University of Ioannina

Department of Economics

Master of Science in Economic Analysis

Employment, job creation and growth in developing countries:
A firm-level analysis

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January 2018

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by

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Thesis presented in fulfillment of the requirements for the degree of

Master of Science in Economic Analysis

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January 2018

Abstract

In this study we examine the contribution of firm size to employment, job creation and growth using the Enterprise Surveys (ES), World Bank's for 112 developing countries, surveyed over the period 2009-2017. While large firms (100+ employees) have the largest share to total employment, both small (<20 employees) and medium (20-99 employees) hold a slightly larger share than large firms. Small firms have the largest share of job creation compared to the other firm size groups. Even after controlling for firm age, we find that small firms have the highest employment and sales growth. However, large firms have the highest productivity growth. On firm age, we find that young firms (≤5 years) have the highest employment, sales and productivity growth. Our results suggest that a policymaker has to take into account both firm size and age to promote growth and create better quality jobs.

Acknowledgements

I would like to express my gratitude to my supervisor, Michael Chletsos, for his useful guidance, beneficial comments, and considerable encouragements to complete this thesis. Also, I would like to give my sincere and special thanks to my parents, Dimitrios and Chrysanthi, and my sister Marina who constantly support my efforts.

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1. Introduction

The importance of small businesses is well acknowledged internationally as a major source of jobs generation and economic recovery. This perception is popular among politicians of different political persuasions, small business advocates, and the business press. Contrary to popular belief, however, research as to whether the firm size is actually correlated with higher net job growth rates is still under way. In some research, firm size and net job growth rates have been shown to have a negative correlation, providing support for this perception, but in other studies, the negative correlation has not been clear.

The studies on developing countries and emerging economies are relatively limited. Acquisti and Lehmann (2000) show that small firms in Russia were the most successful at creating jobs, while medium and large firms were mainly destroying them. Ayyagari, Demirgüç-Kunt and Maksimovic (2014) find for a sample of developing countries an inverse relationship between firm size and job creation controlling for firm age, also they find that young firms have higher job creation rates compared to mature firms. Dogan, Islam and Yazici (2017) find an inverse relationship between job flows and firm size in Turkey. However, Rijkers, Arouri, Freund and Nucifora (2014) find a positive relationship between net job creation and firm size in Tunisia, even after controlling for firm age.

This study is a replication of the paper of Ayyagari, Demirgüç-Kunt and Maksimovic (2014) who examine the relationship of job creation, employment and growth with firm characteristics (firm size and age) in a sample of 104 developing countries for non-agricultural private firms, over the period 2006-2010.

In this study the theoretical question under investigation is the same as the one examined by Ayyagari, Demirgüç-Kunt and Maksimovic (2014). The differences between our paper and the paper of Ayyagari, Demirgüç-Kunt and Maksimovic (2014) concern the size of the sample of the developing countries, the time period and the supplementary robustness check applied in this study. Firstly, we present two basic indicators with summary statistics to figure out the contribution to employment and job creation across firm size groups. We then turn to a more systematic analysis

to examine the relationship between firm size, employment growth and, sales and labor productivity growth across some sub-groups. Our sample consists of 61,700 firms in 112 developing countries over the survey period 2009-2017.

Our main findings are summarized as follow. First, we find a positive relationship between firm size and employment share and, a negative relationship between firm size and share of job creation. Second, we find an inverse relationship between firm size and employment, sales growth, even after controlling for firm age. For productivity growth this relationship is positive. We also find that young firms have higher employment, sales and productivity growth compared to the other firm size groups.

The rest of the study proceeds as follows. In section 2 and 3, we provide further background on the literature. Section 4 illustrates the data, measurements, some summary statistics and describes the empirical methodology we use for analysis. Section 5 presents the results of our analysis. Section 6 provides concluding remarks. An Appendix with income groups and geographic regions is attached at the end.

2. The role of firms in job creation process

There are several approaches and strategies to create an attractive business climate for firms. Economic development experts are abandoning traditional approaches to economic developments that rely on recruiting large enterprises with tax breaks, financial incentives, and other inducements. Instead, they are relying on developing entrepreneurs and small firms; and supporting the growth of existing enterprises, by improving infrastructure and workforce.

In general, economic development strategies aimed at attracting only large firms are unlikely to be successful or are likely to succeed only at great cost. A study of new firm locations and expansions in Georgia suggests that the location of a new large (300+ employees) firm often impedes the growth of the existing firms or discourages the establishment of firms that would otherwise have located there (Edmiston, 2004). Another study indicates that the net employment impact of large-firm locations may actually be closer to zero (Fox and Murray, 2004).

Enrollment of large firms is likewise costly because it may incite a competitive economic development landscape. For example, decisions by local governments to use tax abatements to lure firms are highly dependent on the decisions of their neighbors (Edmiston and Turnbull, 2007). This type of competition can be very costly. Recruiting a firm will generate costs for infrastructure, such as roads, sewers, and public services.

An alternative to recruiting large firms with tax incentives and other inducements is to focus on the small business sector. The evidence in the United States suggests that small businesses indeed create a substantial majority of net new jobs in an average year.

Data published by the U.S. Statistics Bureau clearly demonstrate that the accumulation of net new jobs are created by firms with under 20 employees (Chart 1). Net new jobs are the aggregate of new jobs created by firm births(startups) and expansions (gross job creation) minus the aggregate number of jobs decimated by firm terminations and contractions (gross job destruction). From 1990 to 2003, small

Chart 1

Net Job Creation by Firm Size, 1990-2003
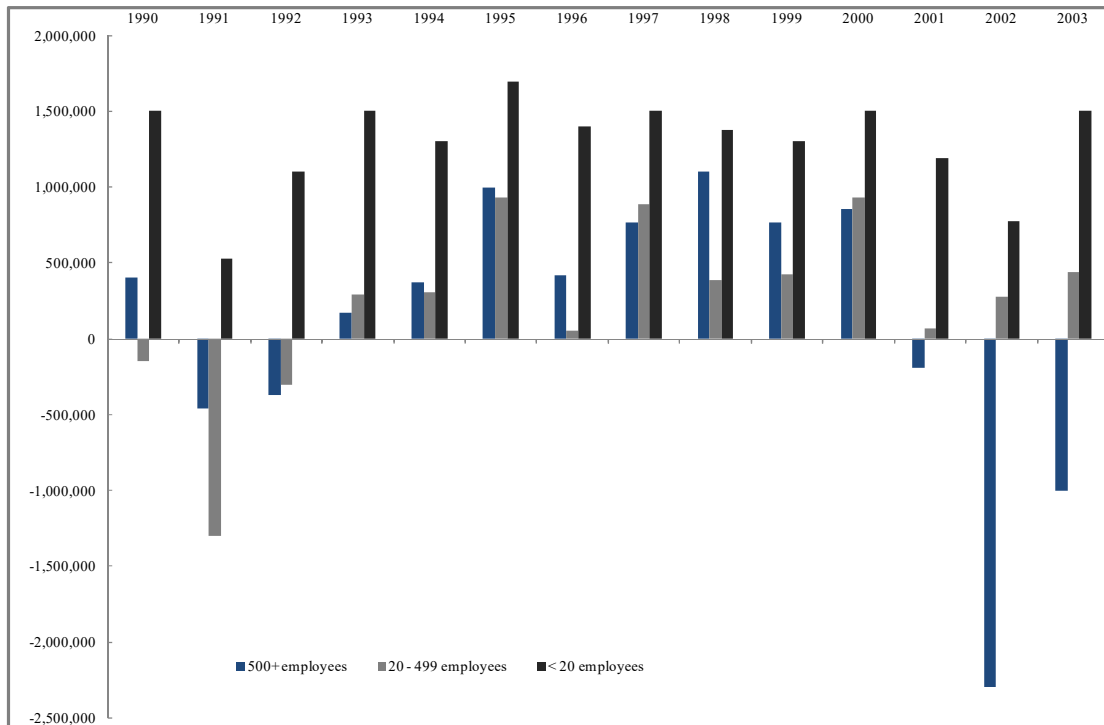
Source: U.S. Census Bureau Statistics of U.S. Business

firms (less than 20 employees) represented 79.5 percent of the net new jobs, despite employing less than 18.4 percent of all jobs in 2003. Medium enterprises (20 to 499 employees) accounted for 13.2 percent of the net new jobs, while large firms (500 or more employees) accounted for 7.3 percent.

A controversial finding from U.S. Statistics Bureau data is that over that same period (1990-2003), despite the fact that small firms had the lead in new jobs creations, as a percentage, small firms' share of total employment actually fell. In 1990, small firms employed 20.2 percent of all workers, while large firms employed 46.3 percent. In 2003, the numbers for small firms dropped to 18.4 percent but climbed to 49.3 percent for large firms (Table A).

The explanation on these opossite results lies in the tranfer of firms across size classes for year to year. In any given year, some small firms will grow beyond 20

Table A

Job Creation and Destruction by Firm Size, 1990-2001

Employment Size Class	Share of Total Employment (2003)	Share of Gross Job Creation (1990-2003)	Share of Gross Job Destruction (1990-2003)	Share of Net New Jobs Created (1990-2003)
<20	18.4	29.3	23.9	79.5
20-499	32.3	30.7	32.6	13.2
500+	49.3	39.9	43.5	7.3

Source: U.S. Census Bureau, Statistics of U.S. Businesses.

employees and join a bigger size class. Such tranfer trims the share of firms in the smallest class size (< 20 employees), in the same way that small business failures trim the class size. Likewise, some large firms will contract, falling below the 500-employee level and dropping into a smaller size class. In general, tranfer of firms across size classes makes it difficult to attribute job growth to firm size.

Another observation from the above figures is that gross job flows are considerably larger than net job flows. Around 23 million net new jobs were created from 1990 to 2003, but these figures represent the difference between 239 million gross new jobs created and 216 million gross jobs lost. Clearly, net employment figures veil a lot of instability in the labor market.

The moderately high share of net new jobs created by small firms stems for the most part from generally large gross job losses among larger firms—not from massive job creation by small businesses. From 1990 to 2003, small firms created almost 80 percent of net new jobs but less than 30 percent of gross jobs and accounted for about 24 percent of gross job losses, while large firms created almost 40 percent of gross new jobs but suffered 43.5 percent of gross job losses.

Except that, most gross and net new jobs at small businesses stem from existing business expansions rather than from new business startups. Small business startups created an average of 1.8 million jobs per year, while the death of small firms was responsible for an average loss of more than 1.6 million gross jobs each year. Thus, the net job growth from small business startups in the 1990s and early 2000s (new jobs created minus job losses) was relatively small, representing less than 13 percent of total net job growth among the smallest firms.

