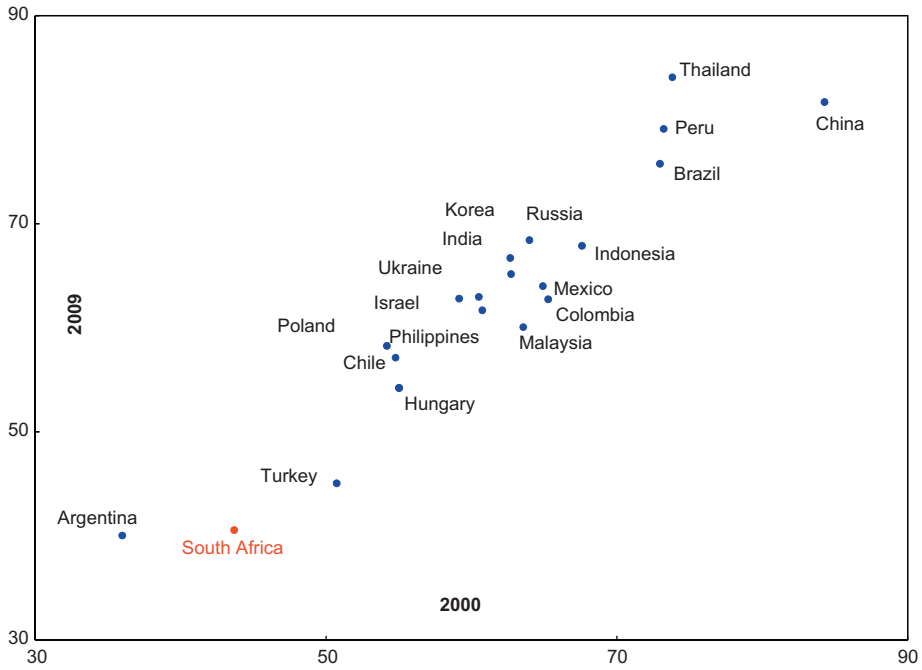
I. Introduction

South Africa suffers from persistently high unemployment and low labor force participation, leading to a depressed absorption rate of below 45 percent—almost the lowest among large emerging market economies. The 2008–09 recession made the situation much worse, with some 1 million jobs eliminated and a sizable group of discouraged workers leaving the labor force, further reducing the absorption rate to 40½ percent in 2009 (Figure 1). Recognizing the gravity of the situation, the authorities made job creation the top priority in the 2010 and 2011 budgets. The New Growth

Figure 1. Employment (Percent of working age population)



Path (NGP) set an ambitious target of creating 5 million more jobs in the next decade, so as to reduce the unemployment rate by 10 percentage points. Against this backdrop, this Departmental Paper examines the job creation performance in a group of large emerging market economies, including South Africa, and highlights some common economic characteristics that are likely associated with fast job creation.

This Departmental Paper is structured as follows. The next section highlights some factors identified by the existing literature that are related to job creation. Section III ranks countries based on their performances in job creation during the last decades. Section IV presents comparative statistics between fast and slow job creators. Section V explores which factors are more likely to be associated with job creation performance. The last section concludes with some takeaways.

II. Literature Review

Although most labor literature focuses on micro-level data within a country, many attempts have been made to explain the cross-country variations in aggregate labor market outcomes at the macro level. An early classical example is Blanchard and Wolfers (2000), which argues that labor market institutions and their interactions with shocks explain most of the heterogeneity in the unemployment rate cross European countries. For this line of literature, Bassanini and Duval (2006) provides a comprehensive survey of the impact of policies and institutions. Empirical results have been largely mixed in this area. Among the key variables identified by the literature, higher unemployment benefits and labor taxes likely increase unemployment, whereas the impact of employment protection, union density, and the coordination of collective bargaining is less conclusive. Some studies suggest that active labor market policies help to reduce unemployment, whereas others argue that only spending on training is effective (Bassanini and Duval, 2006). There is also some evidence that product market deregulation would reduce unemployment (Berger and Danninger, 2007).

Two limitations are apparent for this line of literature. First, the country coverage is usually restricted to OECD members although this is understandable given that the OECD compiles probably the most comprehensive labor market data and that relative homogeneity among OECD countries can mitigate the impact of unobserved country-specific characteristics that are very difficult to fully control for in cross-country labor studies. Second, the most common outcome variable in existing studies is the unemployment rate. Less attention has been devoted to countries' relative performance in terms of net employment creation.[1] As an exception, Garibaldi and Mauro

[1] Another line of literature that started with Davis and Haltiwanger (1992) looked into gross job creation together with gross job destruction using mainly firm-level data with a focus on the determinants of job reallocation and worker reallocation.

