Is Small Beautiful?
Small Enterprise, Aid and Employment in Africa

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Abstract

Aid providers often describe small firms as "job creators". But what types of jobs do they create? Drawing on enterprise survey data for nine African countries and panel data for Ethiopia we find that small and large formal sector firms create similar numbers of net jobs. Small firms, however, have much higher turnover of employment and pay persistently lower wages. To create more 'good' jobs aid should target the constraints to the growth of firms of all sizes. Improving the 'investment climate' and new programs to increase firms' capabilities—through for example management training—offer greater prospects for employment creation.

Keywords: aid, small enterprise, employment, firm exit, Africa

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1. Introduction

Small firms are big business in the aid industry. Why? In a word: jobs. There are an estimated 365-445 million formal and informal micro, small and medium enterprises (MSMEs) in the developing world, employing about 90 per cent of all workers. Only 25 million to 30 million of these firms are formal SMEs (5 to 250 employees). More than 90 per cent are either formal enterprises with fewer than 5 employees or enterprises that are not formally registered (McKinsey 2011). Not surprisingly, in the wake of the Arab Spring small firms have increasingly come to be viewed by the donor community as "job creators" for the young and growing populations of Africa, the Middle East, and Asia. [2] At the 2012 spring meetings of the IMF and World Bank, Andrew Mitchell, then the UK Secretary of State for International Development, declared that "small and medium enterprises are a vital engine of job creation in developing countries." [2] Mitchell is not alone. The European Union recently asserted, "For developing countries, the expansion of the private sector, notably MSMEs is a *powerful engine of economic growth and the main source of job creation* (emphasis in original)" (EU 2012).

In this paper we ask whether donor's confidence that aid to MSMEs will help to create "good" jobs in Africa —jobs capable of sustaining employment and paying decent wages—is supported by the evidence. Following this introduction, Section 2 describes the current state of donor assistance to MSMEs. There are more than 300 public and private investment funds for MSMEs in low-income countries and almost a quarter of their investments in 2010 went to Africa. Official development assistance to MSMEs totaled more than US$ 1 billion. Section 3 surveys the available evidence on MSMEs and job creation in Africa. In reviewing the evidence we are confronted by an important limitation. Representative employment data on micro enterprises and on informal enterprises of any size are virtually impossible to come by in Africa. For this reason we cannot assess job creation and the quality of employment in micro and informal firms. There is an abundant literature, however, to suggest that many of our conclusions with respect to small formal firms hold a fortiori with respect to micro and informal enterprises.[3] Enterprise surveys show that about half of new jobs in Africa are created in firms with 5-19 workers, but the data do

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1 The Brookings Institution and University of Gothenburg, respectively. This paper is a revised version of Page and Söderbom (2012) written for the UNU-WIDER project Foreign Aid Research and Communications – ReCom.

2 The development orthodoxy that smaller firms are more efficient at job creation appears to be largely the product of pronouncements of the U.S. Small Business Administration and by a range of US political leaders that 8 out of 10 new jobs in the USA are generated by firms with fewer than 100 employees (Birch, 1987).

3 See for example World Bank (2013).

not tell anything about how long those jobs last. Small firms everywhere have both higher birth and death rates than large firms. Because the cross-country data cannot tell us anything about firm entry and exit, we turn to panel data from one African country, Ethiopia. Here we find a striking result: when we take into account the significantly lower survival rates of small firms, expected job growth for large and small firms is essentially the same.

There are also substantial differences in the quality of jobs between small and large firms. Small firms consistently trail large firms in wages paid and wage growth. Section 4 takes up these issues using data drawn from enterprise surveys of nine African countries. There is a strong positive relationship between wages and firm size. Workers in small African firms are paid far less than employees in larger firms. In Ethiopia we find a persistent difference in wages between large and small firms. Although wages rise in all firms that survive, firms starting small do not close the wage gap with large firms.

Taken together the various strands of evidence suggest that it is time to rethink aid strategies for job creation based on support to small enterprises. Section 5 offers some preliminary suggestions on how this can be achieved. Aid should target growing firms, and this argues in the first instance for policies and programs that reduce the constraints to the growth of firms, regardless of size.

2. Small enterprises are big business

Financial and technical assistance to micro, small and medium enterprises is a major "product line" of the aid business. At the end of 2010 the global commitments of multilateral development banks (MDBs), bilateral donor agencies, and development finance institutions (DFIs) to support MSMEs totaled around US$ 24.5 billion (Siegesmund and Glisovic 2011).[4] Official development assistance (ODA) to MSMEs—the component of financing carrying at least a 25 per cent grant element—exceeded US$ 1 billion in 2009.[5] In 2010 some 300 public and private investment funds committed more than US$ 21 billion to SMEs in emerging markets through wholesale investment facilities. Almost half of these investments went to Sub-Saharan Africa (24 per cent) and South Asia (22 per cent) combined. The International Finance Corporation is the largest DFI supporting SMEs. In 2009, IFC committed US$ 6.1 billion to its SME finance portfolio. IFC financial intermediaries had an outstanding portfolio of 1.3 million SME loans that

4 In addition there are a large number of non-governmental organizations (NGOs) that deal with MSMEs. Some of these are financed by official development assistance, but a growing number are funded wholly or partly by private philanthropy. While they are not the subject of this paper, which is focused on 'aid and employment', many of these organizations have similar rationales for their SME activities and the results apply equally.

5 These estimates are approximate. There are data gaps in what donors and DFIs self-report, and the information is not reported consistently across organizations. Forty eight per cent of ODA went to Asia, 19 per cent to the Middle East and North Africa, and 18 per cent to Sub-Saharan Africa (Siegesmund and Glisovic 2011).

totaled US$ 90.6 billion in the same year (OECD 2009). In addition private philanthropies such as the Citi foundation and for profit "social" investors are also active in MSME finance.

All the multilateral development banks have programs that address MSME access to finance. Some invest directly in enterprises through loans or equity; others provide loans to financial intermediaries—typically commercial banks—which in turn lend directly to enterprises. The majority of the multilateral banks also provide technical assistance (TA) to governments on a wide range of policy reforms that affect the business environment, such as business registration, licensing, labor regulations, contract enforcement, corporate taxation, and ease of exporting.