As small firms create the majority of net new jobs, there is the question of how these jobs compare to those at large firms by analyzing workers earnings and job stability by firm size classes. Figures from U.S. Census Bureau dataset for 2005 show that large firms pay higher wages than small firms. Thus, the percentage of workers earning low wages declines consistently as establishment size increases (Chart 2). The gap does not appear to be narrowing, as research finds wage growth at large firms equals or exceeds that at small firms (Hu, 2003).

Chart 2

Average Hourly Wage, by Establishment Size, 2005
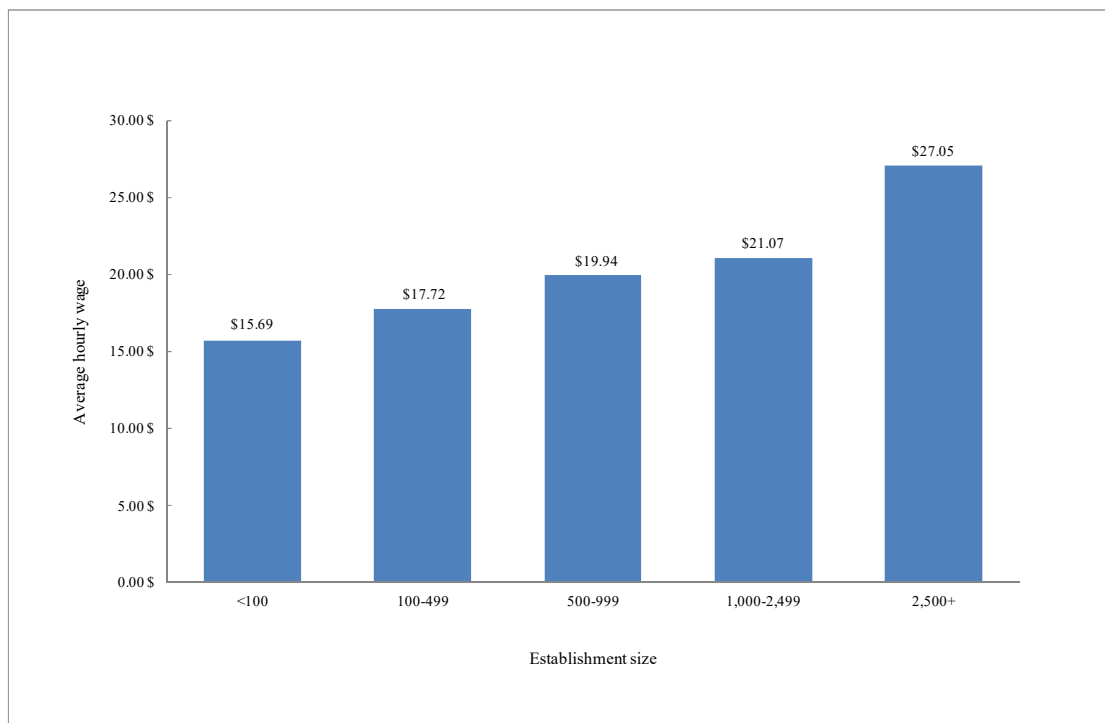
Source: Bureau of Labor Statistics, U.S. Department of Labor (2007). *National Compensation Survey: Occupational Wages in the United States, June 2005*

There are many researches resulting some different explanations for the wage discrepancies across workers. Workers doing the same job might be willing to accept a lower wage in exchange of health benefits (Olson, 2002). Although, this is not a plausible explanation for size-wage effect because large firms tend to offer better benefits than small firms. Demographics may give a controversial result. With the exception of Hispanics, women (especially professional women (Mitra, 2003)) and minorities are more likely to work for large firms (Headd, 2000), so evidence may particularly reject the argue: women and minorities earn less than their white male collaborators. Empirical evidence shows that working conditions cannot explain the firm size-wage effect (Brown and Medoff, 1989). Further, some argue that workers at large firms have a greater incentive to gain additional education and new skills because of greater opportunities for upward mobility (Zabojnik and Bernhardt, 2001). Many explanations for the size-wage effect have been explored with little success; however, workers still tend to earn higher wages at large firms.

Chart 3

Job Losses from Business Failure, by Establishment Size, 2014-2015
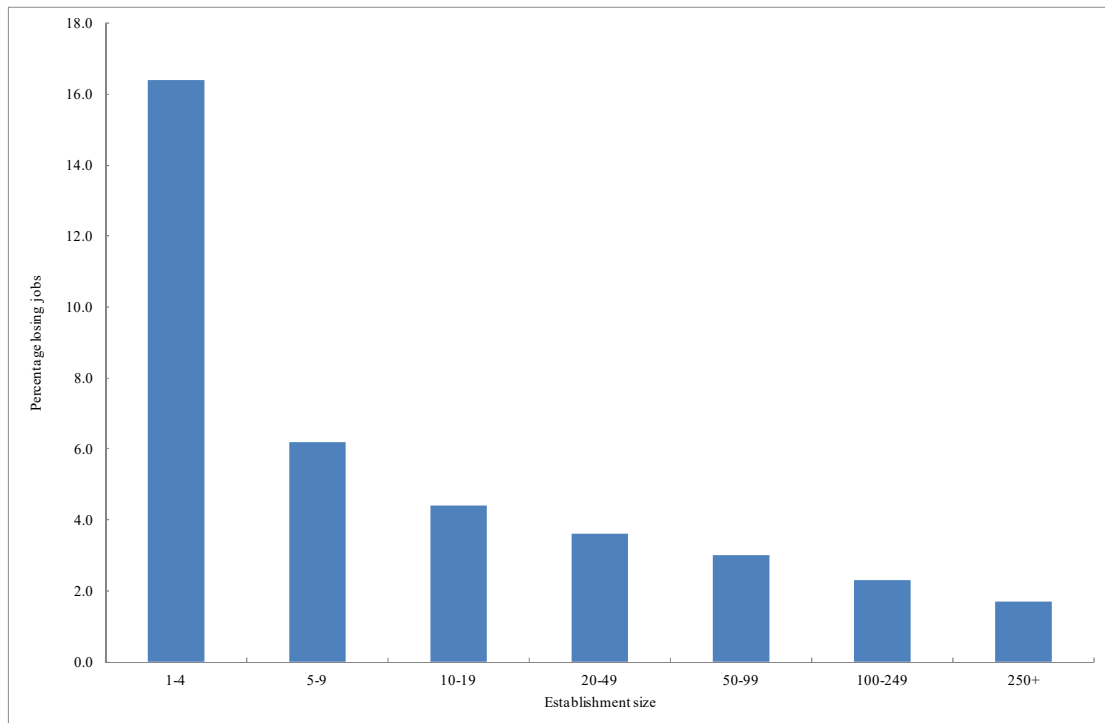
Source: U.S. Census Bureau, Statistics of U.S. Businesses.

Another factor to compare jobs between small and large firms is the job stability each firm provides. The probability of being dismissed from a job is an imperative factor in determining the quality of jobs. A study analyzing the implication of establishment size shows a significant negative relationship between job dissolution and firm size (Groothuis, 1994). Also, other researches show a significant negative relationship between firm size and probability of layoff (Winter-Ember, 2001; Campbell, 1994). Likewise, quit rates decline with firm size (Brown and Medoff, 1989). Mostly larger firms offer more on-the-job training and greater opportunities, which make it easier for them to maintain long employment relationships with their employees (Idson, 1996).

Latest data from U.S. Census Bureau for the period 2014-15 analyze job losses from business failures (firm death) by firm size. Failure rates of establishments drop markedly as firm size increases to 50 employees, therefore only in the size class (one to four employees) the percentage of losing job is high (about three and three-half times higher) regarding to the other size classes. As seen in Chart 3, approximately 16.4 percent of all workers in the smallest firms (one to four employees) lost their jobs from business failures in 2014-15, compared to 1.7 percent at the largest firms (250 or more employees).

3. Literature review

Different researches have been performed in order to identify the determinants of job creation and destruction. Within this paragraph the identified determinants from several articles will be demonstrated and explained. The articles found within the existing literature particularly investigate some firm-level determinants (separately and both firm age, size; and firm openness). Also, the literature points out some other determinants, beyond the firm-level, such as transition[1] and institutions. It is interesting to find out whether these determinants are positively or negatively influencing job creation.

The existing literature investigated the determinant firm size. Many studies have found that job flows (job creation and destruction) tend to decline with firm size. Hence, small firms create (destroy) quite a large share of all new (lost) jobs (Wagner, 1995; Genda, 1998; Schuh and Triest, 2000; Fuchs and Weyh, 2010; Hijzen, Upward and Wright, 2010). However, some researches have shown that small firms were the most successful at creating jobs, while medium and large firms were mainly destroying them (Acquisti and Lehmann, 2000; Neumark, Wall and Zhang, 2011). Except job flows, Lawless (2014), Pyo, Hong and Kim (2016) and Dogan, Islam and Yazici (2017) added employment growth in their main measurement, trying to figure out the relationship between employment (job) growth and firm size. Lawless (2014) for the U.S. and Dogan, Islam and Yazici (2017) for Turkey show that there is an inverse relationship between net job growth, similar with job creation. However, in the case of Korean firms, Pyo, Hong and Kim (2016) after controlling for firm age, found that the correlation between firm size and net job growth rate becomes nonexistent, and in some cases there is even a positive correlation.

The existing literature, also, investigated separately the determinant firm age from firm size. The studies in this area, mainly, focused on the role of start-ups (young/new-born firms) in job creation, destruction and employment. For the case of Great Britain as whole, Van Stel and Storey (2004) find no significant relationship between start-ups and employment creation in the 1980s. For the 1990s, a significant

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[1] A transition economy or transitional economy is an economy which is changing from a centrally planned economy to a market economy.

positive relationship for Great Britain as a whole is found, but for Scotland, which focused policy on start-ups, a negative relationship is found. Ibsen and Westergård-Nielsen (2011) and Kuhn, Malchow-Møller and Sørensen (2016) both for Danish firms find that young firms (start-ups) are creating more jobs than older firms. Adelino, Ma and Robinson (2017) for the U.S., argued that new business starts create the majority of net jobs as a result of the demand shocks.