(1999) found that low taxation and flexible employment protection account for most of the observed differences in employment growth across 21 OECD economies. Cuñat and Peri (2001) explored the differences in terms of job creation across Italian regions and found that input-output linkages, local crime rate, and infrastructure are important for employment growth.

This paper focuses on job creation because employment can be more accurately measured, bypassing the tricky issue of determining who is in the labor force. Consequently, the impact of government policy on labor market can be assessed more clearly. This is especially important for countries with persistent high unemployment like South Africa, where the size of the labor force is sensitive to economic cycles. For instance, during 2008–09, South Africa's economically inactive population rose by 0.9 million, significantly dampening the impact of job shedding on the unemployment rate.

III. A Horse Race—Job Creation during 2000–09

The difference among our sample countries in terms of job creation is remarkable. The key outcome variable we are interested in is the average annual job creation during 2000–09 (Table 1).[2] While top performers added new jobs at a rate of some 3 percent each year, Hungary, at the bottom of the list, actually lost on average 0.2 percent of jobs each year. South Africa's performance is on the lower end of the list, with its annual job growth rate of about 1 percentage point below the median of this group of countries (1.7 percent). Although this difference in percentage points seems small, the difference in absolute terms is sizable. If South Africa performed as well as the median country, it would have had some 1.3 million more jobs during this period.

Countries' job creation performance relative to demographic factors also varies. Intuitively, a country with high working-age population growth (more labor supply and more pressure for faster job creation) creates more jobs. If a country's job creation performance is strong relative to the working-age population, this would suggest that fast job creation reflects factors beyond demographic endowment. Columns 4 and 5 in Table 1 report the accumulative change in the employment-to-working-age population ratio during the sample period and each country's ranking. A majority of our sample countries managed to create more jobs than would have been required to keep pace with their working-age population growth. On average, these countries saw job growth outpace working-age population growth by 1½ percentage points during this period, implying a similar size increase in their labor absorption rate. However, significant variation exists among countries,

[2] A sample period of a decade is chosen to ensure that what we captured is sustained employment creation, rather than one-off employment booms or cyclical swings.

Table 1. Job Creation in Emerging Markets, 2000–09

	Job creation[1]		Δ(L/P)[2]		Δ(L/Y)[3]	
		Rank		Rank		Rank
India[4]	3.0	1	2.4	10	-1.9	8
Peru	2.9	2	5.9	2	-2.3	10
Philippines	2.7	3	0.9	12	-1.6	6
Israel	2.7	4	3.7	7	-0.2	2
Argentina	2.5	5	4.1	5	-1.3	3
Chile	2.2	6	2.4	11	-1.3	5
Thailand	2.1	7	10.3	1	-1.8	7
Brazil[5]	2.0	8	2.8	8	-1.3	4
Malaysia	1.9	9	-3.5	19	-2.3	11
Indonesia	1.7	10	0.3	13	-3.2	17
Colombia[6]	1.6	11	-0.9	15	-2.8	16
Poland	1.2	12	4.1	4	-2.6	12
Korea, Republic of	1.2	13	4.0	6	-2.6	13
Mexico	1.1	14	-2.5	16	-0.1	1
China, P.R.: Mainland	0.9	15	-2.6	17	-8.7	20
Russian Federation	0.8	16	4.4	3	-3.9	18
South Africa	0.7	17	-3.1	18	-2.8	15
Turkey	0.5	18	-5.7	20	-2.8	14
Ukraine	0.0	19	2.5	9	-4.1	19
Hungary	-0.2	20	-0.8	14	-2.2	9
Average	1.6		1.4		-2.5	
Median	1.7		2.4		-2.3	
Corr with job creation			0.4	0.4	0.4	0.6

Sources: IMF, World Economic Outlook database; various country reports; and staff calculations.

[1]Average employment growth (in percent).

[2]Change in employment/working-age population ratio (in percentage points). 2009 minus 2000.

[3]Average growth of employment to output ratio (in percent).

[4]For 2000–05 based on NSSO employment and unemployment Survey 1999/00 and 2004/05.

[5]For 2001–09, due to data break in 2000/01.