Bilateral donor strategies toward small enterprises vary greatly. Some aid agencies finance MSMEs directly through equity or debt financing, while others provide wholesale finance through financial intermediaries. Some donors provide advisory services to train banks in lending practices to SMEs and many also provide TA to small firms to prepare bankable proposals.[6] At the firm level some donors provide technical assistance to improve business practices. Value-chain programs where donors work with large corporations to connect them to small enterprises as suppliers or distributers have become increasingly popular. In addition, donors work directly with enterprises or through business and trade associations to help build supplier relationships and to help small businesses gain access to market information. Aid agencies also focus on institutional, legal, and regulatory reforms intended to remove the constraints to growth faced by small businesses.

3. What do we know about small enterprises and job creation?

Despite the fact that much of the rationale for aid to small enterprises is centered on their role in creating jobs, we in fact know little about small enterprises and job creation in low-income countries, especially in Africa. In part this is due to definitional problems. The definition of 'small' varies by country and by income level. Richer economies like the member states of the OECD use cut-off points of fewer than 500 workers to classify SMEs. In developing countries, where market size and average firm size are both much smaller, cut-off points of fewer than 100 workers or 250 workers are often used. In Africa firms with more than 100 workers employ about 50 per cent of the labor force in the formal sector. Medium-scale enterprises (20-99 workers) constitute the second leading employment category with about 27 per cent of the labor force, and small firms (those with fewer than 20 employees) employ a further 23 per cent.

6 For example, USAID's Development Credit Authority (DCA) office typically looks for a local project that can assist SMEs to prepare bankable proposals in connection with a loan portfolio guarantee.

There are also methodological problems that complicate attempts to draw conclusions from the evidence available on job creation by small firms.[7] The most critical of these is the need to distinguish between gross and net job creation. Small firms indisputably create new jobs, but they can also destroy jobs through higher failure rates. Evidence from OECD countries and Latin America indicates that small firms account disproportionately for firm turnover (Haltiwanger, Scarpetta, and Schweiger 2010). Assessing the impact of turnover on net job creation requires longitudinal (panel) firm-level data that record exit and entry. Unfortunately, for developing countries in general, and for Africa in particular, such data are very scarce. Since small firms have higher exit rates, ignoring firm exit, will tend to exaggerate their role in creating new jobs.[8]

What do we know about SMEs and jobs in Africa?

Ayyagari, Demirgüç-Kunt and Maksimovic (2011) use World Bank enterprise survey data to analyze the contribution of SMEs to total employment and job creation for 99 developing economies.[9] These data are limited in two important respects. First, because they are not panel (firm-year) data it is impossible to deal with the question of firm survival. While the authors' acknowledge this shortcoming, they argue that the "churning" characteristic of the US and other mature economies is less present in developing countries. Second, the data only cover registered firms with more than five employees. As we noted in the introduction, this excludes the vast majority of firms operating outside the formal sector. Nevertheless, their research presents the most comprehensive picture available of the relationship between firm size, firm age and job creation in developing countries.

The database compiled by Ayyagari, Demirgüç-Kunt and Maksimovic contains firm survey data from 35 African countries. We were able to disaggregate the data and use it to describe regional patterns of employment and firm size. Figure 1 shows the distribution of total employment by firm size and region. We have chosen to present the data in four size categories: firms with 2-19 employees which we define as small enterprises in the African context, firms in the size ranges 20-49 and 50-99 employees which we define as medium-scale enterprises and firms with more than 100 employees which we define as large.[10] Using these definitions, large firms are the largest employers in all six developing regions.

[Figure 1 about here]

7 For a discussion of some of the methodological problems associated with attempts to measure job creation by SMEs see Haltiwanger et. al. (2013).

8 See Page and Söderbom (2014) for a discussion of how researchers basing their research on recall data may come to conclude that small firms create more jobs than large firms when in fact the opposite is the case.

9 To these they add data for another 44 countries, mainly high-income economies drawn from other comparable sources.

10 The definition of "large" varies in the literature, often depending on the income level of the country studied. We have chosen to follow the mainstream of the literature on firm size in Africa and define large as a firm with 100 or more workers. Ayyagari, Demirgüç-Kunt and Maksimovic (2011) present results using a definition of large based on firms employing more than 250 workers. For Africa in particular this increases the appearance that the majority of formal sector workers are employed in small and medium scale firms.

In Africa large firms employ about 50 per cent of the formal sector labor force. Medium-scale enterprises constitute the second leading employment category with about 27 per cent of the labor force, and small firms employ a further 23 per cent.[11] This result emphasizes the critical role played by the definition of "small". Had we used a cut-off of 250 employees for large enterprises, two-thirds of African jobs would have been found in "SMEs". Older firms are also where the jobs are. The largest proportion of African formal sector workers is found in firms more than 10 years old (Figure 2).

[Figure 2 about here]

Small firms in Africa create a disproportionate share of new jobs in those economies in which formal sector employment is growing (Figure 3). In the median African country about 47 per cent of new jobs were created in firms with 5-19 workers. This places Africa squarely in the middle of the regional distribution of employment creation rates by small firms, leading Europe and Central Asian and Latin America and trailing East and South Asia.

[Figure 3 about here]

In Africa very young firms and older firms (more than 6 years) have the highest rates of job creation (Figure 4). This is also true, although to a lesser extent, of East Asia but is not characteristic of any other region. The finding that small, young firms are an important source of job creation in Africa raises the concern that the cross-country data do not permit us to look at firm survival. Is it possible that in Africa—as in the United States and Europe—small firms account for a disproportionate share of enterprise births and deaths and, therefore, a disproportionate share of both job creation and job destruction?

[Figure 4 about here]

Tyler Biggs made an early effort to answer this question using panel data from World Bank enterprise surveys in five countries—Ghana, Kenya, Tanzania, Zambia and Zimbabwe—covering a three year period in the early 1990s. He reported that large firms (which he defined as larger than 100 employees) were the dominant source of net job creation in manufacturing in four of the five countries. Large firms contributed 56 per cent of net job creation in Ghana, 74 per cent in Kenya, 76 per cent in Zimbabwe, and 66 per cent in Tanzania. The data also showed higher rates of enterprise failure at the small end of the size distribution, and exit was an important factor in explaining the difference between gross and net job creation in small enterprises (Biggs 2002). Biggs results suggest that when the higher exit rates of small firms are taken into account, the assumption that small enterprises are net job creators in Africa may not be valid. Biggs results, however, are based on a small sample and very short time period of only three years. We would feel more confident if we were able to trace firm dynamics by size over a longer period.