Many studies focused on both firm size and age as the main determinants of job creation and employment growth. Broersma and Gautier (1997), Oberhofer and Vincelette (2013) and Liu, Tsou and Hammit (1999) show an inverse relationship between employment creation and both firm size and age. Bigsten and Gebreeyesus (2009) for Ethiopia and Ayyagari, Demirgüç-Kunt and Maksimovic (2014) for a sample of 104 developing countries show that job creation and employment growth is negatively related to size and age. Also, they find that labor productivity is affected positively by firm size and negatively by age, indicating that both size and age matters to promote growth and create jobs in terms of quality. In addition, Voulgaris, Agiomirgianakis and Papadogonas (2014) for Greece find an inverse relationship between job creation and firm size, however older firms are the major job creators, while large firms are the major job destructors. Also, they examine some other characteristics (exports, new investment in fixed assets, efficiency in the use of working capital assets, market share and productivity growth) which have a positive relationship with job creation and profitability is negatively correlated to employment growth.

More controversial results are reported in Haltiwanger, Jarmin and Miranda (2013) for the U.S. economy. First, they show that young firms are less likely to exhibit job creation from opening new establishment than are mature firms, nevertheless young firms disproportionally create jobs by expanding existing establishments. Controlling for firm age, large firms are more likely to open new establishments than small firms are and establishment exit is also more likely for smaller firms. Second, firm entry rates are much higher for the smallest size classes, however this just mirrors the way that new firms have a tendency to be small. Similar results are reported from Yazdanfar and Salman (2012), who show that firms' size and age, the importance of debt financing and increased availability of liquidity are positively related to job creation as well as industry affiliation.

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Firm openness, also, examined as a firm-level determinant of job creation. Pisu (2008), for Belgian manufacturing firms, show that direct involvement in international markets is a source of job reallocation and the reallocation effect is higher among large firms than among small ones. In the chase of China, Ma, Xue and Yuan (2015) show that trade openness is related positively with job creation and net employment growth. Also, they show that a high share of state-owned enterprises in the economy leads to a significant increase in job destruction and therefore a significant decrease in net employment growth; and industries with higher wage rates, productivity, and capital-labor ratios generally have higher job creation, lower job destruction, and therefore higher net employment growth.

The literature points out the role of transition as an additional important factor of job creation and destruction. Most of the studies suggest that transition is characterized by a sharp increase in job destruction reallocation. Overall, job creation remains low. De novo[2] and foreign-owned private firms have on average a substantially higher net employment growth rate, suggesting that the observed higher gross and net job flow rates in the private sector are due to ownership and/or life-cycle effects as well as to size effects (Konings, Lehmann and Schaffer, 1996; Bilsen and Konings, 1998; Faggio and Konings, 2001). Moreover, for a post-transition period, Konings and De Loecker (2006) show for Slovenia that job creation is associated with new private firm entry and job destruction, mainly, by exit of firms. Also, they show that total factor productivity (TFP) has increased mainly due to existing firms' increasing efficiency and through net entry of firms. There is an inverse relationship between TFP growth and job destruction for state firms and; TFP growth and job reallocation for private firms.

More recent researches mention the role of institutions as an additional determinant of job creation and destruction. Institutions barriers such as strictness of employment protection legislation, the extent of wage bargaining co-ordination and the generosity of unemployment benefits reduce both job creation and job destruction, and overall the growth of firms (Gomez-Salvador, Messina and Vallanti, 2004; Cuaresma, Oberhofer and Vincelette, 2014).

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[2] In general usage, de novo (literally "of new") is Latin expression meaning from the beginning.

4. Data and empirical methodology

4.1 Data

Data for this analysis were collected through World Bank's Enterprise Surveys.[3] The Enterprise Surveys (ES) are an ongoing World Bank project in collecting both objective data based on firms' experiences and enterprises' perception of the environment in which they operate. The Enterprise Survey uses stratified random sampling to survey across firms from the country's statistical office generate a sample representative of the whole non-agricultural private economy (so fully government owned firms are excluded from the sampling universe) in the country. The strata for Enterprise Surveys are *firm size*, *sector of activity*, and *geographic region* within a country. Firm size levels are 5-19 (small), 20-99 (medium), and 100+ employees (large-sized firms). Sector breakdown is manufacturing sectors, construction, services, transport, storage, communications, and computer and related activities.[4] Geographic regions within a country are selected based on which cities/regions collectively contain the majority of economic activity.

The Enterprise Surveys (ES) has been produced since 2002. Most surveys conducted after 2006 use stratified sampling and contain weights based on this information. Ayyagari, Demirgüç-Kunt and Maksimovic (2014) argued some limitations using Enterprise Surveys (ES) data for surveys administered during 2006–2010. First, using the Enterprise Surveys (ES) sample, only report the formal sector in each country and exclude the informal sector. Some of the developing countries in their sample have large informal sectors, which suggest that they underestimate the importance of this sector (mainly small and medium firms) in those countries. Moreover, as the firm size group starting from 5 employees and more, their dataset do not mention results on micro-firms (0-5 employees). Second, their data include only the continuing/surviving firms and hence they have no data on job destruction by firms which were liquidated over the sampling period-year. Also, as the surveys are stratified only by industry/sector, firm size and geographic region, their data are not completely representative for firm age, though firms in the dataset within the strata are randomly sampled. Thence, they present results on firm age as being conditional

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[3] See www.enterprisesurveys.org for the detailed description of the data and methodology used in sampling. The full dataset is available on this website.

[4] All sector breakdowns are described in table 4.

on firm size. Third, the Enterprise Surveys (ES) report the sampling unit of enterprises at the establishment level and not at the firm level.[5] This might be an advantage in the sense that job creation measures are well defined and focused on establishment level rather than changes from mergers, acquisitions, and divestitures. Consequently, they will utilize the term establishment and firm in a same way.

We restrict our sample to surveys administered during 2009-2017. All surveys included in our dataset follow the global standardized methodology. Our final sample consists of surveys across 112 countries, providing new evidence for the role of firm size in job creation. We also have the above data limitations. However, in our case, an additional advantage of the Enterprise Surveys is that they make two separations on firms (domestic and foreign firms; non-exporting and exporting firms). We also utilize the term establishment and firm in a same way, as it reported similarly from the Enterprise Surveys (ES). All the surveys of our data follow the global methodology of the Enterprise Surveys (ES), World Bank, which provide us a representative sample of firms across economies. The final data composed from new comprehensive country-cross sectional dataset. We understand all the above data limitations, although we consider that this analysis among countries will be important to indicate the relationship between size, job creation and growth in developing countries.

4.2 Dependent variables measurement

Employment growth is the change in full-time employment reported in the last fiscal year from a previous period. For all countries, in our sample, the difference between the two fiscal year periods is two years. Hence, employment growth is measured:

$$employment\ growth = \frac{1}{2}\frac{l_f - l_{f^*}}{(l_f + l_{f^*})/2},$$

where l_f is the number of permanent, full-time individuals (workers) in the establishment, at the end of the last fiscal year f and l_{f^*} is the number of permanent, full-time individuals in the establishment, two years before the fiscal year f.[6]

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[5] The Enterprise Surveys (ES) define the establishment as a physical location where business is carried out and where industrial operations take place or services are provided. Additionally, an establishment must make its own financial decisions, have its own financial statements separate from those of the firm, and have its own management and control over its payroll.

[6] For fiscal years f and f^*, it is: $f - f^* = 2$, two years difference.

Sales growth is the change in sales between a two-year period. All sales values are deflated to 2009 using each country's GDP deflators from the World Development Indicators. Hence, sales growth is measured:

$$sales\ growth = \frac{1}{2}\frac{\acute{s}_f - \acute{s}_{f*}}{(\acute{s}_f + \acute{s}_{f*})/2},$$

where $\acute{s}_f$ is the deflated value of total annual sales in the last fiscal year and $\acute{s}_{f*}$ is the deflated value of total annual sales two years before the fiscal year f, reported by each establishment.

Labor productivity growth is the change in labor productivity between a two-year period, where labor productivity is sales divided by the number of full-time permanent workers. All sales values are deflated to 2009 using each country's GDP deflators. Hence, labor productivity growth is measured:

$$labor\ productivity\ growth = \frac{1}{2}\frac{\left(\frac{\acute{s}_f}{l_f}\right) - \left(\frac{\acute{s}_{f*}}{l_{f*}}\right)}{\left\{\left(\frac{\acute{s}_f}{l_f}\right) + \left(\frac{\acute{s}_{f*}}{l_{f*}}\right)\right\}/2}.$$

In table 1, we provide some descriptive statistics for the above types of growth.

[Insert table 1 here]

Table 1 show that the mean values of employment and sales growth is positive (having a value greater than zero). However, for labor productivity growth the mean value is below zero. We discuss below, more specific, firm's growth patterns in developing countries.

4.3 Indicators measurement

Following Ayyagari, Demirgüç-Kunt and Maksimovic (2014), we construct the *share of total employment* where total employment is the population estimate of the number of permanent, full-time employees in the country derived by aggregating the employment reported by each firm in the country multiplied by its sampling weight. Also, we construct the *share of job creation* where job creation is the population estimate of the change in the number of permanent, full time employees over 2 years, also derived by aggregating the change in employment reported by each firm in the

survey multiplied by its sampling weight.[7] We use detailed tables with these above two indicators: share of employment and job creation by size group across geographic regions. Our data are subject to the usual sampling errors and limitations we discussed in the subsection 4.1. Thus, at the foot of each table, we present summary statistics: minimum, maximum, mean and median across countries and regions.

4.3.1 Share of total employment and firm size

Table 2 shows the share of total employment across the firm size classes in each country. The sum of all the employment shares in each country should add to 100 %. The standardized methodology we use here, following the Enterprise Surveys (ES), is to define employment and firm size in the year before the survey. Table's 2 medians show that, across countries, large firms (100+) holding the largest share of total employment (47.19 %). About the medians for small and medium firms, small firms contribute for 19.05 % and medium firms contribute for 31.39 %. However, if we compare both small and medium firms together, we find the median employment share across our sample to be 50.44 %, slightly higher than large firms. We get similar patterns if we use the mean value for the contribution to employment of firm size groups across our sample of 112 countries.[8]

At the foot of table 2 we report the median values of share of total employment by firm size group across geographic regions. In all regions large firms are the largest contributors to total employment. Only in African region the share of medium firms to employment (33.95 %) are comparable to large firms (37.08 %), but still large firms holding the largest share.

Overall, we find that large firms have the largest shares of employment across developing countries.