[6]For 2000–07, due to data break in 2007/08.

with Thailand raising its absorption rate by more than 10½ percentage points and Turkey seeing its absorption rate decline by 5¾ percentage points. South Africa unfortunately remains near the bottom of the list, with employment creation insufficient to absorb the new inflows of working-age population during the last decade, leading to a substantial decline in its absorption rate. Based on the change in the employment-to-working-age population ratio instead of the annual employment growth rate, India, the Philippines, and Chile rank somewhat lower whereas Poland, Korea, and Russia rank somewhat higher. But the overall rankings based on these two indicators are moderately correlated.

Figure 2. GDP Growth and Job Creation

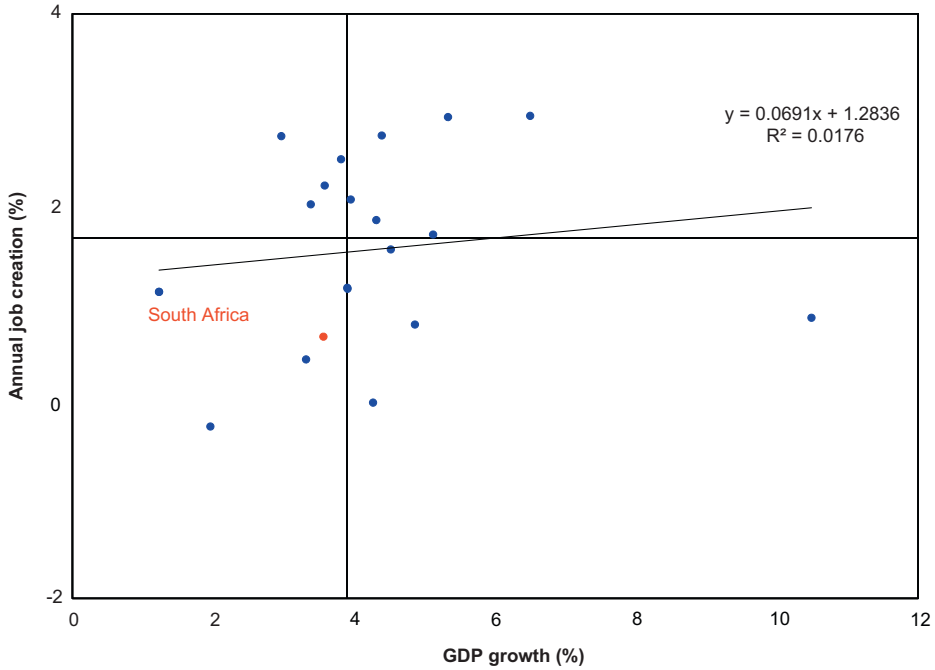
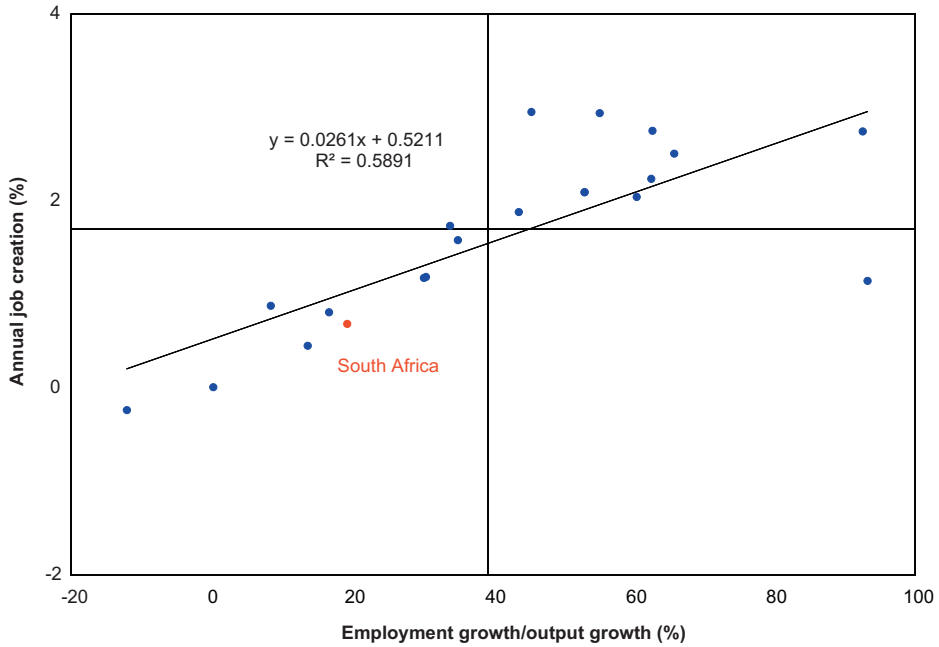