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[11] This of course excludes micro enterprises (of less than 5 employees) and informal enterprises.

Job creation and destruction: evidence from Ethiopia

Fortunately, we have detailed evidence on firm dynamics in one sector, manufacturing, and in one country, Ethiopia. Unlike most other African countries, Ethiopia has collected a lot of data on performance and employment in the manufacturing sector. Most of the existing data derive from surveys conducted by the Central Statistical Agency (CSA) of Ethiopia. The most comprehensive dataset is that based on the *Large and Medium Manufacturing Industries Survey* (LMMS), which attempts to cover *all* manufacturing establishments in the country that engage ten persons or more and use power-driven machinery.

Page and Söderbom (2014) use these detailed longitudinal data to analyze firm entry and exit and patterns of net employment growth across firms of differing size. They combine all LMMS datasets from 1995/6 to 2006/07. This yields nearly 10,000 firm-year observations. Because most firms entered the market before the first survey year of 1995/6, in order to avoid selection bias they focus only on the subsample of 133 new entrants over the period 1995/6-2005/6. They find great diversity in the survival and growth outcomes of firms and persuasive evidence of "churning". Exit rates were significantly higher for small, young firms. Half of the firms starting with 10 employees (or fewer) were gone after 3 years; and after 8 years two thirds of the firms starting small had disappeared. However smaller firms that survived often grew.

Page and Söderbom model firm survival and—conditional on survival—employment growth for the subset of new entrants, using a probit regression in which exit is the dependent variable, and initial size (employment at start-up) and years since start-up (age) are the key explanatory variables.[12] Among surviving firms smaller firms tended to grow employment faster than larger firms. But, in contrast to the results based on enterprise surveys, when the significantly lower survival rates of small firms are taken into account, expected job growth for large and small firms does not significantly differ. A job created today in a new small firm is more likely to disappear in 6-8 years than a job created in a new large firm, but because those small firms that survive create more jobs the number of new workers hired by small and large firms over the period will be about the same.

4. The quality of jobs: firm size, productivity and wages

Our focus on job creation to this point begs another important question: what is the quality of the jobs created? There is a large body of empirical evidence from developed and developing countries showing that large firms offer higher wages than small firms, even when differences in

[12] They also control for year effects. See Page and Söderbom (2014) for a fuller description of the model specification.

worker education and experience and the nature of the industry are considered.[13] In advanced countries, the wage differential between large and small firms for similar job categories is as much as 35 per cent (Brown, Hamilton, and Medoff 1990). In developing countries it can be as large as 50 per cent (Mazumdar 1999; Rosenzweig 1988). Large employers also offer better benefits in the form of pension plans, and life, health and accident insurance. Large firms generally have better working conditions, especially in developing countries, and the jobs generated by large firms generally provide greater security than those generated by small firms (Biggs 2002).

If the objective of donors is not just to create any job, but also to create a good job—in terms of wages, employment duration and working conditions—the quality of jobs is important. Of course, donors focused on poverty reduction may regard the quality of employment as secondary to the need to draw workers out of poverty through any job that offers a wage above the poverty threshold. As Page and Shimeles demonstrate in their contribution to this volume, aid has been largely unsuccessful in achieving that objective in Africa as well, and we take the perspective that creating good jobs should be an important focus of aid policy, especially for the young. We draw on data from two sources to address the question: how good are the jobs created by small firms? First, we use World Bank Enterprise Survey data to study how simple measures of firm performance and wages differ across firms of differing size for a number of countries in Africa. We then turn to the Ethiopia panel data to gain a deeper understanding of wage dynamics.

Firm size, productivity and wages in Africa

We have assembled data on the following nine African countries from the World Bank Enterprise Surveys: Ethiopia (2002; 186 firms); Ghana (2007; 293 firms); Kenya (2007; 416 firms); Mozambique (2007; 347 firms); Nigeria (2007; 1,001 firms); Rwanda (2006; 77 firms); Senegal (2007; 262 firms); Tanzania (2006; 302 firms); and Uganda (2006; 358 firms). The size range of firms is wide. The smallest firm in our dataset employs two people while the largest firm has 7,200 employees. The median employment is 14, the sample average is 57.5, and the coefficient of variation is 3.72. Sixty-one per cent of the firms in the pooled sample belong to the smallest size group of less than 20 employees, 19 per cent employ between 20 and 49 workers; only 9 per cent of the firms have 50-99 workers and 11 per cent of the firms have more than 100 workers.

Next, we compute differences in simple measures of productivity and wages for firms of differing size.[14] Using the pooled dataset, we begin by regressing the logarithm of value-added per worker on a third-degree polynomial in log employment plus a full set of country dummies. Based on this regression we plot predicted value-added per worker normalized by predicted

13 See for example Teal (2010).

14 Unfortunately we do not have data on the number of hours worked per individual. If, as seems likely, hours worked per individual tends to be positively correlated with firm size, the strong relationship between wage and size documented in Figure 6 may partly be driven by differences in working hours across small and large firms.

value-added per worker for a firm with 5 employees. The result is shown in Figure 5. There is a strong positive relationship between value-added per employee and firm size.[15] The size-productivity differential is very pronounced, even among relatively small firms. Firms with 30 employees have, on average, twice as much value-added per worker as firms with 5 employees. Value-added per worker in African firms with 100 employees is more than three times higher than that in firms with 5 employees, and in firms with 200 employees it is 3.5 times higher. In other words, the average worker in a 200-worker firm produces as much value-added in 17 minutes as the average worker in a 5-worker enterprise does in an hour.

[Figure 5 about here]

Differences in productivity are reflected in differences in wages. Figure 6 shows how the average wage paid to workers varies with firm size. Workers in small African firms are paid far less than employees in larger firms. The earnings of the average worker in a 100-worker firm are about 80 per cent higher than the earnings of someone working in a 5-worker enterprise. A significant portion of the size-wage gap is attributable to differences in skills: large firms tend to hire better educated and more experienced workers than small firms. However, conditional on skills, there still remains a large, statistically significant wage difference across small and large firms (Oi and Idson 1999; Söderbom et al. 2005). Teal (2010) provides evidence that the quality of employment differs dramatically between small and large firms in Ghana and Tanzania. In both economies workers with similar observable characteristics in terms of age, education and tenure of employment earn substantially higher wages as firm size increases.

