Jobs, FDI and Institutions in Sub-Saharan Africa: Evidence from Firm-Level Data*

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Abstract

In this paper, we use firm-level data to study the differences in the quantity and quality of jobs between foreign-owned and domestic firms in Sub-Saharan Africa, and identify how country-level institutional factors determine these differences. After controlling for numerous firm-level characteristics in regressions, we find that foreign-owned firms employ more permanent full-time workers than domestic firms. They are also less likely to offer temporary work and employ a smaller number of temporary workers. However, differences between foreign-owned and domestic firms are smaller in countries with higher firing costs, which are likely to induce domestic firms to offer more stable and secure jobs than in other countries. Also, foreign-owned firms invest more in training, in particular for managers, and pay higher wages to non-production and managerial workers. Higher wages for production workers are only paid by firms whose owner is from a high-income country. Finally, we find better governance and social policy standards to decrease wage differences between foreign-owned and domestic firms, which suggests that domestic firms pay wages which are closer to the level of wages paid by foreign-owned firms.

Keywords: job quantity, job quality, foreign ownership, Sub-Saharan Africa

JEL Classification: F14, F16, F21, F23, F66

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1 Introduction

The rapid expansion of foreign direct investment (henceforth, FDI) into developing countries in recent decades has resulted in a voluminous academic and policy-oriented literature on how it affects local economies.[1] Two prominent questions that the literature has aimed at answering is whether foreign multinational enterprises (henceforth, MNEs) create jobs in the (host) country,[2] and whether these jobs are of higher quality as compared to those offered by domestic firms. For a worker, job quality implies secure employment (e.g. under a permanent full-time contract), a wage that secures high living standards, and opportunities for development of human capital (e.g. participation in seminars, trainings, etc.). For a country, job quality implies jobs that are more productive than the country's average, that can potentially lead to productivity spillovers, and that have good prospects for productivity growth (Javorcik, 2015).

We contribute to the literature in two ways. First, we report novel empirical evidence on the differences in the quantity and quality of jobs offered by foreign-owned and domestic firms in Sub-Saharan Africa. Second, we identify how these differences are determined by country-level factors such as firing costs, governance quality, and social inclusion.

Except for the importance of the research questions per se, the focus of the empirical analysis on Sub-Saharan Africa is particularly interesting for two reasons. First, Sub-Saharan Africa will be the region with by far the fastest growth of its working-age population, rising from 466 million in 2010 to 793 million in 2030 (i.e., 70% increase). In other words, the region will add 1.1 million people per month to the working-age population between 2010 and 2015, and 1.6 million per month between 2025 and 2030 (Lam and Leibbrandt, 2013). Based on these demographic trends, the real challenge for Sub-Saharan Africa in the immediate and more distant future is the creation of high quality jobs so that the rapidly increasing working-age population is absorbed into the formal local labour markets and enjoys high living standards. Second, the region has increased remarkably its capacity in attracting FDI in recent decades. FDI flows into Africa increased from $2.8 billion to $54.1 billion between 1990 and 2015, the FDI stock increased from $89.3 billion to $740.4 billion between 1995 and 2015, and the share of FDI stock in gross domestic product increased from 13.6% to 32.1% over the same period

[1] See Blomström and Kokko (1998) among others for a survey of the literature.

[2] MNEs can create jobs directly (i.e., by hiring local workers) or indirectly (i.e., by creating employment in their local input suppliers and other foreign-owned firms which are attracted to the country by their presence). They may also destroy jobs if local firms are forced to exit the market or lay off employees due to increased competition.

(UNCTAD and UNIDO, 2011; UNCTAD, 2016). Despite these trends, we have very limited knowledge of the implications of FDI for the level and quality of employment in the region.

We conduct the empirical analysis using firm-level data from the UNIDO Africa Investor Survey 2010. The dataset comprises 6497 domestic and foreign-owned firms located in 19 Sub-Saharan African countries in the year 2009. Firms operate in industries of the primary, secondary and tertiary sectors of the economy. The parent companies of foreign-owned firms are based in high-income countries, low/middle-income countries outside Sub-Saharan Africa, and in countries in Sub-Saharan Africa (SSA). Therefore, our findings cover a large number of SSA countries, industries, and parent locations. Also, our findings are representative of an important fraction of the African economy. Despite the relatively big informal sector in Africa, ILO estimations for 2015 reveal that 32.9% of workers in the region are under wage and salaried employment.

Three additional advantages of the dataset are as follows. First, its detailed information on labour allows for the construction of numerous measures of the quantity and quality of employment within firms. Namely, employment by type of contract (i.e., permanent full-time, temporary, part-time, unpaid work), employment by type of worker (i.e., production, non-production, managerial), female and foreign employment by type of worker, and training expenditures and wages by type of worker. Second, based on additional information on foreign-owned firms, we create variables which capture greenfield FDI,[3] majority-owned foreign affiliates (MOFAs),[4] and the principal motive for foreign investment (e.g. new market access, lower production costs, access to inputs). Third, information on main characteristics and activities of domestic and foreign-owned firms allows us to incorporate essential firm-level controls in regressions. These are: sales, labour productivity, skill intensity, average wage, a dummy for provision of training to employees, capital intensity, input intensity, firm age, the total number of affiliated establishments, dummies for engagement in local and international backward linkages, in local forward linkages and in exports, as well as dummies for import and local competition. At the country level, we use the firing cost and social inclusion measures, provided by the World Bank World Development Indicators (WDI), as proxies for the host country's level of employment protection and social policy standards, respectively. We also use the Ibrahim Index of African Governance (IIAG), developed by the Mo Ibrahim Foundation, as a measure of institutional quality in the host country.

[3]Creation of a new foreign operation as wholly-owned enterprise or joint venture.
[4]The ownership share of the foreign investor in the firm is at least 50%.

In order to investigate the differences in the quantity and quality of jobs offered by foreign-owned and domestic firms, we estimate a linear model by OLS where a measure of job quantity or job quality is regressed on the dummy for foreign ownership of the firm. When the dependent variable is a dummy, we use probit estimations. In all regressions, we control for main characteristics and activities of the firm. We also control for unobserved heterogeneity across countries and industries (e.g. country-level human capital and institutional quality, industry-level technology/knowledge intensity) with the inclusion of the relevant dummies. By estimating linear models where we interact the dummy for foreign ownership with country-level variables, we study how factors such as firing costs, governance quality and social inclusion determine the association of the quantity and quality of jobs with foreign ownership.

The first key finding of our regression analysis is that foreign-owned firms tend to offer more stable and secure jobs than domestic firms. Specifically, although foreign-owned firms have lower total employment, they also have a higher share of permanent full-time employment and are less likely to offer temporary and unpaid work.[5] When they offer temporary work, they employ a lower share of workers under this type of contract. Higher job stability and security is offered especially by foreign-owned firms whose parents are located in high-income and non-SSA low/middle-income countries. These findings suggest that MNEs transplant their human resource practices into their foreign affiliates at least partially. This may occur because MNEs place a high value on corporate social responsibility in order to protect their reputation (OECD and ILO, 2008) or because such practices are required so that the operations within foreign affiliates (e.g. production of output, service of markets) are in line with MNE standards.

The second key finding is that the gap in the stability and security of jobs offered by foreign-owned and domestic firms narrows with higher firing costs in the country. In particular, the higher share of permanent full-time employment of foreign-owned firms with respect to domestic firms decreases, while their lower probability and share of temporary employment increase. Higher firing costs imply higher employment protection and better bargaining terms of workers vis-à-vis their employers. Hence, this finding possibly suggests that domestic firms are induced to increase the level of job stability and security with respect to foreign-owned firms.

Moreover, we show that additional characteristics of foreign-owned firms crucially determine their differences in job stability and security with respect to domestic firms. Foreign-

[5] Although all firms in the sample are registered businesses and operate in the formal economy, the share of those which offer unpaid work is not negligible (8.59%). Among foreign-owned firms, 6.16% of these offer unpaid work, while among domestic firms, the share of those with unpaid workers is 10.01%.

owned firms whose main business purpose is to export back to the home country are less likely to employ temporary workers and when they do so, they have a lower share of these workers. The service of the home market with output produced in foreign affiliates is a crucial business activity and thus, it may require the creation of more stable and secure jobs within this type of firms. Also, majority-owned foreign affiliates (MOFAs) are less likely to employ part-time workers. Given that foreign investors have the majority of ownership in MOFAs, they may transplant to a higher degree their human resource practices (i.e., more stable and secure jobs) into their foreign affiliates. Also, MNEs may rely on their MOFAs for critical business activities such as the production of output and service of markets, which require the creation of more stable and secure jobs by them. By contrast, foreign-owned firms whose main business purpose is to join a specific partner in the country are more likely to employ part-time workers. A possible explanation for this finding is that these firms undertake themselves less sophisticated production tasks which can be easily performed by part-time workers, while the more sophisticated tasks are performed by their local partner.

Within the group of permanent full-time workers, foreign-owned firms have a higher share of production workers and a lower share of non-production workers. These findings, along with the positive association of foreign ownership with the ratio of production shifts to total employment, imply that foreign-owned firms are characterised by greater production capacity. We do not find evidence for firing costs to play a role in the associations of foreign ownership with the shares of production, non-production, and managerial workers. We also fail to find statistically significant differences between foreign-owned and domestic firms in terms of female employment. Instead, foreign-owned firms have higher shares of total foreign employment and of foreign production, non-production, and managerial workers. The higher shares of foreign employment in foreign-owned firms may be deemed as transfer of critical human capital to foreign affiliates from other parts of the MNE such as the parent company or a sister affiliate (Moran, 2007).

Two more key findings of this paper are that foreign-owned firms tend to invest more in the training of their employees and to pay higher wages than domestic firms. In particular, these firms have a higher ratio of total expenditure in training to total employment and a higher ratio of expenditure in training of managerial workers to the total number of these workers. They also pay an average wage premium (31.9%) and wage premia to non-production and managerial workers (25.4% and 32%, respectively). These wage premia are associated with firms owned by foreign investors from high-income and non-SSA low/middle-income

countries. Instead, only firms which are owned by foreign investors from high-income countries pay a wage premium to production workers (25%). The last finding possibly suggests that production workers in these firms add higher value to the production of output. The greater investment in training in foreign-owned firms, as well as the wage premium that they pay –especially in developing countries–, are well-documented stylised facts in the literature.[6]

The final key finding of this paper is the important role of country-level factors in the association of foreign ownership with wage premia. The average wage gap and the wage gap for managerial workers narrow as governance quality and social inclusion in the country increase. Greater social inclusion decreases also the wage gap for production workers. Higher governance quality implies a more solid wage bargaining setting in the country, a better business regulatory environment, and stronger contract enforcement, while greater social inclusion implies higher social policy standards. Therefore, the most plausible explanation for the reduction in the wage premia is that higher governance quality and greater social inclusion induce domestic firms to pay wages which are closer to the level of wages paid by foreign-owned firms. This may also explain why several recent studies do not find evidence that foreign-owned firms in developed countries – where institutional quality and social policy standards are relatively high – pay a wage premium (Heyman et al., 2007; Huttunen, 2007; Andrews et al., 2009; Malchow-Møller et al., 2013).

The wage differences between foreign-owned and domestic firms are also determined by additional characteristics of foreign ownership. Foreign-owned firms which were created as greenfield FDI pay lower wages to managerial workers as compared to previously domestic firms which became foreign-owned through Mergers and Acquisitions (henceforth, M&As) and to firms which remain domestic. A possible explanation is the "cherry-picking" argument (Almeida, 2007). That is, the main target of foreign investors for M&As are domestic firms which have already higher productivity and human capital than the average firm and thus already pay a wage premium to their managers. In addition, foreign-owned firms whose main business purpose is to join a local partner pay a lower wage to production workers. If this collaboration implies that production-intensive tasks take place within the local partner, then production workers in these firms may add lower value to the production of output.

[6] On the greater investment in training, see among others: Gershenberg (1987), Filer et al. (1995), World Bank (1997), and Barthel et al. (2011). On the wage premium, see among others: te Velde and Morrissey (2003), Strobl and Thornton (2004), Lipsey and Sjöholm (2004), Sjöholm and Lipsey (2006), and Coniglio et al. (2015). Later studies with matched employer-employee data challenge the earlier findings. Heyman et al. (2007) find that foreign acquisitions in Sweden result in lower wages than those paid in domestic firms. Also, Huttunen (2007) for Finland, Andrews et al. (2009) for Germany, and Malchow-Møller et al. (2013) for Denmark find that foreign acquisitions lead to small wage increases.