Figure 3. Employment Output Elasticity and Job Creation



Although job creation is intrinsically linked to output growth, this relationship varies substantially among countries. Column 6 in Table 1 presents the average annual change in the employment-to-output ratio during the sample period, which is simply a proxy for the inverse of

productivity growth. Although it is not surprising that all the sample countries saw productivity growth during the last decade (i.e., a decline in the employment-to-output ratio), the difference among countries is substantial (ranging from −¼ percent in Israel to −8¾ percent in China). South Africa has a slightly more negative value relative to the median for this group of countries (2¾ vs. 2½ percent), implying that employment growth on average lagged output growth by close to 3 percentage points each year. In other words, close to 3 percent of output growth each year is needed to maintain the current employment level.

Cross-country experiences seem to suggest the important role of labor intensity in sustained job creation. The change in the employment-to-output ratio for our purpose could be interpreted as a gauge of labor intensity of growth, which is a split between productivity growth and employment creation for any given growth rate. Under the extreme assumption of unchanged technology, output growth and job creation would move in parallel, leading to a constant employment-to-output ratio. On the other hand, a higher negative change in the employment-to-output ratio would imply that a larger portion of output growth is achieved through productivity enhancement rather than new employment. Among the sample countries, although output growth is positively linked to job creation, this correlation is very weak (Figure 2). On the other hand, labor intensity of growth (measured by the elasticity of employment with respect to output) seems to have played a more important role in determining job creation performance (Figure 3). When the group of sample countries is divided into four quadrants by the sample median in each dimension, South Africa, not surprisingly, ends up in the third quadrant, implying that its lagging performance in job creation reflects both a relatively lower output growth and a lower labor intensity of growth (less than one-fifth of output growth was achieved through more employment).

IV. What Makes the Difference between Fast Job Creators and Slow Job Creators

In this section, we attempt to link a county's job creation record with its other characteristics. The sample countries are sorted into two groups based on their ranking of average job creation during 2000–09, with the top 10 as fast job creators and the rest as slow job creators. Most empirical regularities identified by the existing literature on employment or unemployment generally fall into three categories: macroeconomic environment, labor market conditions, and social and human capital indicators. So we compare fast and slow job creator groups in these three areas.[3]

[3] Due to a small sample size and difficulties in passing the normality test for most variables, the usual t-test for whether two subsamples have the same mean cannot be applied here.

Macroeconomic Environment (Table 2.a.)

- Fast job creators saw more favorable macroeconomic outcomes, with slightly high growth, but substantially lower inflation.

- Fast job creators are more likely to see real effective exchange rate (REER) depreciation or less appreciation compared with slow job creators. In addition, fast job creators export more of their output and have a better current account balance.

- Interestingly, fast job creators tend to have lower government revenue-to-GDP ratio and there is little difference in terms of investment ratio between fast and slow job creators.

- Relative to other countries, two things stand out for South Africa. First, South Africa's growth fell short of even the median of slow job creators, but its average inflation exceeded the median of slow job creators. Second, South Africa saw its REER depreciate more than most other countries, but still it has a much weaker current account balance and a lower export-to-GDP ratio.

Table 2.a. Comparative Statistics: Macroeconomic Environment

	Employment	Working-age population	GDP growth	CPI	REER	CA balance	Export	Government revenues	Gross fixed capital formation
	(Average annual change in percent)					(Average in percent of GDP)			
South Africa	0.7	1.5	3.6	6.2	-0.7	-3.0	29.7	26.5	16.8
Mean									
Fast job creator	2.4	1.8	4.3	4.7	-0.2	2.4	40.9	24.9	20.7
Slow job creator	0.8	0.8	4.2	7.4	1.0	0.0	36.3	30.3	22.9
Median									
Fast job creator	2.4	1.9	4.1	3.7	0.3	1.5	35.7	22.7	20.9
Slow job creator	0.8	0.9	3.9	5.9	0.8	-1.2	32.8	28.9	21.3

Sources: IMF, World Economic Outlook database; Information Notice System (INS); and staff calculations.