[Figure 6 about here]

Wage dynamics and firm size: evidence from Ethiopia

Our analysis of the African nine-country dataset showed that large firms pay higher wages than small firms. The Ethiopia data offer some deeper insights into the relationship between firm size and wages. Using the entire pooled LMMS data set Page and Söderbom (2014) find a strong statistically significant relationship between the average wage in the firm and firm size (measured as log employment). On average a 10 per cent increase in firm size is associated with a 2.9 per cent higher wage. Given that the range of firm sizes is large this predicts very sizable differences in wages between large and small firms. When they restrict their sample to new entrants only, Page and Söderbom find an almost identically large size-wage gap for new entrants in the year of entry. In Ethiopia new small firms pay much lower wages than new large firms from day one.

An important question is whether the small firms that survive (and typically grow) catch up with large firms with respect to wages. The answer in Ethiopia is no. There is no statistical evidence

[15] An important reason why small African firms have much lower labour productivity than large African firms is that capital intensity varies strongly with firm size.

that, conditional on survival, wage growth rates are higher among small entrants than among large ones. The size-wage gap established at the year of entry persists. Firms starting small do not close the wage gap, even if they survive and grow.

5 Implications for aid

We can now put the dimensions of firm dynamics—growth and survival—together with our evidence on productivity and wages, to say something about the overall potential of small and large firms to create and sustain jobs and high wages. The bottom line is this:

- Jobs in small firms tend to disappear at a high rate because of high failure rates, but if small firms survive they grow employment faster than larger firms. These two effects roughly balance each other out, so that the expected job growth across small and large firms is about the same.

- Large firms offer the prospect of much more secure employment because they have much higher survival rates.

- And, in terms of wages there is a big, big difference. Small firms create low-wage jobs and the evidence suggests that wages in small firms do not catch up to those in large firms, even if they grow.

What are the implications for aid policy? While—depending on the size cut-off used—small enterprises may be "where most of the jobs are" in Africa, our evidence indicates that once firm survival is taken into account, small firms and large firms generate essentially the same numbers of net new jobs over the medium term. At least in Ethiopia, the romantic notion that small enterprises are a powerful engine of job creation is not supported by the evidence. Our evidence is consistent with what we know about small enterprises and job creation in other economies (Haltiwanger, Scarpetta, and Schweiger 2010). Moreover, the jobs that small firms create are less attractive than those in larger enterprises. Small firms across Africa have higher job turnover and persistently lower wages than larger firms. In sum, small firms are the wrong target for aid programs aimed at creating good jobs, the sorts of jobs that Andrew Mitchell and the European Commissioners were referring to in their remarks quoted in the introduction.

Aid needs to target those firms that are successful at creating "better jobs". Size alone cannot predict which firms will grow. Indeed, we know that a small firm is more likely to die than a larger firm, despite the fact that if the small firm survives it will grow faster. This argues in the first instance for policies and programs that reduce the constraints to the growth of all firms, regardless of size. Beyond interventions that reduce the constraints to enterprise growth, donors

can experiment with programs that identify and support growing firms and that help to increase firms' chances of survival. Below we offer one concrete suggestion in each of these three areas.

Reducing the constraints to enterprise growth

Aid can reduce the constraints to enterprise growth by supporting public actions to improve the "investment climate"—the regulatory, institutional and physical environment within which firms operate. Investment climate reforms are a traditional "product" of the aid industry in Africa. Around one quarter of official development assistance, some US$ 21 billion per year, currently supports investment climate improvements (Page 2012). However, the way in which the international community has chosen to define priorities for the reform of the investment climate needs to be changed. The donor agenda for the investment climate has largely centered on easily measured reforms to trade, regulatory, and labor market policies.[16] This "made in Washington" approach to investment climate reform has largely failed to boost private investment and enterprise growth in Africa (Page 2012). Donors can reshape the investment climate agenda to make it more effective in removing the obstacles to enterprise growth.

The enterprise surveys organized by the World Bank have generated some data on the perceived obstacles to investment and growth by firms in Africa. The constraints faced by firms are somewhat different depending on firm size, but the differences are perhaps less striking than one might expect (Figure 7). Firms of all sizes highlight infrastructure deficiencies—power, transportation and telecommunications—as significant barriers to enterprise growth. Africa lags at least 20 percentage points behind the average for low-income countries on almost all major infrastructure measures. In addition the quality of service is low, supplies are unreliable, and disruptions are frequent and unpredictable. African firms report losing 5 per cent of their sales because of frequent power outages—a figure that rises to 20 per cent for firms unable to afford backup generation (World Bank 2009).

[Figure 7 about here]

Closing Africa's infrastructure gap will require around US$ 93 billion a year, about 15 per cent of the region's GDP. Forty per cent of the total spending needs are for power, alone. Until quite recently Africa's traditional development partners have shown little willingness to finance infrastructure. Despite the magnitude of the infrastructure gap, infrastructure financing by the members of the OECD Development Assistance Committee (DAC) has been falling as a share of ODA since the early 1970s (Page 2012). While it is clearly unrealistic in the current fiscal environment in the OECD to count on aid to fill the infrastructure financing gap, new approaches

16 There is by now a large literature on the costs of doing business in Africa. See for example the annual *Africa Competitiveness Report* of the AfDB, World Economic Forum and the World Bank.

and products such as guarantee instruments could leverage limited donor financing by reducing the perceived risk of private debt financing for infrastructure.

Identifying and supporting survivors

Most firms start small and those that survive create jobs at a faster rate than large firms. One novel way for aid to support job creation and growth in Africa is to experiment more boldly with interventions designed to identify new small firms with the potential for growth. Rather than providing targeted support (such as training or subsidized loans) to small firms at start-up, donors might consider, for example, giving a small grant to new firms below a certain size. The grant, which would not be conditional on a credit appraisal, is intended to provide working capital for the startup phase of the firm. The implementing agency would refrain from further interventions designed to improve the "creditworthiness" or profitability of the enterprise and observe over a period of, say, 2-3 years which firms have been able to survive.