[Insert table 2 here]

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[7] The Enterprise Surveys (ES) ask establishments to report the number of permanent, full-time employees at the end of the last fiscal year before the year of the survey and three fiscal years ago. Also, we have the number of permanent, full-time employees when the establishment started operations in the country, but we do not provide any measures of job creation and destruction in the year the establishment was born.

[8] Using mean values the contribution to total employment in each size group is: 22.80 % for small firms, 32.06 % for medium firms and 45.14 % for large firms. Large firms still have the largest share of total employment, but comparing to the median value for large firms it is slightly lower, whereas for small and medium firms is slightly higher.

4.3.1 Share of job creation and firm size

Table 3 shows the share of job creation across the firm size classes in each country. In a similar way as in table 2, firm size and job creation are defined in the year before the survey. Of 112 counties in our sample, 11 countries had job losses. We first report in the panel A of table 2 the 101 countries with net positive job creation and in panel B the 11 countries which had a net job loss.

Small firms (5 – 19 employees) in panel A of table 3 have the largest share of job creation across countries with net positive job creation, as indicated by the high sample mean of 58.99 % and median of 46.89 %. Interestingly, of 101 countries, only Colombia have negative share (-18.57 %) of job creation in small firms. In the chase of job creation share, mean and median values have some differences, however small firms still have the largest share. Specifically, medium firms have a mean value of 33.82 % and 33.72 % median, large firms have a mean value of 7.19 % and 21.67 % median. At the foot of panel A we also report median values across geographic regions.

In panel B of table 3, there are 11 countries[9] which had a net job loss, from which 4 countries (Bulgaria, Eritrea, Ukraine and Zimbabwe) the small firms have a net job loss. When we look at the summary statistics across the countries, we find that the mean and median value for firms with 100+ employees is negative suggesting that it is the large firms that are losing jobs in these economies.[10]

[Insert table 3 here]

Overall, we find that small firms have the largest shares of job creation, but large firms have the largest share of job losses. Even in countries which had a net job loss, we find the median small firm to be creating jobs.

4.4 Empirical methodology

The empirical exercise involves estimating the following equation:

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[9] The 11 countries experiencing job losses are Bulgaria, Eritrea, Honduras, Malaysia, Mexico, Peru, Romania, St. Vincent and the Grenadines, Ukraine, Venezuela and Zimbabwe. Most of these countries have had civil strife and ethnic conflict, and it is conceivable that, when institutions break down, it is only the small firms that are able to employ people and create jobs.

[10] We do not report median values across geographic regions, because we only have 4 out of 6 regions for the 11 countries that had net job loss.

$$g_i = \alpha + \beta FS_i + \gamma A_i + SFE_i + CFE_i + TFE_i + u_i \qquad (1)$$

where subscript i denotes for the firm, g is the dependent variable (employment/sales/labor productivity growth), FS is our main explanatory variable (firm size of each firm, based on the number of employees), A is a control variable for the age of each firm in our sample, SFE is sector-industry fixed effects, CFE denotes country fixed effects, TFE is time (year) fixed effects and u is the error term. A detailed explanation of the variables in the equation (1) is provided in table 4. Summary statistics of all the variables used in the regressions is provided in table 1. We control for firm age , since Haltiwanger et al. (2013) evidence based on U.S. data and Pyo et al. (2016) based on Korean data find that there is no relationship between firm size and growth, once age is controlled, to examine if the nonexistent relationship holds for our data.

Also, we are interesting in the relationship between firm age and growth. Thus, we add the age variable as a main explanatory. In this chase, the form of the regression equation is:

$$g_i = \alpha + \beta_1 FS_i + \beta_2 FA_i + SFE_i + CFE_i + TFE_i + u_i \qquad (2)$$

where the variables are the same as in equation (1), with the difference that we have added FA (age of the firm) as a second main explanatory variable. A description for FA in the equation (2) is also available in table 4 and its summary statistics in table 1.

[Insert table 4 here]

Following Cameron and Trivedi (2005) and Ayyagari, Demirgüç-Kunt and Maksimovic (2014) we use the "model approach" to estimate our regression model. Thus, we use OLS regression to estimate (1) and (2), with clustered standard errors at the country level. First, we add some additional robustness checks; we divide our sample to exporting and non-exporting; domestic and foreign firms. Second, we use sector × size interaction effects for the role of size in growth patterns across sectors and also to examine the role of age in growth, we use size × age and sector × age interaction effects.

5. Results

Table 5 shows the first results of our regression analysis. Cols. (1)−(3) present employment growth regressions, cols. (4)−(6) present sales growth regressions and cols. (7)−(9) present productivity growth regressions. We also divide our sample to only manufacturing firms and non-manufacturing sector. Col. (1) shows that small firms have higher employment growth that medium firms and even higher than large firms, controlling for firm age. These relationships hold also for only manufacturing and non-manufacturing sector, with statistical significant results. In cols. (4)−(6) we get the same relationships with cols. (1)−(3). Thus, employment and sales growth have the same patterns subject to firm size. Cols. (7)−(9) show that small firms have lower productivity growth than medium and large firms. However, the results are not significant for all the sub-groups.

[Insert table 5 here]

In the following subsections we put our results in some categorical robustness checks.

5.1 Establishment size and growth − across income groups

In table 6, we take advantage of the stratification of the Enterprises Survey (ES) data, which provide us different income groups across countries and we use regressions for employment, sales and productivity growth for 5 income groups. Small firms have higher employment growth than medium and large firms across all income groups. Small firms have significantly higher sales growth compared to large firms in lower-mid and low income groups. We also find that small firms have lower productivity growth than medium and large firms across all income groups, however the results still not be significant.

[Insert table 6 here]

5.2 Establishment size and growth − large versus small informal sector

In this subsection, we group our sample in two sub-groups following Medina and Schneider (2017) who examine the informal sector (shadow economies) of 152 countries for the period 1991 to 2015. Of 152 countries in their sample, we have data

on the informal sector's contribution to GDP in 93 countries. In Table 7, cols. (1)−(3) report results for countries with a large informal sector (above the median value) and cols. (4)−(6) report results for countries with a small informal sector (below the median value).

In both large and small informal sector we find that small firms have higher employment and sales growth than medium and large firms. For productivity growth, again we find smalls firms to be less productive compared to the other size groups. This indicates that the size of informal sector does not affect our results.

[Insert table 7 here]

5.3 Establishment size and growth − non-exporting versus exporting firms

In table 8 we divide our sample to non-exporting firms and exporting firms. In both groups employment and sales growth keep the same patters than above.[11] However, for exporting firms we find that small firms are more productive compare to medium and large firms (no significant results), but for non-exporting firms we find that small firms are less productive than medium and large firms.

[Insert table 8 here]

5.4 Establishment size and growth − domestic versus foreign firms

In this subsection, we divide our sample to domestic and foreign firms. For employment and growth we get the same patters with the above subsection.[12] However, in this chase too, for the subgroup of foreign firms we find that small firms are more productive than medium and large firms (no significant results), but for domestic firms the results stay the same, small firms are less productive (significant results). The above results are reported in table 9.

[Insert table 9 here]

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[11] Our survey data does not report exporting firms for Azerbaijan and Kosovo.
[12] Our survey data does not report foreign firms for Liberia.

5.5 Additional robustness

In this subsection, we perform additional robustness tests for our main results. First, in the cols. (1)−(3) of table 10 we add sector × size interaction effects[13] and our results hold the same. That is, small firms have higher employment and sales growth and lower productivity growth than medium firms (20-99 employees) and large firms (100+ employees).[14]

Second, for all the firms in our survey sample, by each country, we have a unique stratification identifier reported by the Enterprise Surveys (ES). Based on this unique stratification, in cols. (4)−(6) of table 10 we use OLS regressions with cluster standard errors by survey strata.[15] None of our results are changed. Small firms have higher employment and sales growth but lower productivity growth.

Finally, as our data originate from surveys, we use weighted survey regressions. This method gives more weight to firms in larger countries and standard errors take into account weights, clustering and stratification provide a better specification for our analysis. The weighted survey regressions show that small firms have higher employment growth than medium and large firms. For sales growth, we find that growth of sales in medium firms are higher compared to small firms, but not significant. Also, we find that small firms are more productive than large firms, but the results are not significant. In terms of statistical significant, the weighted survey regression does not make any difference in our main results.

[Insert table 10 here]

5.6 Role of establishment age

In this subsection, we examine the role of age in our model, thus we use age as an additional explanatory variable. We add 3 dummies for firm age, young firms ($\leq$ 5 years), mid-age firms (6-10 years) and mature firms (11+ years). We now estimate the growth regression equation (2) and present the results for employment, sales and

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[13] Using sector × size interaction effects we test whether both firm size (small, medium and large) and sector categories have a stronger impact on the patterns of growth, while controlling for the year of the survey and firm age.

[14] We do not report the interaction effects of sector × size in the table, not to exaggerate the table's size.

[15] Same here, we examine the role of firm size in growth. From Enterprise Surveys (ES) we have in our sample a unique stratification for each country. In this case, we use OLS with clustered standard errors by strata, to assure that standard errors are homoscedastic between countries and to check if our results hold the same with the above.

productivity growth for the full sample in table 11. First, we find that older (mature-age) firms have lower employment and sales growth. We also find that young firms have higher employment, sales and productivity growth than mid-age firms and even higher than mature firms (significant results).

[Insert table 11 here]

5.7 Role of establishment age − additional robustness

In this subsection we perform additional robustness for the results on firm age. We add size × age and sector × age interaction effects. The results are reported in table 12. Our results hold the same with the above subsection, indicate that the youngest firms (5 years old and less) have higher employment, sales and productivity growth.