Labor Market Conditions

Perception and survey-based labor market rankings present a mixed picture regarding the difference between fast and slow job creators (Table 2.b.). For example, the widely used OECD Employment Protection Legislation Index suggests a similar level of labor market rigidity for both groups. Similarly, fast job creators do not rank consistently better than slow job creators in the *Global Competitiveness Report* published by the World Economic Forum. At times, fast job creators are perceived as having more rigid labor market

institutions. These results are not surprising for three reasons. First, survey and perception are subject to responders' knowledge and ideological bias. Second, although labor laws may provide flexibility in hiring and firing, these may not be fully implemented. Third, labor market rigidity reduces both hiring and firing with little net impact on employment. That said, a few observations may be worth highlighting:

- Although the overall labor market efficiency rankings for fast and slow job creators are quite close, fast job creators tend to have a much more cooperative relationship between employers and employees.

- South Africa, relative to other sample countries, seems to perform reasonable well in the areas related to volume adjustment (EPL, rigidity of employment, and redundancy costs), but to have some issues in the wage-related areas (flexibility of wage determination, and pay and productivity). Finally, employer and employee relationships in South Africa are much less cooperative even compared with slow job creators.

Qualitative indicators, however, point to significant differences between fast and slow job creators in the areas of union density, wage levels, hour flexibility, and the share of public sector employment (Table 2.c). Specifically:

- Union density (union members in percent of total employment) differs significantly between the two groups. The union density of slow job creators is 2.5 to 3 times of that of fast job creators.

- The slow job creators tend to have substantially high wage levels by a number of indictors. The average hourly pay in the manufacturing sector for slow job creators is 1.5 times higher than that for fast job creators. In addition, the slow job creators tend to have high minimum wage levels, especially for youth workers. A 19-year-old worker in the group of slow job creators enjoys a minimum wage more than double the level for a similar worker in the group of fast job creators.

- Fast job creators tend to be less restrictive in terms of working hours. Forty percent of slow job creators have major restrictions on nighttime work, which are critical for many production lines, whereas only 10 percent of fast job creators do the same. The median premium for working on weekends is 15 percent for fast job creators, but 100 percent for slow job creators.

- Fast job creators have a higher severance package. This is consistent with Bentolila-Bertola's view (1990) that firing costs have a larger marginal impact on firms' propensity to fire than to hire.

Table 2.b. Comparative Statistics: Labor Market

	Employment	EPL	Labor market efficiency	Cooperation in labor employer relation	Flexibility of wage determination	Rigidity of employment	Hiring and firing practices	Redundancy costs	Pay and productivity
	(annual % change)	OECD Index (1-6)	Ranking by Global Competitive Report						
South Africa	0.7	1.4	97	132	131	86	135	44	112
Median									
Fast job creator	2.4	2.3	70	48	76	63	96	95	49
Slow job creator	0.8	2.1	66	99	55	82	73	75	51
Average									
Fast job creator	2.4	2.3	69	54	73	63	85	95	56
Slow job creator	0.8	2.4	76	95	64	75	83	71	60

Sources: Organization for Economic Cooperation and Development; World Economic Forum; IMF, World Economic Outlook database; and staff calculations.

Table 2.c. Comparative Statistics: Labor Market

	Employment	Union density	Hourly pay in Manufacturing	Minimum wage/ average value addition	Minimum wage for a 19-year old worker or an apprentice	Fixed-term contracts prohibited for permanent tasks?	Premium for work on weekly rest day	Major restrictions on night work in case of continuous operations?	Paid annual leave	Notice period for redundancy dismissal	Severance pay for redundancy dismissal	Share of public sector employment
	(annual % change)	(% of employment)	(2008$)		(US$/ month)	(yes = 1, no = 0)	(% of hour pay)	(yes = 1, no = 0)	(in days)	(in weeks)	(in weeks)	(% of total)
South Africa	0.7	30.6	5.3	70	516	1.00	1.00	1.00	15.0	4.0	5.3	24.9
Median												
Fast job creator	2.4	9.7	1.7	28	140	1.00	0.15	0.00	14.2	4.3	20.2	11.0
Slow job creator	0.8	24.3	4.4	35	312	0.50	1.00	0.00	17.5	5.2	13.9	14.6
Average												
Fast job creator	2.4	11.5	5.2	28	228	0.6	0.3	0.1	14.1	4.0	19.7	11.6
Slow job creator	0.8	34.1	6.1	35	317	0.5	0.9	0.4	17.1	5.3	13.6	16.5

Sources: International Labour Organization; Organization for Economic Cooperation and Development; World Bank, Doing Business Survey; World Economic Forum; IMF, World Economic Outlook database; and staff calculations.