Governments and donors would then use information gathered from the surviving firms to provide them with support tailored to their needs. At that point the bottleneck to growth might not be finance (after all, the firms have by now had some time to accumulate own savings); perhaps inadequate skills or lack of marketing and distribution channels will matter more. Such interventions are amenable to randomized experiments, and it should, therefore, be possible to conduct rigorous impact evaluations of the programs.

Building firm capabilities

As we noted above, for surviving firms the critical bottleneck to growth may turn out not to be finance, but in the jargon of modern microeconomics lack of "firm capabilities". In most industries productivity and quality are determined by a set of interlocking elements of know-how, tacit knowledge or working practices possessed by the individuals who comprise the firm's workforce—both managers and workers (Sutton 2012). Aid agencies can support the acquisition and dissemination of firm capabilities by supporting government efforts to attract foreign direct investment (FDI) and through management training.

Because firm capabilities are not codified, both the initial introduction of new capabilities and their eventual transfer to other firms depend primarily on learning through firm to firm interactions. Foreign direct investment (FDI) is one means of introducing high capability firms into a lower capability environment, and policies and institutions for attracting FDI are therefore a key tool in capability building. Surprisingly, Africa's foreign investment promotion agencies have not been highly successful in promoting FDI outside of the natural resources sector. Donors should prioritize supporting the development of effective foreign investment promotion agencies at the country level. "Value chain" programs designed to connect foreign investors with domestic firms could also be strengthened.

Managerial human capital and management practices play a key role in firm performance (Bloom et al. 2010; Syverson 2011). Case studies of the development of manufacturing firms in Asia and Africa consistently show that better management leads to improvements in productivity and profitability. Better managed firms also have higher survival rates. Randomized experiments in Africa and Latin America have found that the majority of business owners—especially among small firms—have inadequate knowledge of basic management and that rudimentary management training can improve business practices (Bloom et al. 2010; Sonobe, Suzuki and Otsuka 2011). These results suggest that programs of management and technical training for firms that have shown an ability to survive the start-up phase have a potentially large payoff. To realize the promise of management training, however, donors will need to be prepared to abandon existing programs, introduce new approaches and rigorously evaluate the results. A recent critical review of donor-sponsored business training programs for micro and small firms found that the impacts of such programs on performance, survival and employment growth were small in virtually all cases and in most cases not statistically significant (McKenzie and Woodruff 2012).

6. Conclusions

The events of the Arab Spring have put job creation on the front burner of development assistance. An attractive characteristic of small enterprise programs for donors is that they appear to link jobs and aid. Based on cross-country data, donors have assumed that small enterprises are 'where the jobs are' and that by growing this size class of firms, net employment can be increased rapidly. But, we find no persuasive evidence of a difference between small and large firms in their ability to generate net new jobs in Africa.

The conclusion that small firms are "job creators" rests on the assumption that exit by small enterprises is not an important factor in net job growth. Panel data cast serious doubt on this assumption. In the one African country for which we have comprehensive data on the life-cycle of firms, Ethiopia, the more rapid growth of small firms is offset by a very high rate of firm failures. Net job creation by small firms and large firms is essentially the same in the medium term. Moreover, large firms have substantially higher levels of productivity and pay much higher wages than small firms.

What do our results mean for aid? First and foremost, that it is time to stop overselling small enterprise development as the panacea for employment creation. While it is popular to extoll the virtues of small businesses both in high-income and developing countries, their supposed preeminence as "job creators" is not supported by the evidence in either setting. Moreover, if the objective is to create "good" jobs, and not just any job, a much more nuanced approach to aid and employment will be needed. More broadly, our results provide a caution against targeting programs of support to firms on the basis of *ex ante* criteria, no matter how appealing and apparently grounded in "fact".

A more productive approach to aid and employment would be to support the more rapid growth of firms of any size. One traditional “product line” of the aid industry—reform of the investment climate—can be redesigned and expanded to support the growth of firms. A better environment would benefit all firms in Africa, large and small. Moving beyond the investment climate, operations aimed at identifying and providing bespoke support to surviving firms and programs to increase firm capabilities offer new better prospects of helping Africa create good jobs.

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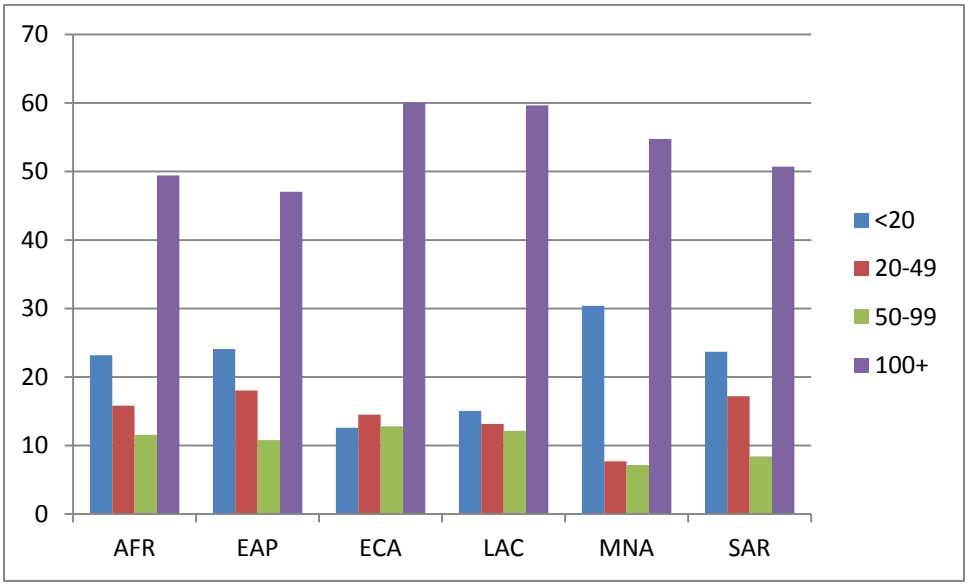
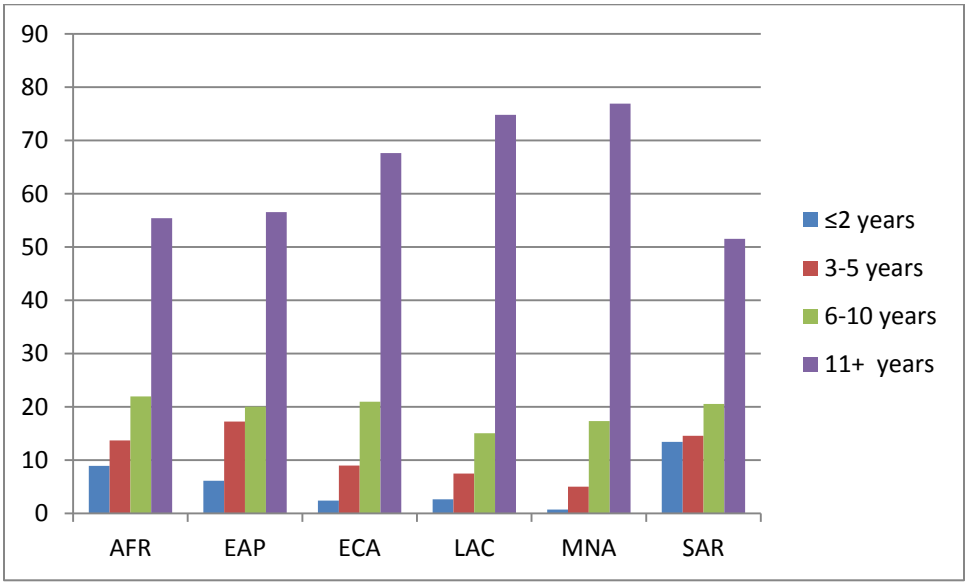
Figure 1: Employment share by firm size class