In turn, this is translated into a lower wage. A higher wage to managerial workers is paid by foreign-owned firms whose main business purpose is to access new markets and to export back to the home country. The latter type of firm pays a higher wage to non-production workers as well. These wage premia indicate that non-production workers and especially managers may undertake administrative, supervisory and managerial tasks which are crucial for the firm in order to serve the home and foreign markets through exports. For example, Antràs et al. (2006) emphasise the essential role of (middle) managers in the foreign affiliate when it trades with its parent (i.e., intra-firm trade). Middle managers supervise production workers by dealing with routine problems faced by the latter. This way, the MNE saves on communication costs, as this supervisory role would have otherwise been undertaken by top managers in the parent company.

The rest of the paper is organised as follows. Section 2 describes the data and the construction of variables, while Section 3 describes the econometric model. Section 4 presents the main empirical results. Section 5 provides some useful policy-related conclusions, as well as some suggestions for further research which may lead to novel policy recommendations.

2 Data

In this section, we describe the data employed in the empirical analysis and the construction of firm- and country-level variables incorporated in the econometric model.[7]

2.1 Firm-level

Our firm-level data source is the UNIDO Africa Investor Survey 2010 which includes information about firms with operations in Sub-Saharan Africa and their assessment of the local business environment. It was designed to cover a representative sample of "for-profit" public and private locally- and foreign-owned firms in all sectors of the economy, which are registered and have at least 10 employees. For each firm within a country, stratified sampling was implemented by its economic sub-sector, size (i.e., number of employees) and ownership (i.e., domestic- or foreign-owned). Face-to-face interviews were conducted, in most cases with the most senior decision maker within the firm (i.e., chief executive or general manager).[8] The firm-level data collected from this survey correspond to the previous financial year (i.e., 2009). As monetary variables are in national currencies, we convert these into US dollars

[7] A short description of the variables is included in Table 17.

[8] For all the details concerning the design and implementation of the survey, see UNIDO (2011).

(USD). We draw currency exchange rate data from the World Bank World Development Indicators (WDI).

The dataset comprises 6497 firms in 19 countries in Sub-Saharan Africa. As shown at the top of Table 1 and Panel A of Table 2, 4094 or 63% of the firms in the sample are domestic (i.e., locally-owned), while 2403 or 37% of these are foreign-owned. The countries with the highest shares of foreign-owned firms are Madagascar, Uganda and Cameroon (53%, 49.9%, and 49.3%, respectively), while the countries with the lowest shares of foreign-owned firms are Niger, Ethiopia, and Burkina Faso (21%, 23.4%, and 23.6%, respectively). As shown in Table 2, the sectors with the highest shares of foreign-owned firms are Mining and Agriculture (59.8% and 51.4%, respectively), followed by Manufacturing (36.6%), Services (36.3%), and Electricity, Gas and Water Supply and Construction (32.3%). Within manufacturing, the highest share of foreign-owned firms is observed in high-tech and medium-tech industries (46%), followed by resource-based and low-tech industries (37.4% and 31.2%, respectively). In the services sector, foreign-owned firms account for a higher share in knowledge-intensive industries (41.9%) than in less knowledge-intensive industries (33.1%).[9]

Foreign ownership variables

The key variable of interest is the dummy for foreign ownership. It is equal to 1 if the firm is owned by a foreign investor by at least 10%. In order to capture any heterogeneity in business culture and practices across foreign investors, we consider their country of origin. We construct dummies for foreign-owned firms whose parents are located in high-income countries, in low/middle-income countries outside SSA, and in SSA countries. If the parent of a foreign affiliate is located in a high-income country, according to the World Bank Historical Country Classification by Income, we include it in the first group (HI). Instead, if, according to the same classification, it is located in an upper-middle-income, lower-middle-income or low-income country, we include it in the group of low/middle-income countries (LMI).[10]

We capture other essential characteristics of foreign-owned firms with additional variables. Based on information on five different modes of foreign investment, we construct a dummy

[9]We follow Hatzichronoglou (1997) and UNCTAD and UNIDO (2011) in order to classify manufacturing industries as resource-based (ISIC Rev. 1.1: 15, 16, 20, 21, 23, 25, 26, 27), low-tech (ISIC Rev. 1.1: 17, 18, 19, 22, 28, 36), and high-tech and medium-tech (ISIC Rev. 1.1: 24, 29, 30, 31, 32, 33, 34, 35, 37, 38). In addition, based on Eurostat (2011), we classify industries in the services sector as knowledge-intensive (ISIC Rev. 1.1: 61, 62, 64, 65, 66, 67, 70, 71, 72, 73, 74, 80, 85, 92) and less knowledge-intensive (ISIC Rev. 1.1: 50, 51, 52, 55, 60, 63, 75, 90, 91, 93, 95, 99). In the Appendix, we also show the two-digit (ISIC Rev. 1.1) industries in which domestic and foreign-owned firms operate.

[10]In the benchmark case, we consider the country classification by income for the year 2010. However, the composition of countries in the two groups does not change when we consider the classification for the year 2009.

which is equal to 1 if the foreign-owned firm was created as greenfield FDI, and 0 if it is a previously domestic firm which became foreign-owned through Mergers and Acquisitions (M&As) or if it remains a domestic firm. The two modes that capture greenfield FDI are: creation of a new operation as wholly-owned enterprise or joint venture. The three modes that capture M&As are: purchase of pre-existing assets from local private owners, purchase of pre-existing assets from foreign private owners, and purchase of pre-existing state-owned assets. Also, we construct a dummy which is equal to 1 if the firm is a majority-owned foreign affiliate (MOFA), that is, if the firm is owned by a foreign investor by at least 50%. The last group of dummies in this category captures the principal motive of a foreign investor to invest in the host country. For firms in non-services industries, the seven motives and the respective dummies are: access to new markets, lower production costs, access to natural resources and inputs, collaboration with a specific partner, export back to home country, benefits from a trade agreement, principal motive other than any of the six aforementioned motives. For firms in the services sector, the survey considers only the first two, the fourth, and the seventh motive. The dummy for access to new markets could proxy for horizontal and export-platform FDI, while the next four dummies could proxy for vertical FDI. The sixth dummy could proxy for all three types of FDI. Dummies are equal to 1 if the corresponding statement is valid, and 0 if the firm's principal motive is any other among those available.

Labour variables

With regards to information on labour, we have data on the total number of permanent full-time, temporary and part-time employees.[11] We compute the shares of these employees in total employment. The dummies for temporary and part-time employment are equal to 1 if the firm has a non-zero number of temporary and part-time employees, respectively.

Within the group of permanent full-time employees, we have information on the number of production and manual workers, the number of clerical, administrative and sales workers, as well as the number of technical, supervisory and managerial workers. For simplicity, we label workers in the first group as production workers, those in the second group as non-production workers, and those in the third group as managers. This information is also available for female and foreign workers. We compute the shares of all production, non-production, managerial, female, and foreign workers in the total number of permanent full-time workers. We also compute the shares of female and foreign production, non-production, and managerial workers

[11] Information, however, on whether employees under each type of contract are at the entry level or at higher career levels is not available.

in the total number of workers of the respective group.

In order to capture unpaid work, we construct a dummy which is equal to 1 if the firm has a non-zero number of unpaid workers. We also compute the share of unpaid workers in the total number of workers. In addition, we construct dummies which are equal to 1 if the number of production shifts per day is one, two, or three, and we compute production shift intensity as the ratio of daily production shifts to total employment.

Other crucial measures of job quality are the training and wages offered to employees. We compute the average training intensity as the ratio of total expenditure in training to the total number of permanent full-time employees. We also compute the training intensities of permanent full-time production, non-production and managerial workers as the ratios of expenditure in training of these workers to the total number of these. Moreover, we compute the average wage as the ratio of the total wage bill to total permanent full-time employment.[12]

Additional firm-level variables

We capture firm size with total sales, firm-level labour productivity with the ratio of total sales to total permanent full-time employment, and skill intensity with the share of managerial workers in total permanent full-time employment. We construct a dummy for training which equals 1 if the firm provides internal/external training to its employees and 0 otherwise. In addition, we compute capital and input intensity as the ratios of capital stock and value of inputs to total permanent full-time employment, respectively. Firm age is the number of years since the foundation of the firm. The total number of domestic and foreign affiliated establishments serves as a measure of the size of the whole (multinational) enterprise.

We also construct dummies for backward and forward linkages, as well as for engagement in export activities. The dummy for local backward linkages is equal to 1 if the firm has a non-zero number of local suppliers or a non-zero value of work contracted out to local suppliers. The dummy for international backward linkages is equal to 1 if the firm has a non-zero number of suppliers abroad. Similarly, the dummy for local forward linkages is equal to 1 if the firm has a non-zero number of local buyers or a non-zero value of work sub-contracted by local firms. The dummy for exports is equal to 1 if the firm has non-zero aggregate export values. Finally, we construct three dummies in order to capture the main source of competition faced

[12] Although the total wage bill includes supplementary benefits which are given only to permanent full-time workers, this ratio is just a proxy for the average wage, as the denominator does not include temporary and part-time workers, whose wages may be included in the total wage bill. In this case, the ratio may be over-estimated. On the other hand, total employment includes unpaid workers in addition to permanent full-time, temporary, and part-time workers. In this case, the ratio may be under-estimated.

by the firm. The first dummy is equal to 1 if competition comes mostly from imports, the second dummy is equal to 1 if competition comes mostly from locally-owned firms, while the third dummy is equal to 1 if competition comes mostly from foreign-owned firms based in the country.

2.2 Country-level

In order to identify how employment protection, institutional quality and social policy determine the relationship between the quantity and quality of jobs and foreign ownership, we use relevant country-level variables. Firing costs proxy for the level of employment protection. They are measured as the number of weeks a worker is paid after being laid off. We draw data on this measure from the World Bank World Development Indicators (WDI). Column 1 of Table 3 shows that Ghana, Zambia, and Mozambique have the highest firing costs (178, 178, and 134, respectively), while Uganda, Tanzania, Burundi, and Rwanda have the lowest firing costs (13, 18, 26, and 26, respectively).

We also use the Ibrahim Index of African Governance (IIAG), developed by the Mo Ibrahim Foundation, in order to take into account of all sorts of a country's institutions. IIAG is an overall index of governance quality which comprises 14 sub-categories. These are: rule of law, accountability, personal safety, national security, participation, rights, gender, public management, business environment, infrastructure, rural sector, welfare, education, and health. For the construction of this index, data for the 14 sub-categories are collected from 33 separate data providers. The overall index of governance quality ranges between 0 and 100, where 100 is the best possible score within the group of 54 African countries between 2000 and the latest data year. Column 2 of Table 3 shows that the countries with the highest governance quality are Cape Verde (76.7), Mozambique (70), and Ethiopia (66.3), while those with the lowest governance quality are Burundi (43.3), Cameroon (45.4), and Nigeria (43.9).

The social inclusion measure, provided by the World Bank WDI, serves as a proxy for a country's social policy standards. This measure is a rating between 1 and 6, with higher values indicating higher social inclusion. According to column 3 of Table 3, in the highest rankings of social inclusion are Cape Verde (4.3), Ghana (3.9) and Rwanda (3.9). In the lowest rankings are Cameroon (3.1), Niger (3.1), and Nigeria (3.2).

3 Econometric model

In order to study the association of the quantity and quality of jobs offered by firm z in country c and industry j with its foreign ownership status, we estimate by OLS the following linear model:

$$JQ_{zcj} = \alpha + \beta_1 * foreign_{zcj} + \beta_2 * controls_{zcj} + \beta_c * D_c + \beta_j * D_j + \epsilon_{zcj} \quad (1)$$

The dependent variable, JQ, is one of the measures of job quantity or job quality, described in Section 2. When the dependent variable is a dummy, equation 1 becomes a probit model. The dummy for foreign ownership, $foreign_{zcj}$, is the main explanatory variable and its coefficient estimate, β_1, captures the relationship of job quantity and job quality with foreign ownership, or equivalently, the differences in the quantity and quality of jobs offered by foreign-owned and domestic firms. Country dummies, D_c, capture various location-specific factors such as institutional quality, human capital of labour force, agglomeration of business activity, and infrastructure. Industry dummies, D_j, capture industry-specific factors such as technology and knowledge intensity.