- The share of public sector employment is similar between slow and fast job creators, suggesting that most job creation is in the private sector.

- South Africa seems to be firmly on the wrong side. Its union density and hourly pay in the manufacturing sectors are higher than the median for slow job creators by 25 and 12 percent, respectively. South Africa's ratio of minimum wage over average output doubles the median for slow job creators and its minimum wage for youth workers is about four times that of fast job creators. South Africa is also much less flexible in terms of work hours. On the other hand, the cost for redundancy dismissal in South Africa is much lower than in most other countries. Finally, the share of public sector employment in South Africa is significantly higher compared with other countries in the sample.

Social and Human Capital Indicators

Social and human capital indicators frequently used in the existing studies do not suggest noticeable differences between slow and fast job creators (Table 2.d.). In addition, South Africa does not seem to be significantly different from other countries in the sample in terms of social and human capital indicators, expect for a probably more skewed income distribution.

Table 2.d. Comparative Statistics: Social and Human Capital Indicators

	Employment	Literacy	Education spending	Income share held by lowest 20%	Rural population	Primary enrollment
	(annual % change)	(% of adult)	(% of GDP)	%	%	%
South Africa	0.7	89.0	5.3	3.1	41.2	89.0
Median						
Fast job creator	2.4	91.2	3.9	5.6	31.3	94.9
Slow job creator	0.8	92.7	5.0	5.7	32.8	92.1
Average						
Fast job creator	2.4	89.0	4.3	5.2	34.0	94.2
Slow job creator	0.8	94.6	4.6	5.9	33.7	93.2

Sources: World Bank, World Development Indicators; IMF, World Economic Outlook database; and staff calculations.

V. Job Creation and Economic Policies

To link the cross-country difference in employment growth to country-specific factors, a cross-section regression was estimated relating average employment growth during 2000–09 to macroeconomic environment, labor

market conditions, and social and human capital. We have the following observations:

- The regression results are mixed at best because many variables identified in the previous sections that seem to separate fast job creators from slow job creators do not turn out to be significant (Table 3). This likely reflects a very small sample size and huge variation among countries.

- As expected, the working-age population is positively linked to employment creation.

- Inflation has a small but often significantly negative impact on employment creation. This is consistent with the view that there is no long-term trade-off between inflation and employment.

- The estimated coefficients for union density and minimum wage in terms of output have the right negative sign, but are not significant. Higher primary school enrollment has a positive impact on employment growth, but again the effect is not significant. Finally, the ratio of government revenues to GDP is negatively associated with job creation.

- Adding dummy for South Africa to the regression does not change the story. The coefficient for this dummy is always negative, implying South Africa-specific impediments to job creation, but again it is statistically insignificant.

Table 3. Regression Outcome

	(1)	(2)	(3)	(4)	(5)
Working age population growth	0.694***	0.571**	0.784***	0.699***	0.534***
	3.822	*2.453*	*4.080*	*3.571*	*2.622*
Inflation	-0.066*	-0.063	-0.076	-0.064	-0.061
	-1.815	*-1.660*	*-1.826*	*-1.688*	*-1.711*
Government revenue/GDP		-0.003			
		-0.153			
Current account balance/GDP					0.040
Minimum wage/average value addition				-0.431	*1.119*
				-0.502	
Union density		-0.009			-0.012
		-1.183			*-1.514*
Primary school enrollment			0.022		
			0.539		
No. of observations	20	20	17	20	20
R^2	0.57	0.60	0.66	0.57	0.63

Source: IMF staff calculations.
Note: *t*-statistic reported below coefficients; ***,**,* denote significant at 1,5, and 10 percent levels.

VI. Some Takeaways

- Working-age population growth is strongly linked to job creation. With the right policies, South Africa could benefit from a relatively high inflow of working-age population.
- Inflation is likely to be detrimental to long-term job creation. Macroeconomic policies should pay close attention to inflation pressure.
- Public sector employment growth does not seem to lead to sustained job creation.
- High average wage levels—in particular, a higher minimum wage in terms of output and a higher minimum wage for youth workers—are likely to be linked to slow employment creation. In this regard, the levels of the average wage and minimum wage in South Africa seem on the high side.

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