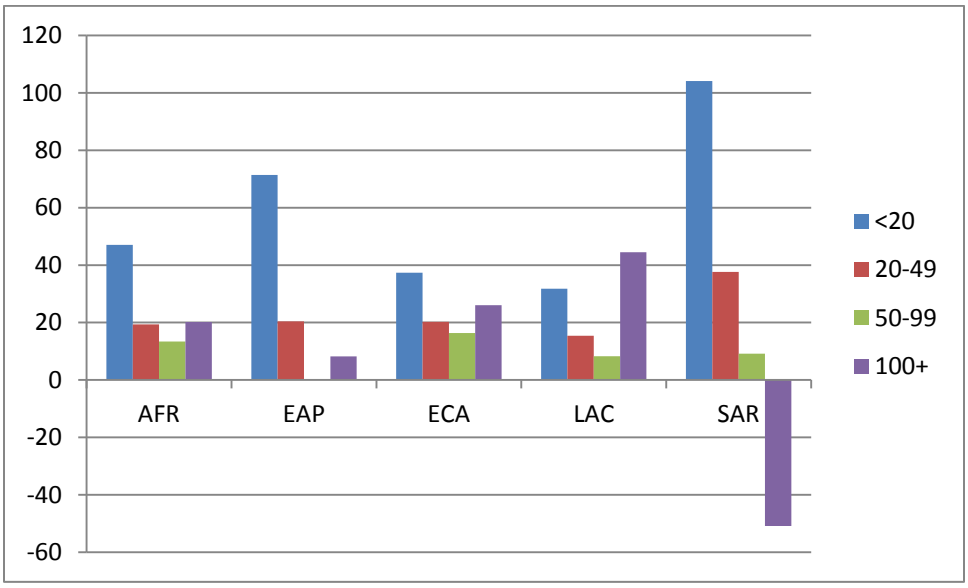
Source: Based on Ayyagari et al. (2011); authors' calculations.

Figure 2: Employment share by firm age



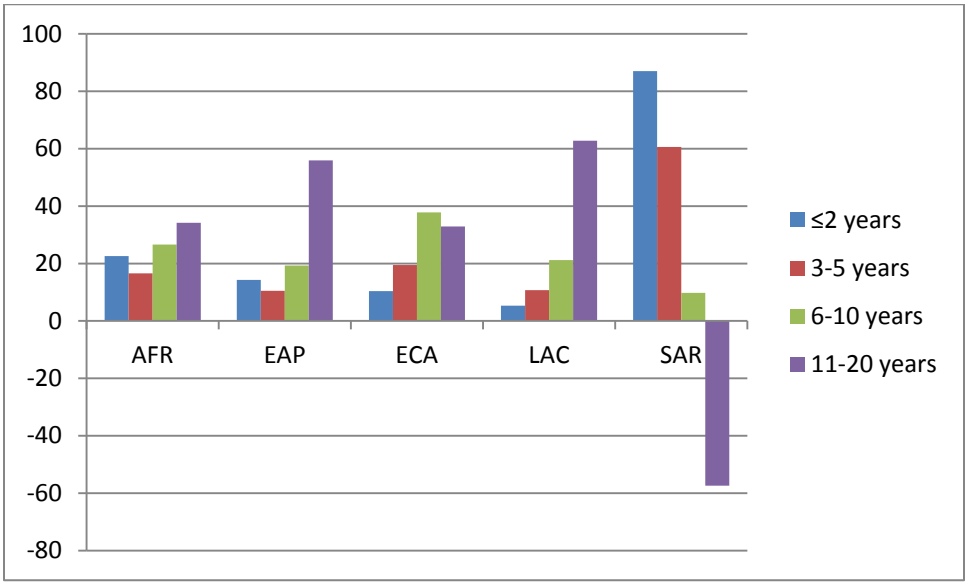
Source: Based on Ayyagari et al. (2011); authors' calculations.