A set of essential firm-level variables, described in Section 2, is included in $controls_{zcj}$. These are: total sales, labour productivity, skill intensity, average wage, a dummy for provision of training to employees, capital intensity, input intensity, firm age, the total number of affiliated establishments, dummies for engagement in local and international backward linkages, in local forward linkages and in exports, as well as dummies for competition faced by the firm from imports and from locally-owned firms (i.e., import and local competition, respectively). In all regressions, the dummy for competition from foreign-owned firms based in the country is excluded.

Skill intensity, computed as the share of managerial workers in total number of permanent full-time workers, serves as a proxy for observable worker characteristics. Hence, it may be associated with higher training expenditures and wages. Total sales and total sales to total employment – as measures of firm size and labour productivity, respectively –, the number of affiliated establishments – as a measure of the size of the whole enterprise –, the export status of the firm, the engagement of the firm in backward and forward linkages, and input intensity may be associated with higher employment levels, training expenditures and wages.

On condition that sourced inputs substitute for certain types of jobs, backward linkages and input intensity will be associated with lower quantity and quality of these jobs. Similarly, import and local competition may shed certain types of domestic jobs or apply downward pressure on their wages, while they may increase the quantity and quality of other types of jobs. Lucas (1978) and Hamermesh (1980) conjecture that physical capital and the skills of workers complement with each other (i.e., capital-skill complementarity hypothesis). If this argument is valid, then capital intensity may be associated with higher training expenditures and wages. In principle, firm age – as a proxy for firm growth and survival rate – may be associated with higher levels of employment. In addition, it may be associated with higher wages, as an indication of good human resource practices of the firm (Brown and Medoff, 1989).[13] However, firm age may also be associated with lower employment and wages in countries and industries with very low rate of firm entry and exit. For instance, Poschke (2013a) and Poschke (2013b) argue that there are firms, mostly in developing countries, which do not grow and nevertheless, remain active in the market for years (i.e., entrepreneurs out of necessity).

In regressions where training intensity is the dependent variable, we do not control for the dummy for provision of training to employees, while in wage regressions we do not control for the average wage. Also, in the regression where the share of permanent full-time managers is the dependent variable, we exclude skill intensity from the set of controls as it is defined identically. All non-dummy explanatory variables are in logs except for skill intensity and firm age. All variables for job quantity and quality are in logs except for those which represent non-monetary shares and the dummies.

In order to account for additional characteristics of foreign ownership, we replace the dummy for foreign ownership with dummies for firms owned by foreign investors from high-income and non-SSA low/middle-income countries. In these regressions, we exclude the dummy for firms owned by foreign investors from SSA countries. We also replace the dummy for foreign ownership with dummies for greenfield FDI, MOFA status, and the dummies for the principal motive for foreign investment. In these regressions, we exclude the dummy for any principal motive for foreign investment that is not specified in the questionnaire.

[13] For similar arguments, see Strobl and Thornton (2004).

4 Empirical results

4.1 Employment

We start the econometric analysis by identifying the relationship of foreign ownership with total employment, permanent full-time, temporary, and part-time employment. The negative and highly significant coefficient estimate of the dummy for foreign ownership in column 1 of Table 4 indicates that foreign-owned firms have lower total employment by 10%.[14] They are also less likely to employ temporary workers by 7% and if they do, they have a 4% lower share of these workers in total employment, as indicated by the negative and statistically significant coefficient estimates in columns 3 and 4, respectively. The positive coefficient estimate in column 2 reveals that foreign-owned firms have a higher share of permanent full-time employment in total employment by 4%. Finally, the coefficient estimates of the foreign ownership dummy in columns 5 and 6 are positive but statistically insignificant at all conventional levels. Hence, there is no statistically significant association between foreign ownership and the probability and share of part-time employment.[15]

<< Table 4 about here >>

The results of Table 4 reveal that foreign-owned firms tend to offer more stable and secure jobs than domestic firms. Empirical evidence on the association of foreign ownership with non-wage working conditions is very scarce (OECD and ILO, 2008). Almond and Ferner (2006) find that US MNEs with affiliates in Europe tend to adapt to the conditions and labour practices of the host countries rather than to transplant their own human resource practices into their foreign affiliates. Bloom et al. (2009) use a sample of US MNEs with affiliates in the UK, Germany, and France and show that they transplant their management practices into their affiliates, but not their human resource practices. Also, Freeman et al.

[14] Since the dependent variable is in logs, the 10% lower total employment of foreign-owned firms with respect to domestic ones is the log approximation. Taking exponents of the coefficient of the foreign ownership dummy, we find that foreign-owned firms have lower total employment by 10.52% $(100 * (exp(0.10) - 1) = 10.52\%)$.

[15] We study the role of the parent location of foreign-owned firms in these associations by replacing in the regressions the dummy for foreign ownership with dummies for parents of foreign-owned firms being located in high-income (HI) and low/middle-income countries outside SSA (LMI). The dummy for foreign-owned firms whose parents are located in SSA countries is excluded from the regressions. The negative associations of foreign ownership with total employment and the share of temporary employment are driven by firms whose parents are located in LMI countries (Table B1). This is also the case for the positive association of foreign ownership with the share of permanent full-time employment. The positive association between foreign ownership and the probability that a firm employs temporary workers is driven by firms whose parents are located in HI countries. By and large, these results also hold when solely China, as well as when both China and India are excluded from the LMI group (Tables B2 and B3).

(2008) examine a single US MNE with domestic and foreign affiliates and find that its foreign affiliates adopt human resource practices which are closer to those in the host countries where they are located. With respect to the literature, our evidence on the advantage of foreign-owned firms in job stability and security suggest that MNEs transplant at least partially their human resource practices into their foreign affiliates in Sub-Saharan Africa. One possible explanation is that MNEs place a high value on corporate social responsibility in order to protect their reputation (OECD and ILO, 2008). Another possible explanation is that the transfer of human resource practices to foreign affiliates is an essential requirement so that their operations (e.g. production of intermediates/final output, service of local and foreign markets) are in line with MNE standards.

We estimate the same regressions as in Table 4 after replacing the dummy for foreign ownership with the dummies for greenfield FDI, MOFA status, and the principal motive for foreign investment. Table 5 portrays the results. Foreign-owned firms which were created as greenfield FDI and those whose main business purpose is to export back to the home country have lower total employment (column 1). The second type of foreign affiliates also have a higher share of permanent full-time employment, are less likely to employ temporary workers and have a lower share of these workers (columns 2, 3 and 4, respectively). The service of the home market with output produced in foreign affiliates is a crucial business activity which may require the creation of more stable and secure jobs within these entities. Majority-owned foreign affiliates (MOFAs) are less likely to employ workers under part-time contracts, while those whose main business purpose is to join a specific partner are more likely to employ workers under these contracts (column 5). As foreign investors in MOFAs retain the majority of ownership, they may transplant to a greater extent their human resource practices (e.g. more stable and secure employment) into these firms. MOFAs may also have a crucial role in the MNE in terms of production of output and service of markets, which requires the creation of more stable and secure jobs by them. By contrast, foreign-owned firms whose main business purpose is to join a local partner may undertake themselves less sophisticated production tasks which can be easily performed by part-time workers, while the more sophisticated tasks are performed by their local partner.

<< Table 5 about here >>

In Table 6, we study the potential role of firing costs in the association of foreign ownership with different types of employment. In doing so, we re-estimate the regressions of Table 4 after

incorporating an interaction term between the dummy for foreign ownership and the country-level measure of firing costs. In all regressions, we do not incorporate the country-level variable as it is captured by the country dummies. The coefficient estimate of the interaction term in column 1 indicates that the lower total employment of foreign-owned firms with respect to domestic firms increases with higher firing costs. The rest of the columns reveal that their higher share of permanent full-time employment decreases (column 2), while the lower probability and share of temporary employment increase with higher firing costs (columns 3 and 4, respectively).[16] Also, the share of part-time employment increases with higher firing costs (column 6). As higher firing costs imply higher employment protection and better bargaining terms of workers vis-à-vis their employers in the country, the gap in the stability and security of jobs offered by foreign-owned and domestic firms narrows because domestic firms are induced to increase the stability and security of jobs that they offer with respect to foreign-owned firms.

<< Table 6 about here >>

In Table 7, we study the association of foreign ownership with the shares of permanent full-time production, non-production, and managerial workers in total permanent full-time employment.[17] Foreign-owned firms have a higher share of production workers (column 1) and a lower share of non-production workers (column 2). There is no statistically significant relationship between foreign ownership and the share of managerial workers (column 3).

<< Table 7 about here >>

In Table 8, we re-estimate the regressions of Table 7 after incorporating the interaction term between foreign ownership and the country-level measure of firing costs.[18] The statistically insignificant coefficient estimates of the interaction term in all columns suggest that firing costs do not play a role in the association of foreign ownership with the shares of permanent full-time production, non-production, and managerial workers.

<< Table 8 about here >>

[16] We obtain qualitatively similar results to those in columns 3 and 5 when we convert the probit models intro linear probability models and estimate these by OLS.

[17] In column 3, we drop skill intensity from the regression since it is defined as the share of managers in total permanent full-time employment, which in this case, happens to be the dependent variable.

[18] Same as in Table 6, we do not include the country-level variable in the regressions as it is captured by the country dummies.

We also study the association of foreign ownership with permanent full-time female and foreign employment. As shown in Table 9, there are no statistically significant differences between foreign-owned and domestic firms in the shares of total female employment and of female production, non-production, and managerial workers.

<< Table 9 about here >>

Table 10 shows that foreign-owned firms have higher shares of total foreign employment (column 1) and of foreign production, non-production, and managerial workers (columns 2 to 4). The higher shares of foreign employment in foreign-owned firms could be viewed as transfer of critical human capital to foreign affiliates from other parts of the MNE such as the parent company or a sister affiliate (Moran, 2007).

<< Table 10 about here >>

Unpaid work is a common practice in the informal sector of the economy. In our sample, however, which includes only firms which are registered and are part of the formal economy, we observe that those which offer unpaid work account for 8.59% of the total. Among foreign-owned firms, 6.16% of these offer unpaid work, while among domestic firms, the share of those with unpaid workers is 10.01%. To this purpose, we study the relationship of foreign ownership with unpaid work in Table 11. In the same table, we also study the relationship of foreign ownership with production shift intensity. Foreign-owned firms are less likely to offer unpaid work (column 1) and have a higher ratio of production shifts to total permanent full-time employment (column 6).[19]

<< Table 11 about here >>

The evidence on their lower probability of offering unpaid work provides extra support to our argument that foreign-owned firms tend to offer more stable and secure jobs. Their higher production shift intensity, combined with their higher share of permanent full-time production workers documented in Table 7, implies that foreign-owned firms have a greater production capacity than domestic firms.

[19] In additional estimations, we replace the dummy for foreign ownership with dummies for high-income (HI) and non-SSA low/middle-income (LMI) parent locations of foreign-owned firms (Table B4). The dummy for parent locations in SSA is excluded from the regressions. We show that the positive association of foreign ownership with production shift intensity is driven by foreign-owned firms whose parents are located in high-income countries. The association holds also when we exclude solely China, as well as both China and India from the LMI group. The negative association between foreign ownership and unpaid work is driven by low/middle-income countries other than China and India (Tables B5 and B6).

4.2 Training

As shown in Table 12, foreign-owned firms invest more in training of their employees. In particular, they have a higher ratio of total expenditure in training to total permanent full-time employment by 52.9% (column 1). By accounting for worker heterogeneity, we document that they also have a higher ratio of expenditure in training of managerial workers to the total number of these workers by 56.8% (column 4).[20] We find no statistically significant differences between foreign-owned and domestic firms in terms of training intensity of production and non-production workers, as indicated by the statistically insignificant coefficient estimates of the dummy for foreign ownership in columns 2 and 3.