[Insert table 12 here]

6. Discussion and conclusion

Replicate the paper of Ayyagari, Demirgüç-Kunt and Maksimovic (2014). For our empirical analysis, we adopt the model of Ayyagari et al. (2014), our main variables are growth, firm size and age. We also control for country, year and sector[16] (fixed effects). Additionally, for robustness we divide our sample to exporting and non-exporting; domestic and foreign firms. We also use some interaction effects (sector × size, size × age and sector × age). More specifically we examine the patterns of employment, job creation and growth. Analyzing a unique cross-country database for 112 developing countries from World Bank's Enterprise Surveys, we first find that large firms (100≥ employees) employing 45.14 % of total permanent, full time workers in the average country indicate that large firms are the largest contributors of employment. Nevertheless, both small (<20 employees) and medium-sized (20-99 employees) enterprises (SMEs) hold a comparable share of employment, employing more than the half of total workers. Second, despite the fact that small firms have the smallest share of total employment across the size groups, we find, in median values, that they generate 46.89 % of jobs in countries with net positive job creation across firms, which demonstrate that small firms are significant contributors to job creation. This is consistent with the evidence of the most studies of the literature, which support that small businesses create most jobs compared to large. Even in countries with net job losses across firms, overall we find only small firms to be job creators (50.22 %), in contrast with large firms, which are responsible for almost all job destruction. This result is in contrast with the empirical evidences of Schuh and Triest (2000) for the U.S. and Hijzen et al. (2010) for the U.K. suggest that small firms have high job creation and destruction. However, studies of Acquisti and Lehmann (2000) for Russia, a developing economy, Ayyagari, Demirgüç-Kunt and Maksimovic (2014) for 104 developing countries and Voulgaris, Agiomirgianakis and Papadogonas (2014) for Greece indicate that small firms are job creators, while large firms are the major job destructors, similar to our results.

Our results on the patterns of growth suggest that small firms have higher employment and sales growth compared to large. This negative relationship between

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[16] We have 41 sectors, as they described in table 4.

firm size and employment growth are demonstrated by numerous of studies in the literature. However, large firms have higher productivity growth (Maksimovic and Phillips, 2002; Van Biesebroeck, 2005; Bartelsman et al., 2013). Even after controlling for firm age we find the same patterns of growth in contrast with Haltiwanger et al. (2013) and Pyo et al. (2016) who find that once firm age is controlled the negative relationship between firm size and employment growth become nonexistent or in some cases positive. The evidence that small firms have lower productivity growth than large firms may explains why job creation does not translate into faster growth. On age, understanding the data caveats we explained, conditional on firm size, we find that young firms (firms 5 years old or less) have higher employment, sales and productivity growth. This evidence suggests that the process of growth cannot only become in terms of size, but focusing both in firm size and age.

Ayyagari, Demirgüç-Kunt and Maksimovic (2014) measuring the share of each size- group of firm, they show that large firms have the largest share of total employment, however small firms have the largest shares of job creation. On the empirical approach, the basic variables they use are growth (employment/sales/productivity), firm size and age.[17] The empirical results, first, show that small firms have highest sales growth and employment growth, even after controlling for firm age. Large firms, however, have higher productivity growth. Conditional on size, young firms are the fastest growing. As we mentioned above, we use a similar approach with Ayyagari et al. (2014). On share of total employment we find similar results with Ayyagari et al. (2014), large firms have the largest share of total employment, however in our case small and medium firms have a slightly larger share.[18] Our results on share of job creation (countries with net job creation) are similar with Ayyagari et al. (2014), small firms have the largest share of job creation, with some small differences in the median values.[19] In contrast with Ayyagari et al.

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[17] They also control for country, year and industry-sector (fixed effects).

[18] Share of total employment: small firms (5-19 employees): 16.5, medium firms (20-99 employees): 27.0, large firms (100+ employees): 54.6, Ayyagari et al. (2014) results. Our results on share of total employment: small firms (5-19 employees): 19.05, medium firms (20-99 employees): 31.39, large firms (100+ employees): 47.19 (median values).

[19] Share of job creation (counties with net job creation): small firms (5-19 employees): 45.34, medium firms (20-99 employees): 30.31, large firms (100+ employees): 16.93, Ayyagari et al. (2014) results. Our results on share of job creation (counties with net job creation): small firms (5-19 employees): 46.89, medium firms (20-99 employees): 33.72, large firms (100+ employees): 21.67 (median values).

(2014) results for the share of job creation (countries with net job loss), we find only small firms to be creating jobs, while medium and large destroy them.[20] Overall, our empirical results are the same with Ayyagari et al. (2014), small firms have highest employment and sales growth, while large firms have higher productivity growth.[21] Same on firm age, young firms tend to have the highest growth patterns.

This analysis focuses on measurement rather than policy. However, the measurement issues of this analysis will definitely affect the decisions of policymakers to consider potential policies on how to create jobs. For example, for small firms we have to consider not only the firm size, but also the firm age to potentially affect growth and overall the speed of job creation. Likewise, policy interventions aimed at small firms which ignore the important role of firm age; we should not expect much of an impact on the pace of job creation. Hence, for efficient job creation and growth, policies must be designed with consideration for both firm size and age. In addition, despite the fact that SMEs create more jobs, their contribution to productivity growth is not as high as that of large firms. This evidence suggests that the decisions of policymakers should not only focus on creating more jobs, but also to create better quality jobs to promote growth.

In the case of the most developing countries in our sample, job creation, growth and specifically the productivity of SMEs may face a variety of obstacles. First, as we analyze a period after global financial crisis 2008, limited access to finance (e.g. Beck at el., 2005; Butler and Cornaggia, 2007; Rahaman, 2011) and need of workers training, for better quality jobs, suggest the biggest obstacles. Policymakers have to consider arrangements focusing on addressing these two obstacles as well as other constrains such as taxes, regulations and corruption. Second, policies to improve entrepreneurship and innovation are likely to be important, since lack of dynamism is a recognizing feature of developing countries, promoting firms to be more productive among the fastest growing.

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[20] Share of job creation (counties with net job losses): small firms (5-19 employees): 36.54, medium firms (20-99 employees): 13.45, large firms (100+ employees): -157.04, Ayyagari et al. (2014) results. Our results on share of total job creation (counties with net job losses): small firms (5-19 employees): 50.22, medium firms (20-99 employees): -3.23, large firms (100+ employees): -162.59 (median values).

[21] Compared to Ayyagari et al. (2014), the magnitude of the coefficient for firm size (medium firm dummy and large firm dummy) in our case is relative smaller.

This analysis focuses on share of employment and job creation, and growth. Due to lack of data and survey data constraint for 112 developing countries, we think there must be more data collection through Enterprise Survey (ES) on business activities, earning dynamics and additionally stratification based on firm age. The most important problem with this is that complete enumeration surveys contain much less accurate data than administrative data in regards to firm age. We have three types of growth employment, sales and productivity, however for productivity we do not have profit information in our survey. Likewise, the survey data excludes firms with fewer than 5 employees and does not cover informal sector. Thus, it is clear that all these additional information need to be added to a new dataset to address some of these issues in related future work.

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Table 1 Descriptive statistics

Variable	Obs.	Mean	St. dev.	Min	Max
Employment growth	62,803	0.047	0.174	-1	1
Sales growth	49,699	0.018	0.293	-0.999	1
Labor productivity growth	47,977	-0.0231	0.296	-0.999	1
Firm size	69,561	2.261	0.765	1	3
Firm age (as a control variable)	67,818	18.045	14.527	0	195
Firm age (as a dummy variable)	67,818	1.536	0.702	0	2
Year	69,561	2,012.31	2.098	2,009	2,017
Sectors (include all sectors)	69,561	20.801	9.544	1	41
SectorMS (divided sectors in Manufacturing and Services)	69,561	1.443	0.496	1	2

Table 2 Share of total employment by size class

Nation	Survey year	Size class		
		1	2	3
		5-19	20-99	100+
Albania	2013	29.85	43.45	26.70
Angola	2010	18.02	35.79	46.19
Antigua and Barbuda	2010	33.35	45.23	21.42
Armenia	2013	11.40	31.19	57.42
Azerbaijan	2009	14.95	32.56	52.49
Bahamas	2010	15.03	27.14	57.84
Bangladesh	2013	2.49	7.33	90.18
Barbados	2010	19.29	33.64	47.07
Belarus	2013	12.87	24.71	62.41
Belize	2010	30.86	54.22	14.93
Benin	2009	39.31	41.80	18.89
Bhutan	2015	28.90	42.45	28.65
Bolivia	2016	18.98	28.11	52.90
Bosnia and Herzegovina	2013	17.60	51.27	31.13
Botswana	2010	11.40	23.51	65.10
Brazil	2009	16.51	29.25	54.24
Bulgaria	2013	17.51	29.65	52.84
Burkina Faso	2009	21.98	30.27	47.74
Burundi	2014	28.11	61.34	10.54
Cabo Verde	2009	27.67	34.66	37.67
Cambodia	2016	16.65	12.49	70.85
Cameroon	2016	27.32	31.73	40.95
Central African Republic	2011	33.71	35.13	31.16
Chad	2009	19.26	41.54	39.19
Chile	2010	2.27	11.32	86.41
China	2012	10.98	28.39	60.63
Colombia	2010	16.09	17.07	66.84
Congo, Dem. Rep.	2013	45.66	33.61	20.73
Congo, Rep.	2009	12.90	36.89	50.21
Costa Rica	2010	8.13	23.12	68.75
Croatia	2013	26.50	36.86	36.64
Côte d'Ivoire	2009	49.20	20.14	30.67

Table 2 continued

Nation	Survey year	Size class		
		1	2	3
		5-19	20-99	100+
Djibouti	2013	24.07	39.61	36.33
Dominican Republic	2010	13.91	27.97	58.11
Ecuador	2010	15.63	23.62	60.75
Egypt, Arab Rep.	2016	12.21	21.41	66.38
El Salvador	2010	12.48	22.75	64.78
Eritrea	2009	39.73	47.79	12.49
Ethiopia	2015	13.72	36.48	49.80
Fiji	2009	17.16	33.65	49.19
Gabon	2009	17.81	28.87	53.33
Georgia	2013	29.88	46.28	23.85
Ghana	2013	19.11	32.98	47.91
Grenada	2010	25.88	39.51	34.61
Guatemala	2010	7.45	20.68	71.86
Guinea	2016	41.69	28.86	29.46
Guyana	2010	5.76	23.36	70.88
Honduras	2010	9.72	14.67	75.61
Hungary	2009	9.20	25.36	65.44
India	2014	7.74	31.33	60.92
Indonesia	2009	38.66	19.13	42.21
Jamaica	2010	28.96	39.83	31.20
Jordan	2013	15.52	27.89	56.59
Kazakhstan	2013	15.60	39.70	44.70
Kenya	2013	11.35	25.96	62.70
Kosovo	2009	42.32	31.45	26.23
Kyrgyz Republic	2013	9.22	34.56	56.22
Lao PDR	2009	26.09	28.89	45.02
Lesotho	2016	13.67	14.32	72.01
Liberia	2009	66.30	24.98	8.72
Macedonia, FYR	2009	15.46	37.24	47.30
Malaysia	2015	17.07	20.26	62.67
Mali	2010	45.42	40.10	14.48
Mauritania	2014	9.92	34.92	55.16
Mauritius	2009	11.10	26.81	62.09