Figure 3: Job creation as a share of total job creation by firm size class



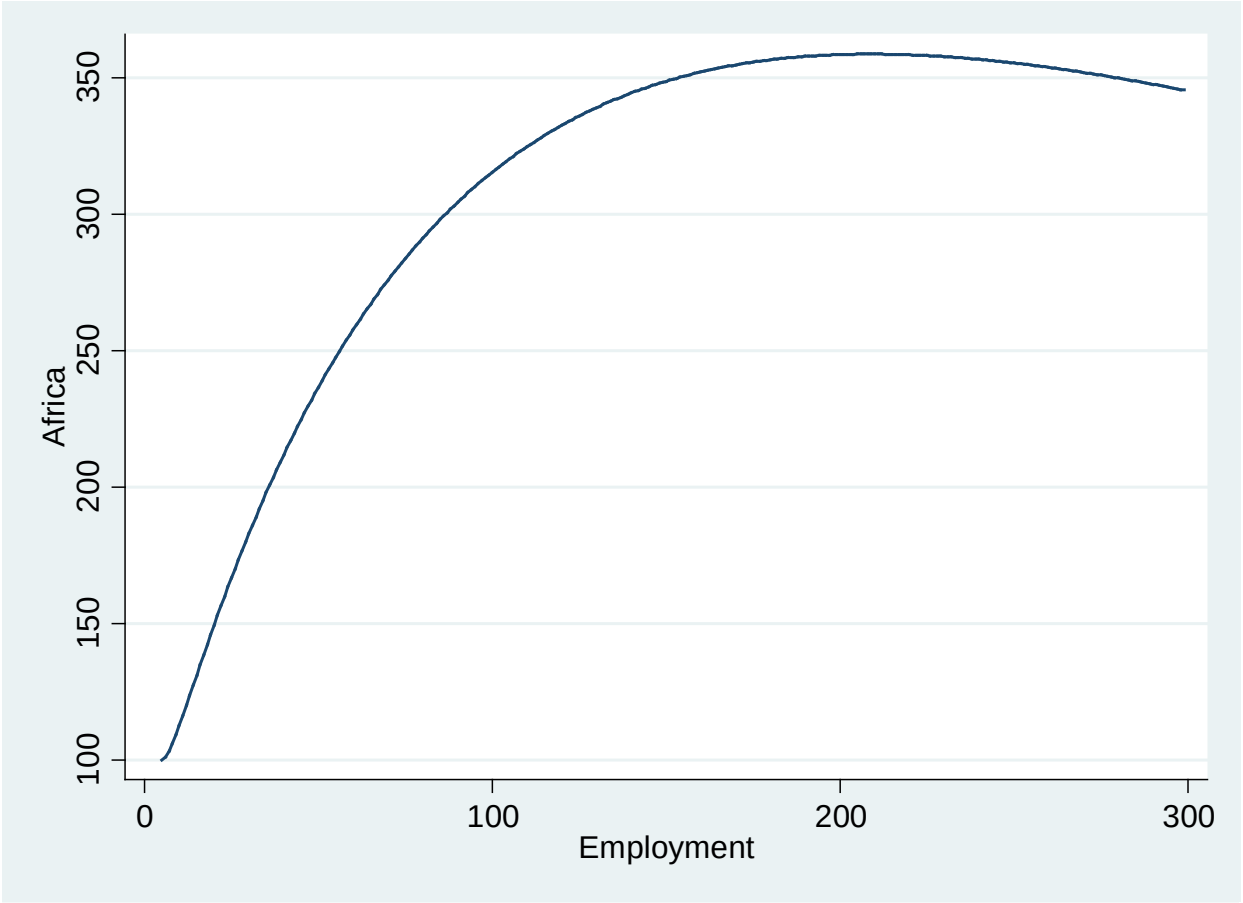
Source: Based on Ayyagari et al. (2011); authors' calculations.

Figure 4: Job creation as a share of total job creation by firm age



Source: Based on Ayyagari et al. (2011); authors' calculations.

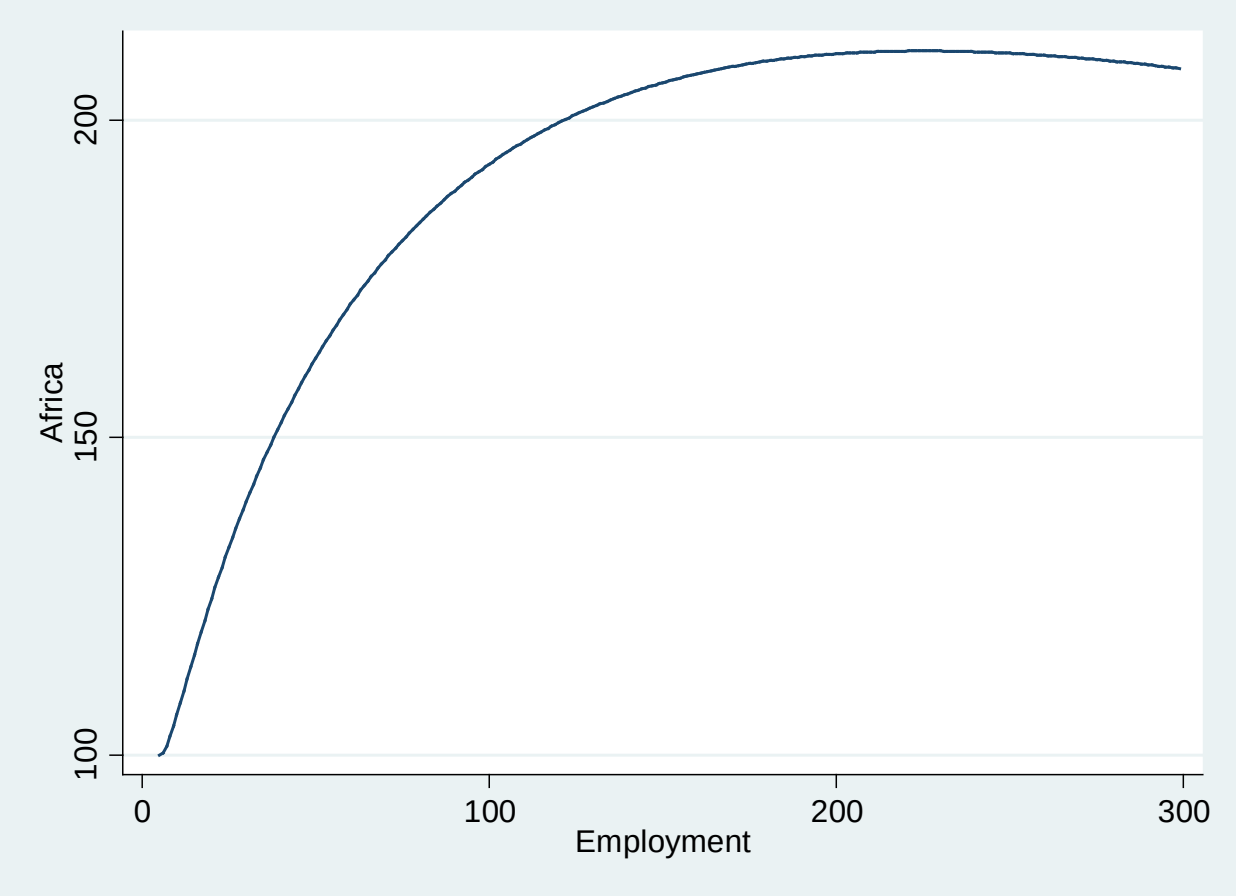
Figure 5: Value-added per worker and firm size in nine African countries