<< Table 12 about here >>

The findings in Table 12 are in line with many studies which report that foreign-owned firms provide more training to their employees as compared to domestic firms. International Labour Organisation (1981) and Lindsey (1994) emphasise the substantial efforts undertaken by MNEs in the education of local workers. Chen (1983) argues that the main benefit of Hong Kong manufacturing from the presence of foreign-owned firms is mostly the training of workers at various levels, rather than the production of new techniques and products. Similarly, Gershenberg (1987) argues that MNEs offer more training to technical workers and managers than local firms do. Also, Filer et al. (1995), World Bank (1997), and Barthel et al. (2011) show that foreign-owned firms in Czech Republic, Malaysia, and Ghana, respectively, provide more training to their workers. According to Blomström and Kokko (1998), provision of training to the foreign affiliate's employees – from on-the-job training to seminars and more formal schooling, to overseas education – is a form of technology and knowledge transfer from the parent which may be crucial for the business operations of the MNE as a whole. As foreign-owned firms tend to offer more opportunities for training and personal development of their staff than domestic firms, workers themselves may find more attractive and rewarding to be employed by the first type of firms (Javorcik, 2015).

4.3 Wages

Table 13 shows the relationship of foreign ownership with the average wage, as well as with the wage paid to permanent full-time production, non-production, and managerial workers.

[20] Taking exponents of the coefficient of the foreign ownership dummy, we find that foreign-owned firms have a higher average training intensity by 69.72% ($100 * (exp(0.529) - 1) = 69.72\%$) and a higher training intensity of managerial workers by 76.47% ($100 * (exp(0.568) - 1) = 76.47\%$).

Foreign-owned firms pay a higher average wage by 31.9% (column 1) and higher wages to non-production and managerial workers by 25.4% and 32%, respectively (columns 3 and 4).[21]

<< Table 13 about here >>

These findings are in line with several studies which report wage premia paid by foreign-owned firms (te Velde and Morrissey, 2003; Strobl and Thornton, 2004; Lipsey and Sjöholm, 2004; Sjöholm and Lipsey, 2006; Coniglio et al., 2015). The extant literature has also provided several possible explanations for their existence (Javorcik, 2015).

As labour mobility across firms involves the spread of information (Arrow, 1962),[22] the wage premium acts as a disincentive for cross-firm labour mobility and ultimately prevents the ensuing knowledge diffusion from happening (Fosfuri et al., 2001; Glass and Saggi, 2002; Balsvik, 2011; Poole, 2013).[23] The risk of knowledge diffusion through labour mobility is particularly high for MNEs because of their investment in personnel training (Blomström and Kokko, 1998)[24] and the significant R&D efforts made by foreign affiliates (Fairchild and Sosin, 1986). Through these processes, their workers acquire critical knowledge that can later spill over if they decide to work for a domestic employer or set up their own rival firm, without compensating their former employers for the full inventory of ideas that travels with them.

The wage premium may also be explained by rent-sharing across international borders (Budd and Slaughter, 2004) and rent-sharing arrangements between MNEs – as highly productive and profitable firms – and their employees (Budd et al., 2005). In addition, it may be a form of compensation for the higher labour demand volatility in foreign plants (Fabbri et al., 2003) or for the higher foreign plant closure rate (Bernard and Sjöholm, 2003). Lipsey and Sjöholm (2004) rationalise the wage premium as a way for foreign-owned firms to offset their lack of knowledge of the local labour market in order to succeed in identifying and

[21] Taking exponents of the coefficient of the foreign ownership dummy, we find that foreign-owned firms pay an average wage premium of 37.58% ($100 * (exp(0.319) - 1) = 37.58\%$), a wage premium to non-production workers of 28.92% ($100 * (exp(0.254) - 1) = 28.92\%$), and a wage premium to managerial workers of 37.71% ($100 * (exp(0.320) - 1) = 37.71\%$).

[22] For a survey of the empirical literature on labour mobility across firms and knowledge spillovers, see Görg and Greenaway (2004).

[23] If patents or other intellectual property rights could perfectly protect knowledge and ideas from being expropriated, labour mobility would not have been a concern for entrepreneurs. Except for the wage premium as a disincentive for labour mobility across firms, firm owners design special labour contracts and incentive pay programmes for their employees such as profit-sharing agreements and long-term stock options (Balkin and Gomez-Mejia, 1985; Møen, 2005).

[24] UNLTC (1993) reports that knowledgeable foreign workers employed by foreign-owned firms are gradually replaced by local workers who have been trained by them in the meanwhile. In addition, Møen (2005) finds that technical employees in R&D-intensive firms pay for the human capital that they develop by accepting lower wages early in their career. They are later paid higher wages as a compensation for their investment in human capital at earlier stages.

attracting the good workers of the country. It may also be attributed to "cherry-picking". That is, previously domestic firms with above-average human capital and wages are taken over by foreign investors through Mergers and Acquisitions (Almeida, 2007). Furthermore, the wage premium may arise because of unobservable worker characteristics such as higher ability or greater motivation (Javorcik, 2015), as well as because foreign-owned firms tend to operate in high-wage sectors and locations (Moran, 2007). Finally, according to the labour market literature, the wage premium may result from the more sophisticated human resource practices adopted by MNEs (Javorcik, 2015).

By re-estimating the regressions in Table 13 with dummies for the parent location of foreign-owned firms, we show that the average wage premium and the wage premia to non-production and managerial workers are paid by firms whose parents are located in high-income and non-SSA low/middle-income countries (Table B7). Interestingly, a wage premium to production workers is paid only by foreign-owned firms whose parents are located in high-income countries (25%).[25] As the arguments set out above are more appropriate to explain the existence of the average wage premium, some further reasoning is required to explain why production workers are paid a wage premium only by foreign-owned firms whose parents originate from high-income countries. A possible explanation could be that production workers add higher value to the production of output in this type of firms.

Table 14 displays the estimation results when the dummy for foreign ownership is replaced by dummies for greenfield FDI, MOFA status and the principal motive for foreign investment. Foreign-owned firms whose main business purpose is to benefit from a free trade agreement pay a higher average wage (column 1). Those created as greenfield FDI pay lower wage to managerial workers (column 4). This is in line with the "cherry-picking" argument put forward by Almeida (2007). Some previously domestic firms which became foreign-owned through M&As had already higher productivity and human capital than the average firm and were already paying a wage premium to their managers.[26]

[25] In these estimations, the dummy for parents of foreign-owned firms being located in SSA countries is excluded. The p-values of the F-test at the bottom of the table are greater than 10% and thus, the magnitudes of the coefficient estimates of the two dummies cannot be compared. The results also hold when solely China, as well as when both China and India are excluded from the LMI group. The only exception is that the relationship between foreign ownership and the wage premium for non-production workers is not statistically significant any more when the LMI group does not include China and India (Tables B8 and B9). When we drop from the sample all domestic firms which are not multinationals and therefore, compare the wages paid by foreign and domestic MNEs, we find no statistically significant differences in the average wage and in the wages paid to production and managerial workers (Table B10). We only find that non-production workers are paid a wage premium by foreign MNEs.

[26] See also Girma and Görg (2007) and Heyman et al. (2007).

By contrast, foreign-owned firms whose main business purpose is to access new markets and to export back to the home country pay a higher wage to managerial workers (column 4). The latter type of firms pay also a higher wage to non-production workers (column 3). These wage premia indicate that the role of non-production workers and especially of managers is crucial in foreign-owned firms that aim at serving the home and new foreign markets through exports. In particular, managers are likely to have an important supervisory role in the local production of output and a key role in the communication between the parent company and the foreign affiliate. For instance, Antràs et al. (2006) show that the role of (middle) managers in foreign affiliates which trade with their parent (i.e., intra-firm trade) is crucial because it allows them to save on communication costs. That is, managers deal with routine problems faced by local production workers that top managers in the parent company should have otherwise addressed themselves. Foreign-owned firms whose main business purpose is to join a specific partner in the host country pay a lower wage to production workers (column 2). If this collaboration involves production-intensive tasks being undertaken mostly in their local partner, then they may add lower value to the production of output, which is translated into a lower wage.

<< Table 14 about here >>

In Table 15, we study the role of institutional quality in the association between foreign ownership and the wage premium. We re-estimate the regressions of Table 13 after incorporating the interaction term between the dummy for foreign ownership and the overall index of governance quality (IIAG). The coefficient estimates of the interaction term reveal that the average wage gap and the wage gap for managerial workers between foreign-owned and domestic firms narrow in countries with higher governance quality.[27] As higher governance quality implies better labour market institutions (e.g. solid wage bargaining setting), better business regulatory environment, and stronger contract enforcement in the country, the shrinkage in the wage premia are likely to be primarily attributed to wages paid by domestic firms which are closer to the level of wages paid by foreign-owned firms.

<< Table 15 about here >>

[27] We obtain very similar results when we interact the dummy for foreign ownership with the variable capturing the rule of law, which is one of the 14 sub-categories of the overall index of governance quality provided by the Mo Ibrahim Foundation (Table B11). Same as the governance quality measure, it ranges between 0 and 100, with higher values indicating stronger rule of law in the host country.

In additional regressions, we incorporate an interaction term between the dummy for foreign ownership and the social inclusion index. The estimation results indicate that the average wage premium, and the wage premia for production and managerial workers between foreign-owned and domestic firms narrow in countries with greater social inclusion (Table 16).[28] As greater social inclusion implies higher social policy standards in the country, the most plausible explanation for the decrease in the wage premia is that domestic firms pay wages which are closer to the level of wages paid by foreign-owned firms.

<< Table 16 about here >>

5 Conclusion and policy implications

In this paper, we provide novel empirical evidence on the differences in the quantity and quality of jobs offered by foreign-owned and domestic firms. We also show how these differences are determined by country-level factors such as employment protection, institutional quality, and social policy standards. To this purpose, we use a sample of foreign-owned and domestic firms in 19 countries in Sub-Saharan Africa in 2009.

The key findings of the paper are that foreign-owned firms tend to create jobs which offer higher stability and security, more training opportunities and higher wages than domestic firms. They suggest that MNEs tend to transplant, at least partially, their human resource practices into their foreign affiliates. Hence, their presence in Sub-Saharan Africa is likely to be beneficial for local workers. Interestingly, essential country-level factors such as higher firing costs, institutional quality and social policy standards tend to decrease the differences in job stability and security and in wages between foreign-owned and domestic firms. The most plausible reason for the smaller differences is that domestic firms increase their employment and wage standards with respect to foreign-owned firms, which is also to the benefit of local workers.

The main findings of this paper and the ensuing policy implications lead to new avenues for further research whose findings may generate novel policy recommendations. Very little is known about the main reasons which induce foreign-owned firms to offer more stable and secure jobs in the form of permanent contracts. Is it because foreign-owned firms have a

[28] The social protection measure serves as an alternative proxy for social policy standards in the host country. Same as the social inclusion measure, it is a rating between 1 and 6 provided by the World Bank WDI. Higher values of this measure indicate higher social protection. From estimations where we interact the dummy for foreign ownership with the social protection index, we find that the wage premium for managerial workers decreases with higher social protection in the host country (Table B12).

relatively large stock of knowledge and workers who have access to it are incentivised to be loyal to their employer? Is it because foreign-owned firms have a greater tendency of investing in the education and skill development of their employees and want to benefit from returns on their investment? Are their lower probabilities of creating temporary and unpaid jobs attributed to better human resource practices of MNEs and to principles such as team spirit, pride in the workplace and dedication to the company? If yes, to what extent the better human resource practices of MNEs are transplanted into their foreign affiliates? Also, if more sophisticated human resource practices are one of the explanations, through which channels such practices can be adopted by domestic firms as well? More generally, are there job stability and security spillovers from foreign-owned to domestic firms and if yes, how do these occur?

In this paper, we show that higher firing costs is an important policy tool so that domestic firms reduce the gap in job stability and security with respect to foreign-owned firms. In future research, one could study whether similar labour market policies (e.g. introduction of minimum wage) can be as effective as firing costs or whether such labour market policies can act as deterrent factors for foreign investment or as incentives for foreign-owned firms to create more unstable and insecure jobs in the host country.

The positive association between foreign ownership and foreign employment shares generates a cascade of important questions that need to be thoroughly investigated. How foreign workers interact with local ones and transfer knowledge to them within foreign-owned firms? Are foreign workers gradually replaced by local workers after the latter have received proper training and developed certain skills? Does their presence in the country produce positive local externalities? For instance, do foreign workers leave foreign-owned firms in order to work for domestic employers or set up their own firm in the country by carrying with them valuable knowledge? These questions are of particular interest to policy makers because if such externalities occur, they are likely to create jobs whose productivity is above the country average and to generate significant productivity, knowledge, and wage spillovers to domestic firms.

Moreover, our evidence on the relationship of foreign ownership with wage premia for different types of workers calls for further research on the reasons for their existence which will adequately account for worker heterogeneity and for foreign firm characteristics and activities. The precise identification of these reasons is expected to be of high policy relevance. Also, the mechanism which explains the decrease in the wage gap between domestic and foreign-owned firms with higher institutional quality and social policy standards is essential to be identified

precisely.