Table 2 continued

Nation	Survey year	Size class		
		1 5-19	2 20-99	3 100+
Mexico	2010	8.21	9.15	82.64
Moldova	2013	30.58	45.08	24.34
Mongolia	2013	18.88	46.93	34.19
Montenegro	2013	31.21	28.94	39.85
Morocco	2013	11.38	33.88	54.74
Myanmar	2014	16.34	22.83	60.82
Namibia	2014	41.15	40.71	18.14
Nepal	2009	52.42	30.49	17.09
Nicaragua	2016	29.66	48.13	22.21
Niger	2009	41.68	44.01	14.32
Nigeria	2014	43.90	40.34	15.75
Pakistan	2013	4.56	18.27	77.17
Peru	2010	6.90	15.21	77.88
Poland	2013	10.67	26.55	62.78
Romania	2013	25.68	35.19	39.13
Russian Federation	2012	12.15	32.32	55.53
Rwanda	2011	16.62	28.43	54.95
Samoa	2009	28.18	51.24	20.57
Senegal	2014	14.29	22.04	63.67
Serbia	2013	25.92	35.94	38.14
Sierra Leone	2016	51.41	22.65	25.94
Solomon Islands	2015	8.97	34.05	56.99
Sri Lanka	2011	17.01	19.19	63.79
St. Kitts and Nevis	2010	24.57	56.39	19.04
St. Lucia	2010	25.42	39.86	34.72
St. Vincent and the Grenadines	2010	43.85	40.42	15.74
Sudan	2014	22.70	46.43	30.86
Suriname	2010	21.43	60.52	18.05
Swaziland	2016	18.01	34.30	47.69
Tajikistan	2013	15.66	46.16	38.18
Tanzania	2013	29.08	34.42	36.50
Thailand	2016	19.47	26.13	54.39

Table 2 continued

Nation	Survey year	Size class		
		1	2	3
		5-19	20-99	100+
Timor-Leste	2015	28.73	42.90	28.36
Togo	2009	43.17	24.61	32.22
Trinidad and Tobago	2010	30.88	27.67	41.46
Tunisia	2013	10.38	26.44	63.18
Turkey	2013	19.59	39.52	40.89
Uganda	2013	42.95	26.23	30.83
Ukraine	2013	19.19	37.12	43.69
Uruguay	2010	18.08	26.48	55.45
Uzbekistan	2013	19.98	29.91	50.10
Venezuela, RB	2010	22.51	23.37	54.12
Vietnam	2009	5.86	18.92	75.21
West Bank and Gaza	2013	62.45	32.87	4.68
Yemen, Rep.	2010	47.44	23.63	28.92
Zambia	2013	29.97	39.16	30.88
Zimbabwe	2011	9.60	28.76	61.64
Summary statistics				
Minimum		2.27	7.33	4.68
Mean		22.80	32.06	45.14
Median		19.05	31.39	47.19
Maximum		66.30	61.34	90.18
Median across regions				
AFR		27.49	33.95	37.08
EAP		17.16	28.39	54.39
ECA		17.60	35.19	43.69
LAC		16.30	25.79	56.17
MNA		15.52	27.89	54.74
SAR		15.03	27.14	60.92

Notes: This table presents the share of different size classes to total employment in each country. Total employment is the population estimate of the number of permanent, full time employees in a particular year in each country, derived from the Enterprise Surveys (ES). In cols. 1–3, we report employment shares across three size classes based on permanent full time employment: 5–19 employees (1), 20–99 employees (2), and 100+ employees (3). At the foot of the table we report summary statistics and median values across geographic regions.

Table 3 Share of total job creation by size class

Nation	Survey year	Size class		
		1	2	3
		5-19	20-99	100+
A. Countries with net job creation				
Albania	2013	67.31	41.72	-9.03
Angola	2010	34.66	55.73	9.61
Antigua and Barbuda	2010	93.43	-17.08	23.65
Armenia	2009	29.31	25.06	45.63
Azerbaijan	2013	50.23	49.41	0.36
Bahamas	2010	56.38	21.29	22.32
Bangladesh	2013	1.66	3.40	94.95
Barbados	2010	8.95	9.54	81.52
Belarus	2013	35.81	50.74	13.45
Belize	2010	50.05	29.68	20.27
Benin	2009	101.96	25.19	-27.15
Bhutan	2015	49.22	37.10	13.69
Bolivia	2016	30.43	41.39	28.18
Bosnia and Herzegovina	2013	196.44	58.36	-154.80
Botswana	2010	40.99	111.95	-52.94
Brazil	2009	22.37	25.33	52.30
Burkina Faso	2009	118.42	176.02	-194.44
Burundi	2014	57.13	53.17	-10.30
Cabo Verde	2009	61.49	27.48	11.03
Cambodia	2016	40.78	22.71	36.51
Cameroon	2016	33.14	41.65	25.22
Central African Republic	2011	78.02	19.83	2.15
Chad	2009	49.94	47.38	2.68
Chile	2010	1.19	14.18	84.63
China	2012	15.64	33.72	50.64
Colombia	2010	-18.57	29.57	88.99
Congo, Dem. Rep.	2013	66.28	33.58	0.15
Congo, Rep.	2009	25.78	30.89	43.32
Costa Rica	2010	33.96	30.68	35.36
Croatia	2013	77.86	72.77	-50.63
Côte d'Ivoire	2009	87.22	11.17	1.60

Table 3 continued

Nation	Survey year	Size class		
		1	2	3
		5-19	20-99	100+
Djibouti	2013	39.22	48.21	12.57
Dominican Republic	2010	34.82	54.88	10.31
Ecuador	2010	249.67	-19.48	-130.19
Egypt, Arab Rep.	2016	174.50	-187.77	113.27
El Salvador	2010	215.23	-292.13	176.90
Ethiopia	2015	24.14	47.06	28.80
Fiji	2009	33.01	42.12	24.87
Gabon	2009	103.26	104.65	-107.92
Georgia	2013	51.45	42.84	5.70
Ghana	2013	17.14	30.28	52.58
Grenada	2010	57.18	86.96	-44.14
Guatemala	2010	11.67	9.24	79.08
Guinea	2016	60.52	44.73	-5.25
Guyana	2010	9.52	49.92	40.56
Hungary	2009	52.01	141.84	-93.85
India	2014	13.96	34.89	51.16
Indonesia	2009	72.45	-16.26	43.80
Jamaica	2010	36.33	37.14	26.53
Jordan	2013	31.98	14.64	53.38
Kazakhstan	2013	27.76	50.12	22.12
Kenya	2013	12.45	7.06	80.49
Kosovo	2009	64.38	14.93	20.69
Kyrgyz Republic	2013	21.78	95.44	-17.22
Lao PDR	2009	76.98	-68.65	91.67
Lesotho	2016	28.15	31.37	40.48
Liberia	2009	83.97	6.60	9.42
Macedonia, FYR	2009	213.66	269.74	-383.40
Mali	2010	59.34	14.08	26.58
Mauritania	2014	18.06	50.25	31.69
Mauritius	2009	8.03	29.88	62.09
Moldova	2013	68.38	34.21	-2.59
Mongolia	2013	32.66	35.40	31.94
Montenegro	2013	95.96	58.47	-54.43

Table 3 continued

Nation	Survey year	Size class		
		1 5-19	2 20-99	3 100+
Morocco	2013	11.78	19.80	68.42
Myanmar	2014	19.84	6.12	74.04
Namibia	2014	83.90	11.19	4.91
Nepal	2009	84.84	7.76	7.40
Nicaragua	2016	25.72	61.29	12.99
Niger	2009	64.63	34.24	1.13
Nigeria	2014	66.06	37.07	-3.13
Pakistan	2013	25.31	44.29	30.40
Poland	2013	77.80	0.52	21.67
Russian Federation	2012	42.41	51.98	5.61
Rwanda	2011	33.30	25.58	41.12
Samoa	2009	256.13	-43.27	-112.85
Senegal	2014	395.11	290.48	-585.58
Serbia	2013	65.82	-9.85	44.03
Sierra Leone	2016	64.90	26.69	8.41
Solomon Islands	2015	17.71	30.14	52.15
Sri Lanka	2011	26.00	-15.58	89.58
St. Kitts and Nevis	2010	58.34	69.15	-27.49
St. Lucia	2010	45.70	85.95	-31.65
Sudan	2014	33.60	40.98	25.42
Suriname	2010	19.87	47.68	32.45
Swaziland	2016	24.05	41.13	34.81
Tajikistan	2013	46.89	45.44	7.67
Tanzania	2013	48.36	38.85	12.79
Thailand	2016	16.22	16.42	67.36
Timor-Leste	2015	38.34	54.64	7.03
Togo	2009	94.35	8.76	-3.11
Trinidad and Tobago	2010	63.86	33.99	2.15
Tunisia	2013	14.06	-8.23	94.16
Turkey	2013	21.36	45.16	33.48
Uganda	2013	49.43	51.43	-0.85
Uruguay	2010	16.05	29.31	54.64

Table 3 continued

Nation	Survey year	Size class		
		1	2	3
		5-19	20-99	100+
Uzbekistan	2013	58.78	14.83	26.38
Vietnam	2009	78.85	82.07	-60.92
West Bank and Gaza	2013	75.05	25.13	-0.18
Yemen, Rep.	2010	37.29	21.15	41.56
Zambia	2013	59.14	-23.03	63.88
Summary statistics				
Minimum		-18.57	-292.13	-585.58
Mean		58.99	33.82	7.19
Median		46.89	33.72	21.67
Maximum		395.11	290.48	176.90
Median across regions				
AFR		58.13	33.91	8.91
EAP		35.67	26.42	40.15
ECA		51.73	47.42	5.65
LAC		33.96	37.14	28.18
MNA		37.29	19.80	53.38
SAR		26.01	21.29	30.40

Table 3 continued

Nation	Survey year	Size class		
		1	2	3
		5-19	20-99	100+
B. Countries with net job loss				
Bulgaria	2013	-22.51	-62.17	-15.33
Eritrea	2009	-40.85	-45.74	-13.40
Honduras	2010	1.20	-5.54	-95.66
Malaysia	2015	76.91	33.20	-210.11
Mexico	2010	50.22	12.37	-162.59
Peru	2010	527.75	602.67	-1230.43
Romania	2013	156.34	-3.23	-253.11
St. Vincent and the Grenadines	2010	93.19	28.15	-221.34
Ukraine	2013	-33.96	-13.42	-52.61
Venezuela, RB	2010	473.00	241.04	-814.04
Zimbabwe	2011	-1.04	-41.30	-57.66
Summary statistics				
Minimum		-40.85	-62.17	-1230.43
Mean		116.39	67.82	-284.21
Median		50.22	-3.23	-162.59
Maximum		527.75	602.67	-13.40

Notes: This table presents the share job creation by different size classes. Job creation is the population estimate of the change in the number of permanent, full-time employees over a 2-year period, derived from the Enterprise Surveys (ES). In cols. 1–3, we report three size classes based on permanent full time employment in the base year: 5–19 employees (1), 20–99 employees (2), and 100+ employees (3). In panel A, we report data for 101 countries that had a net positive job creation and at the foot of panel A we report summary statistics and median values across geographic regions. In panel B, we report data for 11 countries that had a net job loss and summary statistics at the foot of panel B.