Note: The graph shows predicted value added per worker based on a regression of log value added per worker on a third-order polynomial in log employment and country dummies. The predictions are normalized at 100 for a firm with five employees.

Source: Authors' calculations based on firm-level data from Ethiopia (year 2002), Ghana (2007), Kenya (2007), Mozambique (2007), Nigeria (2007), Rwanda (2006), Senegal (2007), Tanzania (2006), and Uganda (2006), collected as part of the World Bank's Enterprise Surveys (www.enterprisesurveys.org).

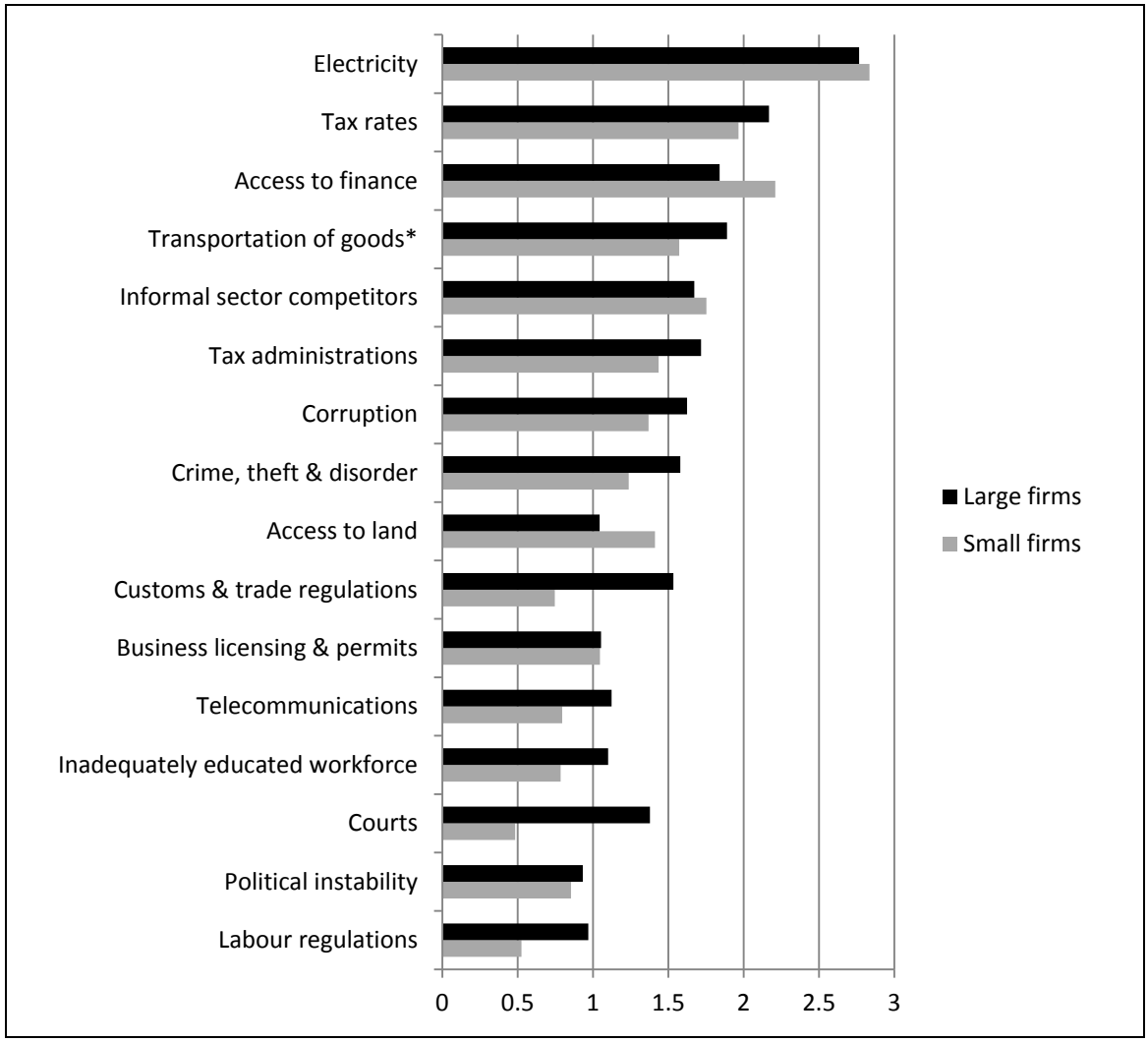
Figure 6: Average wages and firm size in nine African countries



Note: The graph shows predicted average wage based on a regression of log labor cost per worker on a third-order polynomial in log employment and country dummies. The predictions are normalized at 100 for a firm with five employees.

Source: Authors' calculations based on firm-level data from Ethiopia (year 2002), Ghana (2007), Kenya (2007), Mozambique (2007), Nigeria (2007), Rwanda (2006), Senegal (2007), Tanzania (2006), and Uganda (2006), collected as part of the World Bank's Enterprise Surveys (www.enterprisesurveys.org).

Figure 7: Perceived obstacles to the operation of small and large firms



* Including inputs and supplies.

Note: Firms are classified as large if they employ 50 or more workers; otherwise small.

Source: Authors' calculations based on firm-level data from Ethiopia (year 2002), Ghana (2007), Kenya (2007), Mozambique (2007), Nigeria (2007), Rwanda (2006), Senegal (2007), Tanzania (2006), and Uganda (2006), collected as part of the World Bank's Enterprise Surveys (www.enterprisesurveys.org).