Finally, the causal relationship of foreign ownership with the quantity and quality of jobs is a critical issue which cannot be addressed with the existing data. Does foreign ownership lead to more stable and secure employment, more training opportunities and higher wages, or domestic firms, which already offer more stable and secure jobs, invest more in training and pay higher wages, are taken over by foreign MNEs (i.e., cherry-picking)? The answer to this question is important for the design of appropriate policies (Almeida, 2007). Hopefully, the increasing availability of matched employer-employee data will allow us to address this question properly in the future.

Tables with main descriptive statistics

Table 1: Domestic and foreign-owned firms by country

All countries	# of firms	% of firms	Malawi	# of firms	% of firms
Domestic	4094	63	Domestic	81	62.8
Foreign	2403	37	Foreign	48	37.2
Total	6497	100	Total	129	100
Burkina Faso	# of firms	% of firms	Mali	# of firms	% of firms
Domestic	94	76.4	Domestic	207	69.5
Foreign	29	23.6	Foreign	91	30.5
Total	123	100	Total	298	100
Burundi	# of firms	% of firms	Mozambique	# of firms	% of firms
Domestic	131	74	Domestic	191	59.5
Foreign	46	26	Foreign	130	40.5
Total	177	100	Total	321	100
Cameroon	# of firms	% of firms	Niger	# of firms	% of firms
Domestic	137	50.7	Domestic	83	79
Foreign	133	49.3	Foreign	22	21
Total	270	100	Total	105	100
Cape Verde	# of firms	% of firms	Nigeria	# of firms	% of firms
Domestic	286	73.3	Domestic	447	75
Foreign	104	26.7	Foreign	149	25
Total	390	100	Total	596	100
Ethiopia	# of firms	% of firms	Rwanda	# of firms	% of firms
Domestic	436	76.6	Domestic	116	61.4
Foreign	133	23.4	Foreign	73	38.6
Total	569	100	Total	189	100
Ghana	# of firms	% of firms	Senegal	# of firms	% of firms
Domestic	240	56.9	Domestic	182	62.3
Foreign	182	43.1	Foreign	110	37.7
Total	422	100	Total	292	100
Kenya	# of firms	% of firms	Tanzania	# of firms	% of firms
Domestic	323	52.6	Domestic	304	66.2
Foreign	291	47.4	Foreign	155	33.8
Total	614	100	Total	459	100
Lesotho	# of firms	% of firms	Uganda	# of firms	% of firms
Domestic	103	57.5	Domestic	407	50.1
Foreign	76	42.5	Foreign	406	49.9
Total	179	100	Total	813	100
Madagascar	# of firms	% of firms	Zambia	# of firms	% of firms
Domestic	109	47	Domestic	217	68
Foreign	123	53	Foreign	102	32
Total	232	100	Total	319	100

Notes: Authors' calculations.
Source: UNIDO Africa Investor Survey 2010.

Table 2: Domestic and foreign-owned firms by sector

Panel A: Whole economy (all sectors)	# of firms	% of firms
Domestic	4094	63
Foreign	2403	37
Total	6497	100
Panel B: Agriculture	# of firms	% of firms
Domestic	108	48.6
Foreign	114	51.4
Total	222	100
Panel C: Mining	# of firms	% of firms
Domestic	35	40.2
Foreign	52	59.8
Total	87	100
Panel D: Manufacturing	# of firms	% of firms
Domestic	2000	63.4
Foreign	1153	36.6
Total	3153	100
Panel E: Resource-Based Manufacturing	# of firms	% of firms
Domestic	923	62.6
Foreign	552	37.4
Total	1475	100
Panel F: Low-Tech Manufacturing	# of firms	% of firms
Domestic	793	68.8
Foreign	359	31.2
Total	1152	100
Panel G: High-Tech and Medium-Tech Manufacturing	# of firms	% of firms
Domestic	284	54
Foreign	242	46
Total	526	100
Panel H: EGW Supply and Construction	# of firms	% of firms
Domestic	304	67.7
Foreign	145	32.3
Total	449	100
Panel I: Services	# of firms	% of firms
Domestic	1647	63.7
Foreign	938	36.3
Total	2585	100
Panel J: Knowledge-Intensive Services	# of firms	% of firms
Domestic	550	58.1
Foreign	396	41.9
Total	946	100
Panel K: Less Knowledge-Intensive Services	# of firms	% of firms
Domestic	1097	66.9
Foreign	542	33.1
Total	1639	100

Notes: Authors' calculations. Whole Economy ISIC Rev. 1.1: 1–99. Sector ISIC Rev. 1.1: Agriculture (1–5); Mining (10–14); Manufacturing (15–39); Resource-Based Manufacturing (15, 16, 20, 21, 23, 25, 26, 27); Low-Tech Manufacturing (17, 18, 19, 22, 28, 36); High-Tech and Medium-Tech Manufacturing (24, 29, 30, 31, 32, 33, 34, 35, 37, 38); Electricity, Gas and Water (EGW) Supply and Construction (40 and 45); Services (50–99); Knowledge-Intensive Services (61, 62, 64, 65, 66, 67, 70, 71, 72, 73, 74, 80, 85, 92); Less Knowledge-Intensive Services (50, 51, 52, 55, 60, 63, 75, 90, 91, 93, 95, 99).
Source: UNIDO Africa Investor Survey 2010.

Table 3: Firing costs, governance quality and social inclusion in 2009 by country

Country	Firing costs	Governance quality	Social inclusion
Burkina Faso	34	54.9	3.6
Burundi	26	43.3	3.3
Cameroon	33	45.4	3.1
Cape Verde	93	76.7	4.3
Ethiopia	40	66.3	3.6
Ghana	178	53.2	3.9
Kenya	47	59.3	3.5
Lesotho	44	46.9	3.3
Madagascar	30	58.2	3.6
Malawi	84	54.2	3.5
Mali	31	54.6	3.4
Mozambique	134	70	3.3
Niger	35	46.3	3.1
Nigeria	50	43.9	3.2
Rwanda	26	55	3.9
Senegal	38	57.8	3.4
Tanzania	18	58.4	3.7
Uganda	13	55.6	3.8
Zambia	178	56.8	3.5

Notes: Firing costs are measured as the number of weeks a worker is paid after she is laid off. The overall index of governance quality ranges between 0 and 100, where 100 is the best possible score within the group of 54 African countries between 2000 and the latest data year. The social inclusion measure is a rating between 1 and 6, with higher values indicating higher social inclusion. The data correspond to the year 2009.
Sources: World Bank World Development Indicators (firing costs, social inclusion) and Mo Ibrahim Foundation (governance quality).

Tables with main results

Table 4: Employment (total, permanent, temporary, part-time) and foreign ownership

Dep. var:	(1) total employment	(2) permanent employment (share)	(3) temporary employment (dummy)	(4) temporary employment (share)	(5) part-time employment (dummy)	(6) part-time employment (share)
foreign	**-0.10*** **	**0.04** **	**-0.07***	**-0.04*** **	0.003	0.005
	[0.04]	**[0.02]**	**[0.04]**	**[0.02]**	[0.03]	[0.006]
sales	0.9***	0.04***	0.007	-0.03***	0.02**	-0.003
	[0.01]	[0.005]	[0.009]	[0.005]	[0.007]	[0.002]
productivity	-0.9***	-0.05***	0.005	0.05***	-0.03***	0.002
	[0.02]	[0.007]	[0.01]	[0.006]	[0.010]	[0.003]
skill intensity	0.003***	-0.001***	0.001*	0.001***	0.0007	0.00003
	[0.0008]	[0.0004]	[0.0006]	[0.0004]	[0.0005]	[0.0001]
wage	0.04***	-0.005	0.0008	0.007	-0.010	-0.002
	[0.01]	[0.005]	[0.009]	[0.005]	[0.007]	[0.002]
training	-0.02	0.01	0.001	-0.02**	0.02	0.004
	[0.02]	[0.010]	[0.02]	[0.009]	[0.02]	[0.004]
capital intensity	0.02***	-0.008**	0.01**	0.008**	0.01***	0.0005
	[0.008]	[0.003]	[0.007]	[0.003]	[0.005]	[0.001]
input intensity	0.009	-0.005	-0.00009	0.005	-0.007	0.0009
	[0.009]	[0.004]	[0.008]	[0.003]	[0.005]	[0.001]
firm age	0.0002	0.00004	0.0002	-0.00005	0.0002	0.00003
	[0.0006]	[0.0003]	[0.0006]	[0.0003]	[0.0005]	[0.0001]
affiliated parties	-0.003	-0.007	0.03**	0.009	0.01	-0.002
	[0.01]	[0.007]	[0.01]	[0.006]	[0.01]	[0.002]
local backward link	0.03	-0.02*	0.09***	0.03**	-0.005	-0.01
	[0.03]	[0.01]	[0.03]	[0.01]	[0.02]	[0.006]
foreign backward link	0.02	-0.02	0.08***	0.02	0.02	-0.005
	[0.03]	[0.02]	[0.03]	[0.01]	[0.02]	[0.006]
local forward link	0.03	-0.02	0.02	0.002	0.06***	0.02***
	[0.02]	[0.01]	[0.03]	[0.01]	[0.02]	[0.004]
export status	0.1***	-0.06***	0.06***	0.07***	0.006	-0.004
	[0.03]	[0.01]	[0.02]	[0.01]	[0.02]	[0.004]
import competition	-0.007	0.008	0.03	-0.01	0.003	0.005
	[0.03]	[0.01]	[0.03]	[0.01]	[0.02]	[0.005]
local competition	0.003	-0.006	0.03	0.0008	0.002	0.003
	[0.02]	[0.01]	[0.03]	[0.01]	[0.02]	[0.004]
Obs	2517	2517	2514	2510	2512	2502
R^2	0.88	0.23		0.23		0.040
$Pseudo - R^2$			0.13		0.092	
$Log - likelihood$			-1453.6		-1008.9	

Notes: OLS estimations with country and industry dummies in columns 1, 2, 4, and 6. Probit estimations with country and industry dummies in columns 3 and 5. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. All non-dummy dependent variables are also in logs except for those which represent non-monetary shares. The coefficient estimates in columns 3 and 5 represent marginal effects. For the description of the variables, see Table 17.

Table 5: Employment (total, permanent, temporary, part-time) and foreign ownership (GFDI, MOFA, motive to invest)

Dep. var:	(1) total employment	(2) permanent employment (share)	(3) temporary employment (dummy)	(4) temporary employment (share)	(5) part-time employment (dummy)	(6) part-time employment (share)
greenfield FDI	**-0.09***	0.04	-0.06	-0.03	-0.003	-0.009
	[0.05]	[0.03]	[0.06]	[0.03]	[0.05]	[0.010]
MOFA	0.05	-0.02	0.03	0.04	**-0.1****	-0.02
	[0.07]	[0.04]	[0.10]	[0.03]	**[0.06]**	[0.02]
market access	-0.07	0.03	-0.04	-0.05	0.1	0.03
	[0.07]	[0.04]	[0.1]	[0.03]	[0.07]	[0.02]
low cost	0.06	-0.02	-0.02	0.004	0.1	0.02
	[0.1]	[0.07]	[0.1]	[0.06]	[0.1]	[0.02]
input access	0.2	-0.09	0.2	0.03	0.1	0.06
	[0.1]	[0.07]	[0.1]	[0.06]	[0.09]	[0.05]
join partner	-0.10	0.03	-0.2	-0.09	**0.3*****	**0.05****
	[0.1]	[0.08]	[0.2]	[0.06]	**[0.1]**	**[0.03]**
export back home	**-0.2***	**0.1****	**-0.4****	**-0.2*****	0.1	0.06
	[0.1]	[0.06]	[0.2]	[0.06]	[0.1]	[0.06]
TA benefits	0.1	-0.04	0.08	0.006	0.2	0.03
	[0.1]	[0.06]	[0.2]	[0.05]	[0.2]	[0.03]
Obs	2619	2619	2616	2612	2599	2604
R^2	0.88	0.22		0.22		0.041
$Pseudo - R^2$			0.13		0.096	
$Log - likelihood$			-1514.7		-1039.0	

Notes: OLS estimations with country and industry dummies in columns 1, 2, 4, and 6. Probit estimations with country and industry dummies in columns 3 and 5. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. All non-dummy dependent variables are also in logs except for those which represent non-monetary shares. The coefficient estimates in columns 3 and 5 represent marginal effects. The control variables of Table 4 are included in regressions but are not disclosed. For the description of the disclosed and undisclosed variables, see Table 17.