Table 4 Description of variables

A.Dependent variables	
Employment growth	The change in full-time permanent workers by each establishment, between a two-year period.
Sales growth	The change in sales (deflated values of 2009 for each country) between a two-year period.
Labor productivity growth	The change in labor productivity between a two-year period, where labor productivity is sales divided by the number of full-time permanent workers.
B.Main variables	
Firm size	Dummy variable accounting for the size of each firm in employees. Firm size is grouped in three bands, namely (i) (Small firms) 5-19 employees (reference group); (ii) (Medium firms) 20-99 employees, and (iii) (Large firms) 100+ employees.
Firm age (dummy)	Dummy variable used in the 2nd regression form, accounting for the age of each firm. Firm age in our survey data is defined as the number of years since establishment begins operations in the country. Firm age is grouped in three bands, namely (i) (Young firms) ≤ 5 years (reference group); (ii) (Mid-age firms) 6-10 years, and (iii) (Mature firms) 11+ years.
C. Control variables	
Firm age	Firm age in our survey data is defined as the number of years since establishment begins operations in the country. We use firm age as a control variable in the 1st regression form to check if the inverse relationship between employment growth and firm size still holds.
Sector (MS)	Dummy variable accounting for the sector-industry of each firm. Sector_MS is grouped in 2 bands namely (i) Manufacturing, and (ii) Services.
Year	Survey year from ES for each country. In our sample the surveys administered during 2009-2017.

Table 4 continued

Sector (all industries)	Dummy variable accounting for all industries. We have a total of 41 industries.
	1. Basic Metals & Metal Products
	2. Basic Metals/Fabricated Metals/Machinery
	3. Chemicals & Chemical Products
	4. Chemicals, Plastics & Rubber
	5. Construction
	6. Electronics & Communications Equip.
	7. Fabricated Metal Products
	8. Food
	9. Furniture
	10. Garments
	11. Hospitality & Tourism
	12. Hotels & Restaurants
	13. IT & IT Services
	14. Leather Products
	15. Machinery & Equipment
	16. Machinery & Equipment, Electronics & Ve
	17. Manufacturing
	18. Manufacturing Panel
	19. Minerals, Metals, Machinery & Equipment
	20. Motor Vehicles
	21. Motor Vehicles & Transport Equip.
	22. Non-Metallic Mineral Products
	23. Other Manufacturing
	24. Other Services
	25. Other Services Panel
	26. Petroleum products, Plastics & Rubber
	27. Printing & Publishing
	28. Retail
	29. Retail Panel
	30. Rubber & Plastics Products
	31. Services
	32. Services of Motor Vehicles
	33. Services of Motor Vehicles/Wholesale/Re
	34. Textiles
	35. Textiles & Garments
	36. Tourism
	37. Transport
	38. Transport, Storage, & Communications
	39. Wholesale
	40. Wood Products & Furniture
	41. Wood products, Furniture, Paper & Publi

Table 5 Establishment size and growth

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Employment growth			Sales growth			Productivity growth		
	Full	Manufacturing	Non-manufacturing	Full	Manufacturing	Non-manufacturing	Full	Manufacturing	Non-manufacturing
Medium firm dummy (20–99 employees)	-0.011*** (0.003)	-0.012*** (0.004)	-0.008* (0.005)	-0.010** (0.005)	-0.009* (0.005)	-0.013 (0.010)	0.003* (0.004)	0.002 (0.005)	0.006** (0.009)
Large firm dummy (100+ employees)	-0.036*** (0.007)	-0.036*** (0.009)	-0.035*** (0.006)	-0.023*** (0.006)	-0.020*** (0.006)	-0.027** (0.011)	0.008 (0.005)	0.011 (0.007)	0.009 (0.010)
Age	-0.001*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Constant	0.106*** (0.004)	0.102*** (0.004)	0.124*** (0.005)	0.067*** (0.004)	0.065*** (0.004)	0.075*** (0.009)	-0.021*** (0.003)	-0.024** (0.004)	-0.017*** (0.003)
No. of firms	61,700	35,071	26,629	49,055	28,817	20,238	47,414	27,951	19,463
Adjusted R^2	0.055	0.054	0.057	0.088	0.083	0.098	0.063	0.059	0.072
No. of countries	112	112	112	112	112	112	112	112	112

Notes: OLS regressions estimated of equation (1). Clustered standard error at the country level in brackets. In cols. 1, 4, and 7 we report results for the full sample. In cols. 2, 5, and 8, we report results for just the manufacturing sector, and in cols. 3, 6, and 9, we report results for non-manufacturing firms. All data are at the firm level from the World Bank Enterprise Surveys.
Significance level is denoted by *** (1%), ** (5%) and * (10%).

Table 6 Establishment size and growth—across income groups

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Employment growth				Sales growth				Productivity growth			
	Low	Lower-mid	Upper-mid	High	Low	Lower-mid	Upper-mid	High	Low	Lower-mid	Upper-mid	High
Medium firm dummy (20–99 employees)	-0.025*** (0.007)	-0.026** (0.010)	-0.024*** (0.005)	-0.023*** (0.005)	-0.013 (0.009)	-0.013** (0.005)	-0.012* (0.006)	-0.013** (0.004)	0.008 (0.011)	0.002 (0.006)	0.010** (0.006)	0.009 (0.009)
Large firm dummy (100+ employees)	-0.051*** (0.011)	-0.030** (0.012)	-0.042*** (0.007)	-0.018 (0.016)	-0.042*** (0.015)	-0.020** (0.008)	-0.019 (0.011)	-0.031* (0.015)	0.007 (0.012)	0.007 (0.008)	0.022*** (0.009)	0.005 (0.014)
Age	-0.002*** (0.000)	0.001*** (0.000)	-0.001*** (0.000)	-0.003 (0.001)	-0.001** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.002 (0.001)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Constant	0.142*** (0.009)	0.126*** (0.015)	0.174*** (0.011)	0.095** (0.038)	0.142*** (0.022)	0.077*** (0.008)	0.162*** (0.016)	0.089** (0.023)	0.059*** (0.022)	-0.025** (0.008)	0.004*** (0.014)	0.004** (0.015)
No. of firms	8,146	28,254	20,074	5,226	6,208	22,818	16,346	3,683	5,950	22,063	15,850	3,551
Adjusted R^2	0.083	0.054	0.054	0.038	0.177	0.084	0.045	0.016	0.145	0.056	0.026	0.003
No. of countries	23	44	38	7	23	44	38	7	23	44	38	7

Notes: OLS regressions estimated of equation (1). Clustered standard error at the country level in brackets. In cols. 1, 5, and 9, we report results for a subpopulation of firms in low income countries. In cols. 2, 6, and 10, we report results for a subpopulation of firms in lower-middle income countries. In cols. 3, 7, and 11, we report results for a subpopulation of firms in upper middle income countries. In cols. 4, 8, and 12, we report results for a subpopulation of firms in high income countries. All data are at the firm level from the World Bank Enterprise Surveys. Significance level is denoted by *** (1%), ** (5%) and * (10%).

Table 7 Establishment size and growth—large versus small informal sector

	(1)	(2)	(3)	(4)	(5)	(6)
	Employment growth	Sales growth	Productivity growth	Employment growth	Sales growth	Productivity growth
	Large informal sector			Small informal sector		
Medium firm dummy (20–99 employees)	-0.037*** (0.008)	-0.013** (0.006)	0.018** (0.008)	-0.017*** (0.005)	-0.009** (0.004)	0.005* (0.003)
Large firm dummy (100+ employees)	-0.056*** (0.012)	-0.031*** (0.010)	0.018 (0.013)	-0.026*** (0.007)	-0.018** (0.008)	0.006 (0.005)
Age	-0.002*** (0.000)	-0.001*** (0.000)	0.000** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	0.000 (0.000)
Constant	0.107*** (0.006)	0.070*** (0.005)	-0.039*** (0.005)	0.074*** (0.005)	0.046*** (0.004)	-0.015*** (0.003)
No. of observations	22,909	16,656	15,841	34,747	29,575	28,844
Adjusted R^2	0.073	0.118	0.085	0.040	0.048	0.035
No. of countries	47	47	47	46	46	46

Notes: OLS regressions estimated of equation (1). Clustered standard error at the country level in brackets. Cols 1–3 present results for countries that have a large informal sector (above the median value) and cols. 4–6 present results for countries with a small informal sector (below the median value) where informal sector is defined by the informal sector's contribution to GDP in Medina & Schneider (2017). All data are at the firm level from the World Bank Enterprise Surveys.
Significance level is denoted by *** (1%), ** (5%) and * (10%).

Table 8 Establishment size and growth—non-exporting versus exporting firms

	(1)	(2)	(3)	(4)	(5)	(6)
	Employment growth	Sales growth	Productivity growth	Employment growth	Sales growth	Productivity growth
	Non-exporting firms			Exporting firms		
Medium firm dummy (20–99 employees)	-0.025*** (0.005)	-0.011*** (0.004)	0.010*** (0.004)	-0.020** (0.008)	-0.029*** (0.009)	-0.015 (0.009)
Large firm dummy (100+ employees)	-0.035*** (0.007)	-0.021*** (0.007)	0.011* (0.006)	-0.041*** (0.010)	-0.037*** (0.011)	-0.006 (0.010)
Age	-0.002*** (0.000)	-0.001*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.000 (0.000)
Constant	0.074*** (0.004)	0.055*** (0.004)	-0.006* (0.003)	0.052*** (0.008)	0.003 (0.010)	-0.044*** (0.009)
No. of observations	52,953	41,804	40,546	8,213	7,009	6,670
Adjusted R^2	0.058	0.100	0.072	0.045	0.052	0.033
No. of countries	112	112	112	111	111	111

Notes: OLS regressions estimated of equation (1). Clustered standard error at the country level in brackets. Cols. 1–3 present results for non-exporting firms. Cols. 4–6 present results for exporting firms. All data are at the firm level from the World Bank Enterprise Surveys.
Significance level is denoted by *** (1%), ** (5%) and * (10%).