Table 6: Employment (total, permanent, temporary, part-time) and foreign ownership (firing cost)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var:	total employment	permanent employment (share)	temporary employment (dummy)	temporary employment (share)	part-time employment (dummy)	part-time employment (share)
foreign	-0.2***	0.09***	-0.2***	-0.09***	-0.010	-0.002
	[0.05]	[0.02]	[0.05]	[0.02]	[0.04]	[0.008]
foreign * firing cost	**0.002*** **	**-0.0010*** **	**0.001*** **	**0.0008*** **	0.0002	**0.0001***
	[0.0005]	**[0.0003]**	**[0.0005]**	**[0.0002]**	[0.0004]	**[0.00007]**
Obs	2517	2517	2514	2510	2512	2502
R^2	0.88	0.23		0.23		0.041
$Pseudo - R^2$			0.13		0.092	
$Log - likelihood$			-1450.3		-1008.8	

Notes: OLS estimations with country and industry dummies in columns 1, 2, 4, and 6. Probit estimations with country and industry dummies in columns 3 and 5. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. All non-dummy dependent variables are also in logs except for those which represent non-monetary shares. The coefficient estimates in columns 3 and 5 represent marginal effects. The control variables of Table 4 are included in regressions but are not disclosed. For the description of the disclosed and undisclosed variables, see Table 17.

Table 7: Permanent full-time employment and foreign ownership

	(1)	(2)	(3)
Dep. var:	permanent full-time workers (share)		
	production	non-production	managerial
foreign	**0.03****	**-0.03****	-0.01
	[0.01]	**[0.01]**	[0.01]
sales	0.02***	-0.02***	-0.03***
	[0.004]	[0.004]	[0.003]
productivity	-0.03***	0.03***	0.04***
	[0.005]	[0.005]	[0.005]
skill intensity	-0.008***	-0.001***	
	[0.0003]	[0.0003]	
wage	-0.01***	0.01***	0.01***
	[0.004]	[0.003]	[0.003]
training	-0.02***	0.02**	0.02***
	[0.007]	[0.007]	[0.006]
capital intensity	-0.001	0.002	-0.002
	[0.003]	[0.003]	[0.002]
input intensity	-0.002	0.002	0.0003
	[0.003]	[0.003]	[0.003]
firm age	-0.0007***	0.0006**	0.0002
	[0.0002]	[0.0002]	[0.0002]
affiliated parties	-0.01**	0.01*	0.005
	[0.006]	[0.006]	[0.006]
local backward link	0.02	-0.02	-0.005
	[0.01]	[0.01]	[0.010]
foreign backward link	-0.03***	0.02**	0.002
	[0.01]	[0.01]	[0.010]
local forward link	0.01	-0.01	-0.002
	[0.01]	[0.01]	[0.009]
export status	0.005	-0.01	-0.003
	[0.010]	[0.009]	[0.008]
import competition	-0.02	0.01	0.01
	[0.01]	[0.01]	[0.010]
local competition	-0.01	0.01	0.004
	[0.01]	[0.01]	[0.008]
Obs	2517	2517	2517
R^2	0.59	0.37	0.16

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are not in logs. Skill intensity is dropped from the regression in column 3. For the description of the variables, see Table 17.

Table 8: Permanent full-time employment and foreign ownership (firing cost)

	(1)	(2)	(3)
Dep. var:	permanent full-time workers (share)		
	production	non-production	managerial
foreign	0.05**	-0.04*	-0.005
	[0.02]	[0.02]	[0.02]
foreign * firing cost	-0.0003	0.0001	-0.0001
	[0.0002]	[0.0002]	[0.0001]
Obs	2517	2517	2517
R^2	0.59	0.37	0.16

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are not in logs. Skill intensity is dropped from the regression in column 3. The control variables of Table 7 are included in regressions but are not disclosed. For the description of the disclosed and undisclosed variables, see Table 17.

Table 9: Permanent full-time female employment and foreign ownership

	(1)	(2)	(3)	(4)
Dep. var:	permanent full-time female workers (share)			
	all	production	non-production	managerial
foreign	-0.02	-0.01	-0.009	-0.03
	[0.02]	[0.02]	[0.02]	[0.02]
sales	-0.003	0.010**	-0.02***	0.007
	[0.004]	[0.005]	[0.006]	[0.005]
productivity	-0.002	-0.02***	0.02**	-0.006
	[0.006]	[0.007]	[0.009]	[0.007]
skill intensity	0.0003	0.0005	0.0005	0.0001
	[0.0003]	[0.0004]	[0.0005]	[0.0003]
wage	0.003	0.003	0.004	-0.0006
	[0.004]	[0.005]	[0.007]	[0.005]
training	0.02***	0.02**	0.02	0.004
	[0.008]	[0.009]	[0.01]	[0.01]
capital intensity	-0.004	-0.003	0.0008	-0.002
	[0.003]	[0.003]	[0.005]	[0.004]
input intensity	-0.002	-0.004	-0.003	-0.002
	[0.003]	[0.004]	[0.005]	[0.004]
firm age	-0.0006***	-0.0005*	-0.0007*	-0.00010
	[0.0002]	[0.0003]	[0.0004]	[0.0003]
affiliated parties	0.01**	0.005	0.001	0.01*
	[0.005]	[0.007]	[0.009]	[0.007]
local backward link	-0.003	-0.02	0.01	0.01
	[0.01]	[0.02]	[0.02]	[0.02]
foreign backward link	0.02**	0.02*	0.008	0.009
	[0.01]	[0.01]	[0.02]	[0.02]
local forward link	-0.02	-0.009	-0.01	0.006
	[0.01]	[0.01]	[0.02]	[0.01]
export status	0.03***	0.04***	-0.007	0.008
	[0.01]	[0.01]	[0.02]	[0.01]
import competition	-0.01	-0.01	-0.05**	0.009
	[0.01]	[0.02]	[0.02]	[0.02]
local competition	-0.02**	-0.02*	-0.03	-0.009
	[0.01]	[0.01]	[0.02]	[0.01]
Obs	2502	2310	2287	2349
R^2	0.29	0.29	0.089	0.070

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are not in logs. For the description of the variables, see Table 17.

Table 10: Permanent full-time foreign employment and foreign ownership

	(1)	(2)	(3)	(4)
Dep. var:	permanent full-time foreign workers (share)			
	all	production	non-production	managerial
foreign	**0.07*** **	**0.03*** **	**0.08*** **	**0.2*** **
	[0.009]	**[0.009]**	**[0.02]**	**[0.02]**
sales	-0.003**	0.001	0.004	-0.002
	[0.001]	[0.001]	[0.003]	[0.004]
productivity	0.005*	-0.001	0.0003	0.01*
	[0.003]	[0.002]	[0.004]	[0.006]
skill intensity	0.0002	-0.000003	-0.0002	-0.002***
	[0.0001]	[0.00010]	[0.0002]	[0.0003]
wage	0.001	-0.0001	0.002	-0.000002
	[0.001]	[0.002]	[0.003]	[0.004]
training	-0.003	-0.004	-0.008	-0.006
	[0.003]	[0.003]	[0.005]	[0.009]
capital intensity	0.0008	0.00006	0.001	0.007**
	[0.001]	[0.001]	[0.002]	[0.003]
input intensity	0.002	0.002*	-0.001	0.003
	[0.001]	[0.001]	[0.003]	[0.004]
firm age	-0.0003***	-0.0001	-0.0005***	-0.0007**
	[0.00009]	[0.0001]	[0.0001]	[0.0003]
affiliated parties	-0.002	-0.005*	-0.006	-0.02**
	[0.004]	[0.003]	[0.004]	[0.007]
local backward link	-0.009	-0.004	-0.002	-0.02
	[0.006]	[0.006]	[0.007]	[0.01]
foreign backward link	0.01***	0.007**	0.02***	0.03***
	[0.003]	[0.003]	[0.005]	[0.009]
local forward link	0.01***	0.001	0.01**	0.03***
	[0.004]	[0.005]	[0.007]	[0.01]
export status	0.006	0.0003	0.01	0.02
	[0.004]	[0.004]	[0.008]	[0.01]
import competition	-0.01**	-0.009*	-0.002	-0.01
	[0.005]	[0.005]	[0.010]	[0.01]
local competition	-0.01***	-0.007	-0.006	-0.03**
	[0.005]	[0.005]	[0.008]	[0.01]
Obs	2367	2316	2296	2239
R^2	0.17	0.083	0.097	0.25

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are not in logs. For the description of the variables, see Table 17.

Table 11: Unpaid workers, production shifts and foreign ownership

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var:	unpaid work (dummy)	unpaid work (share)	one production shift	two production shifts	three production shifts	production shift intensity
foreign	**-0.06*** **	-0.006	-0.03	0.05	-0.002	**0.010***
	[0.02]	[0.009]	[0.04]	[0.04]	[0.02]	**[0.005]**
sales	-0.003	-0.007**	-0.1***	0.05***	0.06***	-0.04***
	[0.006]	[0.004]	[0.008]	[0.009]	[0.006]	[0.002]
productivity	0.001	0.008**	0.09***	-0.05***	-0.05***	0.04***
	[0.008]	[0.004]	[0.01]	[0.02]	[0.009]	[0.003]
skill intensity	-0.0004	0.0006	-0.0003	0.0002	0.0002	0.0004
	[0.0004]	[0.0007]	[0.0007]	[0.0008]	[0.0005]	[0.0003]
wage	-0.007	-0.004	0.002	-0.0009	-0.0009	-0.0006
	[0.006]	[0.003]	[0.009]	[0.010]	[0.007]	[0.001]
training	0.03**	0.0005	-0.03*	0.01	0.02*	0.003
	[0.01]	[0.004]	[0.02]	[0.02]	[0.01]	[0.003]
capital intensity	0.002	-0.002	-0.002	-0.005	0.007	0.001
	[0.005]	[0.001]	[0.007]	[0.007]	[0.005]	[0.001]
input intensity	0.0008	-0.0004	-0.02**	0.008	0.01*	0.0003
	[0.005]	[0.0010]	[0.009]	[0.009]	[0.006]	[0.001]
firm age	-0.00004	0.000006	0.0005	-0.0004	-0.0002	0.0002*
	[0.0004]	[0.00009]	[0.0006]	[0.0007]	[0.0004]	[0.00009]
affiliated parties	0.004	0.004	0.01	0.003	-0.02*	0.001
	[0.009]	[0.003]	[0.01]	[0.02]	[0.009]	[0.002]
local backward link	-0.003	0.005	-0.005	0.05	-0.04**	0.004
	[0.02]	[0.004]	[0.03]	[0.04]	[0.02]	[0.004]
foreign backward link	-0.009	-0.006	0.05*	-0.008	-0.04**	-0.01**
	[0.02]	[0.01]	[0.03]	[0.03]	[0.02]	[0.005]
local forward link	-0.01	0.002	-0.005	0.008	0.002	0.001
	[0.02]	[0.004]	[0.03]	[0.03]	[0.02]	[0.005]
export status	0.008	0.010	-0.02	0.02	0.005	0.003
	[0.02]	[0.006]	[0.02]	[0.03]	[0.02]	[0.004]
import competition	0.01	-0.003	0.08***	-0.1***	0.04*	-0.003
	[0.02]	[0.004]	[0.03]	[0.03]	[0.02]	[0.005]
local competition	0.010	0.006	0.07**	-0.1***	0.04**	-0.003
	[0.02]	[0.004]	[0.03]	[0.03]	[0.02]	[0.004]
Obs	2354	2446	1959	1851	1915	1963
R^2		0.021				0.53
$Pseudo - R^2$	0.094		0.27	0.12	0.29	
$Log - likelihood$	-678.8		-955.2	-978.3	-473.3	

Notes: OLS estimations with country and industry dummies in columns 2 and 6. Probit estimations with country and industry dummies in columns 1, 3, 4, and 5. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. All non-dummy dependent variables are also in logs except for those which represent non-monetary shares. The coefficient estimates in columns 1, 3, 4, and 5 represent marginal effects. For the description of the variables, see Table 17.

Table 12: Provision of training and foreign ownership

	(1)	(2)	(3)	(4)
Dep. var:		training intensity		
	average	production workers	non-production workers	managerial workers
foreign	**0.529***	0.222	0.536	**0.568***
	[0.273]	[0.349]	[0.371]	**[0.335]**
sales	-0.314***	-0.447***	-0.277***	-0.192***
	[0.055]	[0.073]	[0.075]	[0.068]
productivity	0.467***	0.715***	0.300***	0.275***
	[0.083]	[0.115]	[0.112]	[0.093]
skill intensity	0.008**	0.020***	0.004	-0.024***
	[0.004]	[0.006]	[0.006]	[0.004]
wage	0.118*	0.089	0.095	0.172**
	[0.062]	[0.071]	[0.081]	[0.070]
capital intensity	0.214***	0.166***	0.190***	0.163***
	[0.042]	[0.053]	[0.060]	[0.053]
input intensity	-0.005	-0.038	0.048	-0.001
	[0.046]	[0.074]	[0.057]	[0.051]
firm age	0.002	0.010*	-0.004	-0.003
	[0.004]	[0.006]	[0.005]	[0.005]
affiliated parties	-0.028	0.098	0.088	-0.021
	[0.116]	[0.131]	[0.137]	[0.138]
local backward link	0.299	0.109	0.152	0.038
	[0.216]	[0.384]	[0.288]	[0.290]
foreign backward link	0.190	-0.213	0.125	0.182
	[0.188]	[0.220]	[0.291]	[0.203]
local forward link	0.255	-0.038	0.317	0.439
	[0.207]	[0.318]	[0.276]	[0.271]
export status	0.078	-0.011	-0.041	-0.247
	[0.162]	[0.214]	[0.249]	[0.214]
import competition	-0.066	0.154	-0.352	0.023
	[0.194]	[0.251]	[0.308]	[0.257]
local competition	-0.016	0.093	-0.178	-0.105
	[0.154]	[0.218]	[0.232]	[0.181]
Obs	854	564	455	589
R^2	0.64	0.65	0.59	0.63

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are in logs. For the description of the variables, see Table 17.

Table 13: Average wage and foreign ownership

Dep. var:	(1) average wage	(2) wage for production workers	(3) wage for non-production workers	(4) wage for managerial workers
foreign	**0.319*** **	0.113	**0.254*** **	**0.320*** **
	[0.081]	[0.074]	**[0.073]**	**[0.078]**
sales	-0.036	0.040***	0.107***	0.104***
	[0.022]	[0.015]	[0.016]	[0.016]
productivity	0.317***	0.039	0.010	0.019
	[0.048]	[0.024]	[0.029]	[0.027]
skill intensity	0.005***	0.003*	0.001	-0.001
	[0.002]	[0.002]	[0.001]	[0.001]
training	0.088**	0.044	0.115***	0.109***
	[0.041]	[0.035]	[0.035]	[0.034]
capital intensity	0.077***	0.009	-0.012	0.007
	[0.019]	[0.011]	[0.013]	[0.013]
input intensity	0.064**	0.007	-0.003	0.017
	[0.029]	[0.015]	[0.018]	[0.017]
firm age	0.005***	0.003***	0.003**	0.003***
	[0.001]	[0.001]	[0.001]	[0.001]
affiliated parties	-0.015	0.051*	-0.015	0.020
	[0.034]	[0.029]	[0.025]	[0.025]
local backward link	0.102*	0.076	-0.075	-0.000
	[0.056]	[0.049]	[0.051]	[0.049]
foreign backward link	0.112*	0.068	0.095**	0.044
	[0.064]	[0.046]	[0.047]	[0.045]
local forward link	0.037	0.020	0.069	0.045
	[0.054]	[0.051]	[0.054]	[0.050]
export status	0.034	0.105**	0.116**	0.021
	[0.055]	[0.049]	[0.049]	[0.048]
import competition	-0.044	-0.050	-0.023	-0.082
	[0.067]	[0.053]	[0.056]	[0.055]
local competition	-0.096*	0.050	-0.041	-0.034
	[0.054]	[0.049]	[0.050]	[0.048]
Obs	2517	2387	2364	2442
R^2	0.83	0.89	0.89	0.90

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are in logs. For the description of the variables, see Table 17.

Table 14: Average wage and foreign ownership (GFDI, MOFA, motive to invest)

Dep. var:	(1) average wage	(2) wage for production workers	(3) wage for non-production workers	(4) wage for managerial workers
greenfield FDI	-0.013	-0.089	-0.096	**-0.258****
	[0.138]	[0.092]	[0.127]	**[0.124]**
MOFA	0.120	0.019	0.096	0.107
	[0.250]	[0.130]	[0.151]	[0.145]
market access	0.185	0.168	0.259	**0.476*****
	[0.242]	[0.137]	[0.164]	**[0.152]**
low cost	0.296	0.479	0.175	0.279
	[0.489]	[0.335]	[0.277]	[0.243]
input access	-0.142	0.249	-0.047	0.380
	[0.309]	[0.178]	[0.204]	[0.241]
join partner	0.679	**-0.305***	0.031	0.245
	[0.596]	**[0.164]**	[0.304]	[0.327]
export back home	0.105	0.187	**0.463***	**0.615****
	[0.612]	[0.207]	**[0.263]**	**[0.273]**
TA benefits	**0.832***	-0.154	0.078	0.174
	[0.500]	[0.176]	[0.306]	[0.301]
Obs	2506	2378	2356	2434
R^2	0.83	0.90	0.89	0.90

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are in logs. The control variables of Table 13 are included in regressions but are not disclosed. For the description of the disclosed and undisclosed variables, see Table 17.

Table 15: Average wage and foreign ownership (governance quality)

Dep. var:	(1) average wage	(2) wage for production workers	(3) wage for non-production workers	(4) wage for managerial workers
foreign	1.542***	0.661*	0.724**	1.301***
	[0.468]	[0.377]	[0.348]	[0.412]
foreign * governance	**-0.021*****	-0.009	-0.008	**-0.017****
	[0.008]	[0.006]	[0.006]	**[0.007]**
Obs	2517	2387	2364	2442
R^2	0.83	0.90	0.89	0.90

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are in logs. The control variables of Table 13 are included in regressions but are not disclosed. For the description of the disclosed and undisclosed variables, see Table 17.

Table 16: Average wage and foreign ownership (social inclusion)

Dep. var:	(1) average wage	(2) wage for production workers	(3) wage for non-production workers	(4) wage for managerial workers
foreign	2.366***	1.203**	0.665	2.468***
	[0.842]	[0.574]	[0.533]	[0.638]
foreign * social inclusion	**-0.571****	**-0.304***	-0.115	**-0.599*****
	[0.232]	**[0.156]**	[0.145]	**[0.172]**
Obs	2517	2387	2364	2442
R^2	0.83	0.90	0.89	0.90

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are in logs. The control variables of Table 13 are included in regressions but are not disclosed. For the description of the disclosed and undisclosed variables, see Table 17.

Table 17: Description of variables

Variable	Description
foreign	the firm is foreign-owned (dummy)
parent HI	the parent of the foreign-owned firm is located in a high-income country (dummy)
parent LMI	the parent of the foreign-owned firm is located in a low/middle-income country (dummy)
parent LMI (excl. China/India)	the parent of the foreign-owned firm is located in a low/middle-income country (China and India excluded from LMI group) (dummy)
parent LMI (excl. China)	the parent of the foreign-owned firm is located in a low/middle-income country (China excluded from LMI group) (dummy)
greenfield FDI	the foreign-owned firm has been created as greenfield FDI (dummy)
MOFA	the firm is owned by a foreign investor by at least 50% (dummy)
market access	principal motive of foreign investor to invest in the host country: access new markets (dummy)
low cost	principal motive of foreign investor to invest in the host country: lower production cost (dummy)
input access	principal motive of foreign investor to invest in the host country: access to natural resources/inputs (dummy)
join partner	principal motive of foreign investor to invest in the host country: collaboration with a specific partner (dummy)
export back home	principal motive of foreign investor to invest in the host country: export back to home country (dummy)
TA benefits	principal motive of foreign investor to invest in the host country: benefits from a trade agreement (dummy)
sales	total sales
productivity	labour productivity (total sales to total permanent full-time employment)
skill intensity	share of the number of technical, supervisory and managerial employees in total number of employees
(average) wage	ratio of total wage bill to total number of permanent full-time employees
training	the firm provides formal internal/external training to its employees (dummy)
capital intensity	ratio of capital stock to total number of employees
input intensity	ratio of value of inputs to total number of employees
firm age	years since the foundation of the firm
affiliated parties	total number of affiliated establishments of the firm
local backward link	the firm has local backward linkages (dummy)
foreign backward link	the firm has international backward linkages (dummy)
local forward link	the firm has local forward linkages (dummy)
export status	the firm has exports (dummy)
import competition	main source of competition faced by the firm: imports (dummy)
local competition	main source of competition faced by the firm: locally-owned firms (dummy)
total employment	total number of employees (permanent full-time, temporary, part-time)
permanent employment (share)	share of permanent full-time employees in total number of employees
temporary employment (dummy)	the firm has temporary employees (dummy)
temporary employment (share)	share of temporary employees in total number of employees
part-time employment (dummy)	the firm has part-time employees (dummy)
part-time employment (share)	share of part-time employees in total number of employees
permanent full-time production workers (share)	share of permanent full-time production/manual workers in total number of permanent full-time workers
permanent full-time non-production workers (share)	share of permanent full-time clerical/administrative and sales workers in total number of permanent full-time workers
permanent full-time managerial workers (share)	share of permanent full-time technical, managerial, and supervisory workers in total number of permanent full-time workers
permanent full-time female workers (share)	share of permanent full-time female workers in total number of permanent full-time workers
permanent full-time female production workers (share)	share of permanent full-time female production/manual workers in total number of permanent full-time production/manual workers
permanent full-time female non-production workers (share)	share of permanent full-time female clerical/administrative and sales workers in total number of permanent full-time clerical/administrative and sales workers
permanent full-time female managerial workers (share)	share of permanent full-time female technical, managerial, and supervisory workers in total number of permanent full-time technical, managerial, and supervisory workers
permanent full-time foreign workers (share)	share of permanent full-time foreign workers in total number of permanent full-time workers
permanent full-time foreign production workers (share)	share of permanent full-time foreign production/manual workers in total number of permanent full-time production/manual workers
permanent full-time foreign non-production workers (share)	share of permanent full-time foreign clerical/administrative and sales workers in total number of permanent full-time clerical/administrative and sales workers
permanent full-time foreign managerial workers (share)	share of permanent full-time foreign technical, managerial, and supervisory workers in total number of permanent full-time technical, managerial, and supervisory workers
unpaid work (dummy)	the firm has unpaid workers (dummy)
unpaid work (share)	ratio of total number of unpaid workers to total employment
one production shift	the firm has one production shift per day (dummy)
two production shifts	the firm has two production shifts per day (dummy)
three production shifts	the firm has three production shifts per day (dummy)
production shift intensity	ratio of number of production shifts per day to total employment
average training intensity	ratio of total expenditure in training of workers to total number of permanent full-time workers
training intensity of production workers	ratio of total expenditure in training of production workers to total number of permanent full-time production/manual workers
training intensity of non-production workers	ratio of total expenditure in training of clerical/administrative and sales workers to total number of permanent full-time clerical/administrative and sales workers
training intensity of managerial workers	ratio of total expenditure in training of technical, managerial, and supervisory workers to total number of permanent full-time technical, managerial, and supervisory workers
wage for production workers	monthly wage of production/manual workers
wage for non-production workers	monthly wage of clerical/administrative and sales workers
wage for managerial workers	monthly wage of technical, managerial, and supervisory workers
firing cost	the number of weeks a worker is paid after she is laid off (source: World Bank World Development Indicators)
governance	Ibrahim Index of African Governance (0–100) (source: Mo Ibrahim Foundation)
rule of law	rule of law index (0–100) (source: Mo Ibrahim Foundation)
social inclusion	social inclusion index (1–6) (source: World Bank World Development Indicators)
social protection	social protection index (1–6) (source: World Bank World Development Indicators)

Notes: Authors' notation.