Table 9 Establishment size and growth—domestic versus foreign firms

	(1)	(2)	(3)	(4)	(5)	(6)
	Employment growth	Sales growth	Productivity growth	Employment growth	Sales growth	Productivity growth
	Domestic firms			Foreign firms		
Medium firm dummy (20–99 employees)	-0.025*** (0.005)	-0.012*** (0.004)	0.010** (0.004)	-0.025*** (0.008)	-0.021 (0.021)	-0.007 (0.018)
Large firm dummy (100+ employees)	-0.036*** (0.007)	-0.022*** (0.006)	0.010** (0.005)	-0.040*** (0.011)	-0.025 (0.023)	-0.004 (0.020
Age	-0.001*** (0.000)	-0.001*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	0.000 (0.000)
Constant	0.073*** (0.004)	0.049*** (0.003)	-0.011*** (0.003)	0.046*** (0.010)	0.018 (0.021)	-0.032* (0.017)
No. of observations	55,429	43,977	42,687	5,278	4,383	4,091
Adjusted R^2	0.056	0.090	0.064	0.053	0.079	0.058
No. of countries	112	112	112	110	110	110

Notes: OLS regressions estimated of equation (1). Clustered standard error at the country level in brackets. Cols. 1–3 present results for domestic firms. Cols. 4–6 present results for foreign firms. All data are at the firm level from the World Bank Enterprise Surveys.
Significance level is denoted by *** (1%), ** (5%) and * (10%).

Table 10 Establishment size and growth—additional robustness

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Employment growth	Sales growth	Productivity growth	Employment growth	Sales growth	Productivity growth	Employment growth	Sales growth	Productivity growth
	Sector × size effects			Clustering by strata			Weighted survey regression		
Medium firm dummy (20–99 employees)	-0.026*** (0.004)	-0.015*** (0.005)	0.008* (0.004)	-0.024*** (0.002)	-0.012*** (0.003)	0.008*** (0.003)	-0.019*** (0.006)	0.011 (0.009)	0.025** (0.010)
Large firm dummy (100+ employees)	-0.034*** (0.006)	-0.029*** (0.010)	-0.001 (0.009)	-0.036*** (0.002)	-0.023*** (0.004)	0.008** (0.004)	-0.015** (0.006)	-0.017 (0.012)	-0.005 (0.013)
Age	-0.001*** (0.000)	-0.001*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	0.000 (0.000)
Constant	0.070*** (0.005)	0.046*** (0.004)	-0.012** (0.004)	0.070*** (0.007)	0.044*** (0.009)	-0.013 (0.010)	0.082*** (0.019)	0.067*** (0.022)	-0.035 (0.021)
No. of firms	61,700	49,055	47,414	61,700	49,055	47,414	61,700	49,055	47,414
Adjusted R^2 (R^2)	0.055	0.088	0.063	0.055	0.088	0.063	(0.051)	(0.053)	(0.044)
No. of countries	112	112	112	112	112	112	112	112	112

Notes: The regressions estimated in this table are from equation (1). In Cols. 1–3, we include country × sector interaction effects and use OLS regressions with standard errors clustered by country. In cols. 4–6, we use OLS regressions but cluster standard errors by survey strata. In cols. 7–9, we use weighted survey regressions. Adjusted R2 are reported at the foot of the table except for the regressions in (7)–(9) where we report R2. All data are at the firm level from the World Bank Enterprise Surveys.
Significance level is denoted by *** (1%), ** (5%) and * (10%).

Table 11 Role of establishment age

	(1) Employment growth	(2) Sales growth	(3) Productivity growth
Medium firm dummy (20–99 employees)	-0.007*** (0.003)	-0.008*** (0.005)	0.005 (0.004)
Large firm dummy (100+ employees)	-0.035*** (0.006)	-0.023*** (0.006)	0.007 (0.005)
Mid-age dummy (6–10 years)	-0.051*** (0.010)	-0.059*** (0.012)	-0.025*** (0.008)
Mature firm dummy (11+ years)	-0.083*** (0.015)	-0.089*** (0.014)	-0.027*** (0.008)
Constant	0.133*** (0.011)	0.100*** (0.014)	0.007 (0.009)
No. of firms	61,700	49,055	47,414
Adjusted R^2	0.066	0.095	0.066
No. of countries	112	112	112

Notes: The regressions estimated in this table are from equation (2). All data are at the firm level from the World Bank Enterprise Surveys. All regressions are OLS regressions with standard errors clustered at the country level.
Significance level is denoted by *** (1%), ** (5%) and * (10%).

Table 12 Role of establishment age—additional robustness

	(1) Employment growth	(2) Sales growth	(3) Productivity growth	(4) Employment growth	(5) Sales growth	(6) Productivity growth
	Size × age effects			Sector × age effects		
Medium firm dummy (20–99 employees)	-0.026*** (0.005)	-0.017*** (0.004)	0.005 (0.005)	-0.026*** (0.005)	-0.015*** (0.003)	0.006 (0.004)
Large firm dummy (100+ employees)	-0.036*** (0.006)	-0.023*** (0.007)	0.007 (0.006)	-0.033*** (0.006)	-0.022*** (0.006)	0.007 (0.005)
Mid-age dummy (6–10 years)	-0.049*** (0.011)	-0.052*** (0.019)	-0.026* (0.015)	-0.048*** (0.009)	-0.049*** (0.009)	-0.021 (0.017)
Mature firm dummy (11+ years)	-0.083*** (0.015)	-0.086*** (0.019)	-0.028** (0.013)	-0.078*** (0.015)	-0.079*** (0.010)	-0.032** (0.015)
Constant	0.103*** (0.010)	0.083*** (0.015)	0.008 (0.012)	0.099*** (0.009)	0.078*** (0.007)	0.001 (0.010)
No. of firms	61,700	49,055	47,414	61,700	49,055	47,414
Adjusted R^2	0.066	0.095	0.066	0.069	0.096	0.067
No. of countries	112	112	112	112	112	112

Notes: The regressions estimated in this table are from equation (2). In Cols. 1–3, we include size × age interaction effects and use OLS regressions with standard errors clustered by country. In cols. 4–6, we include sector × age interaction effects and use OLS regressions with standard errors clustered by country. All data are at the firm level from the World Bank Enterprise Surveys.
Significance level is denoted by *** (1%), ** (5%) and * (10%).

Appendix

A.1. Geographic regions

1. AFR – Sub-Saharan Africa
2. EAP – East Asia & Pacific
3. ECA – Europe & Central Africa
4. LAC – Latin America & Caribbean
5. MNA – Middle East & North Africa
6. SAR – South Africa

AFR	EAP	ECA	LAC	MNA	SAR
Angola	Cambodia	Albania	Belize	Djibouti	Bangladesh
Benin	China	Armenia	Bolivia	Egypt	Bhutan
Botswana	Fiji	Azerbaijan	Brazil	Jordan	India
Burkina Faso	Indonesia	Belarus	Colombia	Morocco	Nepal
Burundi	Lao PDR	Bosnia and Herzegovina	Costarica	Tunisia	Pakistan
Cameroon	Malaysia	Bulgaria	Dominican Republic	West Bank And Gaza	SriLanka
Capeverde	Mongolia	Fyrom	Ecuador	Yemen	
Central African Republic	Myanmar	Georgia	El Salvador		
Chad	Samoa	Hungary	Grenada		
Congo	Solomon Islands	Kazakhstan	Guatemala		
Côte d'Ivoire	Thailand	Kosovo	Guyana		
Democratic Republic of the Congo	Timor-Leste	Kyrgyzstan	Honduras		
Eritrea	Vietnam	Moldova	Jamaica		
Ethiopia		Montenegro	Mexico		
Gabon		Romania	Nicaragua		
Ghana		Russia	Peru		
Guinea		Serbia	St. Lucia		
Kenya		Tajikistan	St. Vincent and the Grenadines		
Lesotho		Turkey	Suriname		
Liberia		Ukraine	Venezuela		
Mali		Uzbekistan			
Mauritania					
Mauritius					
Namibia					
Niger					
Nigeria					
Rwanda					
Senegal					
Sierra Leone					
Sudan					
Swaziland					
Tanzania					
Togo					
Uganda					
Zambia					
Zimbabwe					

A.2. Income groups

Low	Lower – mid	Upper – mid	High
Bangladesh	Angola	Albania	Bahamas
Benin	Armenia	Antigua and Barbuda	Barbados
Burkina Faso	Belize	Azerbaijan	Croatia
Burundi	Bhutan	Belarus	Hungary
Central African Republic	Bolivia	Bosnia and Herzegovina	Poland
Chad	Cambodia	Botswana	Russia
Democratic Republic of the Congo	Cameroon	Brazil	Trinidad and Tobago
Eritrea	Capeverde	Bulgaria	
Ethiopia	Congo	Chile	
Guinea	Côte d'Ivoire	China	
Kenya	Djibouti	Colombia	
Lao People's Democratic Republic	Egypt	Costarica	
Liberia	El Salvador	Dominican Republic	
Mali	Georgia	Ecuador	
Nepal	Ghana	Fiji	
Niger	Guatemala	Fyrom	
Rwanda	Guyana	Gabon	
Sierra Leone	Honduras	Grenada	
Tajikistan	India	Jamaica	
Tanzania	Indonesia	Jordan	
Togo	Kosovo	Kazakhstan	
Uganda	Kyrgyzstan	Malaysia	
Zimbabwe	Lesotho	Mauritius	
	Mauritania	Mexico	
	Moldova	Montenegro	
	Mongolia	Namibia	
	Morocco	Peru	
	Myanmar	Romania	
	Nicaragua	Serbia	
	Nigeria	St. Kitts and Nevis	
	Pakistan	St. Lucia	
	Samoa	St. Vincent and the Grenadines	
	Senegal	Suriname	
	Solomon Islands	Thailand	
	Sri Lanka	Tunisia	
	Sudan	Turkey	
	Swaziland	Uruguay	
	Timor-Leste	Venezuela	
	Ukraine		
	Uzbekistan		
	Vietnam		
	West Bank And Gaza		
	Yemen		
	Zambia		