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Supplementary Appendix

A Appendix: Additional descriptive statistics

Table A1: Industries of domestic firms

ISIC Rev. 1.1	Name	# of firms	% of firms
1	Agriculture, hunting and related service activities	100	2.4
2	Forestry, logging and related service activities	6	0.1
5	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	2	0.1
10	Mining of coal and lignite; extraction of peat	8	0.2
11	Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction excluding surveying	6	0.1
12	Mining of uranium and thorium ores	1	0.1
13	Mining of metal ores	2	0.1
14	Other mining and quarrying	18	0.4
15	Manufacture of food products and beverages	466	11.4
16	Manufacture of tobacco products	4	0.1
17	Manufacture of textiles	74	1.8
18	Manufacture of wearing apparel; dressing and dyeing of fur	111	2.7
19	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear	66	1.6
20	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	102	2.5
21	Manufacture of paper and paper products	61	1.5
22	Publishing, printing and reproduction of recorded media	208	5.1
23	Manufacture of coke, refined petroleum products and nuclear fuel	4	0.1
24	Manufacture of chemicals and chemical products	153	3.7
25	Manufacture of rubber and plastics products	140	3.4
26	Manufacture of other non-metallic mineral products	109	2.7
27	Manufacture of basic metals	37	0.9
28	Manufacture of fabricated metal products, except machinery and equipment	208	5.1
29	Manufacture of machinery and equipment n.e.c.	57	1.4
31	Manufacture of electrical machinery and apparatus n.e.c.	24	0.6
32	Manufacture of radio, television and communication equipment and apparatus	1	0.1
33	Manufacture of medical, precision and optical instruments, watches and clocks	9	0.2
34	Manufacture of motor vehicles, trailers and semi-trailers	17	0.4
35	Manufacture of other transport equipment	9	0.2
36	Manufacture of furniture; manufacturing n.e.c.	126	3.1
37	Recycling	4	0.1
38	Other manufacturing	10	0.2
40	Electricity, gas, steam and hot water supply	27	0.7
41	Collection, purification and distribution of water	1	0.1
45	Construction	276	6.7
50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel	158	3.9
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	231	5.6
52	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	259	6.3
55	Hotels and restaurants	223	5.4
60	Land transport; transport via pipelines	115	2.8
61	Water transport	9	0.2
62	Air transport	8	0.2
63	Supporting and auxiliary transport activities; activities of travel agencies	66	1.6
64	Post and telecommunications	39	1
65	Financial intermediation, except insurance and pension funding	91	2.2
66	Insurance and pension funding, except compulsory social security	53	1.3
67	Activities auxiliary to financial intermediation	17	0.4
70	Real estate activities	51	1.2
71	Renting of machinery and equipment without operator and of personal and household goods	11	0.3
72	Computer and related activities	25	0.6
73	Research and development	1	0.1
74	Other business activities	202	4.9
75	Public administration and defence; compulsory social security	5	0.1
80	Education	19	0.5
85	Health and social work	11	0.3
90	Sewage and refuse disposal, sanitation and similar activities	32	0.8
91	Activities of membership organizations n.e.c.	1	0.1
92	Recreational, cultural and sporting activities	13	0.3
93	Other service activities	6	0.1
95	Private households with employed persons	1	0.1
	Total	4094	100

Notes: Authors' calculations.
Source: UNIDO Africa Investor Survey 2010.

Table A2: Industries of foreign-owned firms

ISIC Rev. 1.1	Name	# of firms	% of firms
1	Agriculture, hunting and related service activities	101	4.2
2	Forestry, logging and related service activities	5	0.2
5	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	8	0.3
10	Mining of coal and lignite; extraction of peat	11	0.5
11	Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction excluding surveying	9	0.4
12	Mining of uranium and thorium ores	1	0.1
13	Mining of metal ores	15	0.6
14	Other mining and quarrying	16	0.7
15	Manufacture of food products and beverages	219	9.1
16	Manufacture of tobacco products	16	0.7
17	Manufacture of textiles	44	1.8
18	Manufacture of wearing apparel; dressing and dyeing of fur	82	3.4
19	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear	28	1.2
20	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	33	1.4
21	Manufacture of paper and paper products	38	1.6
22	Publishing, printing and reproduction of recorded media	41	1.7
23	Manufacture of coke, refined petroleum products and nuclear fuel	8	0.3
24	Manufacture of chemicals and chemical products	135	5.6
25	Manufacture of rubber and plastics products	143	6
26	Manufacture of other non-metallic mineral products	53	2.2
27	Manufacture of basic metals	42	1.7
28	Manufacture of fabricated metal products, except machinery and equipment	112	4.7
29	Manufacture of machinery and equipment n.e.c.	32	1.3
30	Manufacture of office, accounting and computing machinery	3	0.1
31	Manufacture of electrical machinery and apparatus n.e.c.	24	1
32	Manufacture of radio, television and communication equipment and apparatus	8	0.3
33	Manufacture of medical, precision and optical instruments, watches and clocks	8	0.3
34	Manufacture of motor vehicles, trailers and semi-trailers	14	0.6
35	Manufacture of other transport equipment	5	0.2
36	Manufacture of furniture; manufacturing n.e.c.	52	2.2
37	Recycling	6	0.2
38	Other manufacturing	7	0.3
40	Electricity, gas, steam and hot water supply	15	0.6
41	Collection, purification and distribution of water	1	0.1
45	Construction	129	5.4
50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel	74	3.1
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	168	7
52	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	125	5.2
55	Hotels and restaurants	98	4.1
60	Land transport; transport via pipelines	44	1.8
61	Water transport	15	0.6
62	Air transport	15	0.6
63	Supporting and auxiliary transport activities; activities of travel agencies	29	1.2
64	Post and telecommunications	51	2.1
65	Financial intermediation, except insurance and pension funding	96	4
66	Insurance and pension funding, except compulsory social security	39	1.6
67	Activities auxiliary to financial intermediation	6	0.2
70	Real estate activities	25	1
71	Renting of machinery and equipment without operator and of personal and household goods	7	0.3
72	Computer and related activities	16	0.7
73	Research and development	1	0.1
74	Other business activities	107	4.5
80	Education	10	0.4
85	Health and social work	2	0.1
90	Sewage and refuse disposal, sanitation and similar activities	3	0.1
92	Recreational, cultural and sporting activities	6	0.2
93	Other service activities	1	0.1
	Total	2402	100

Notes: Authors' calculations.
Source: UNIDO Africa Investor Survey 2010.

B Appendix: Additional results tables

Table B1: Employment (total, permanent, temporary, part-time) and parent location of foreign-owned firms

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var:	total employment	permanent employment (share)	temporary employment (dummy)	temporary employment (share)	part-time employment (dummy)	part-time employment (share)
parent HI	-0.05	0.01	**-0.09***	-0.01	-0.02	0.004
	[0.05]	[0.02]	**[0.04]**	[0.02]	[0.04]	[0.007]
parent LMI	**-0.08***	**0.04***	-0.05	**-0.04****	0.05	0.008
	[0.04]	**[0.02]**	[0.05]	**[0.02]**	[0.04]	[0.008]
sales	0.9***	0.04***	0.006	-0.04***	0.02**	-0.003
	[0.01]	[0.005]	[0.009]	[0.005]	[0.007]	[0.002]
productivity	-0.9***	-0.05***	0.005	0.05***	-0.03***	0.002
	[0.02]	[0.007]	[0.01]	[0.007]	[0.010]	[0.003]
skill intensity	0.003***	-0.001***	0.001*	0.001***	0.0007	0.00003
	[0.0008]	[0.0004]	[0.0006]	[0.0004]	[0.0005]	[0.0001]
wage	0.04***	-0.004	0.0007	0.007	-0.010	-0.002
	[0.01]	[0.005]	[0.009]	[0.005]	[0.007]	[0.002]
training	-0.02	0.01	0.0008	-0.02**	0.02	0.004
	[0.02]	[0.010]	[0.02]	[0.009]	[0.02]	[0.004]
capital intensity	0.02***	-0.008**	0.01**	0.008**	0.01***	0.0005
	[0.008]	[0.004]	[0.007]	[0.003]	[0.005]	[0.001]
input intensity	0.009	-0.005	-0.0005	0.005	-0.007	0.0009
	[0.009]	[0.004]	[0.008]	[0.003]	[0.005]	[0.001]
firm age	0.0002	0.00006	0.0002	-0.00007	0.0003	0.00004
	[0.0006]	[0.0003]	[0.0006]	[0.0003]	[0.0005]	[0.0001]
affiliated parties	-0.01	-0.002	0.03**	0.004	0.01	-0.002
	[0.01]	[0.007]	[0.01]	[0.006]	[0.01]	[0.002]
local backward link	0.03	-0.02*	0.09***	0.03**	-0.004	-0.01
	[0.03]	[0.01]	[0.03]	[0.01]	[0.02]	[0.006]
foreign backward link	0.02	-0.02	0.08***	0.02	0.02	-0.005
	[0.03]	[0.02]	[0.03]	[0.01]	[0.02]	[0.006]
local forward link	0.04*	-0.02*	0.02	0.007	0.06***	0.02***
	[0.02]	[0.01]	[0.02]	[0.01]	[0.02]	[0.004]
export status	0.1***	-0.06***	0.06***	0.06***	0.006	-0.003
	[0.03]	[0.01]	[0.02]	[0.01]	[0.02]	[0.004]
import competition	-0.008	0.008	0.03	-0.01	0.004	0.005
	[0.03]	[0.02]	[0.03]	[0.01]	[0.02]	[0.005]
local competition	0.006	-0.008	0.03	0.002	0.004	0.003
	[0.03]	[0.01]	[0.03]	[0.01]	[0.02]	[0.004]
Obs	2513	2513	2510	2506	2508	2498
R^2	0.88	0.23		0.23		0.040
$Pseudo - R^2$			0.13		0.092	
$Log - likelihood$			-1451.5		-1006.3	
F-test H_0: $\beta_{parentHI} = \beta_{parentLMI}$ (P-value)	0.65	0.25	0.51	0.21	0.100	0.67

Notes: OLS estimations with country and industry dummies in columns 1, 2, 4, and 6. Probit estimations with country and industry dummies in columns 3 and 5. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. All non-dummy dependent variables are also in logs except for those which represent non-monetary shares. The coefficient estimates in columns 3 and 5 represent marginal effects. For the description of the variables, see Table B13.

Table B2: Employment (total, permanent, temporary, part-time) and parent location of foreign-owned firms (China excluded from LMI group)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var:	total employment	permanent employment (share)	temporary employment (dummy)	temporary employment (share)	part-time employment (dummy)	part-time employment (share)
parent HI	-0.06	0.01	**-0.09***	-0.01	-0.02	0.004
	[0.05]	[0.02]	**[0.04]**	[0.02]	[0.04]	[0.007]
parent LMI (excl. China)	**-0.09****	**0.05****	-0.05	**-0.05****	0.05	0.007
	[0.04]	**[0.02]**	[0.05]	**[0.02]**	[0.04]	[0.008]
sales	0.9***	0.04***	0.006	-0.04***	0.02**	-0.003
	[0.01]	[0.005]	[0.009]	[0.005]	[0.007]	[0.002]
productivity	-0.9***	-0.05***	0.005	0.05***	-0.03***	0.002
	[0.02]	[0.007]	[0.01]	[0.007]	[0.010]	[0.003]
skill intensity	0.003***	-0.001***	0.001*	0.001***	0.0007	0.00003
	[0.0008]	[0.0004]	[0.0006]	[0.0004]	[0.0005]	[0.0001]
wage	0.04***	-0.005	0.0009	0.007	-0.010	-0.002
	[0.01]	[0.005]	[0.009]	[0.005]	[0.007]	[0.002]
training	-0.02	0.01	0.001	-0.02*	0.02	0.004
	[0.02]	[0.010]	[0.02]	[0.009]	[0.02]	[0.004]
capital intensity	0.02***	-0.008**	0.01**	0.008**	0.01***	0.0006
	[0.008]	[0.004]	[0.007]	[0.003]	[0.005]	[0.001]
input intensity	0.009	-0.005	-0.0005	0.005	-0.007	0.0009
	[0.009]	[0.004]	[0.008]	[0.003]	[0.005]	[0.001]
firm age	0.0002	0.00006	0.0002	-0.00007	0.0003	0.00003
	[0.0006]	[0.0003]	[0.0006]	[0.0003]	[0.0005]	[0.0001]
affiliated parties	-0.01	-0.003	0.03**	0.004	0.01	-0.002
	[0.01]	[0.007]	[0.01]	[0.006]	[0.01]	[0.002]
local backward link	0.03	-0.02*	0.09***	0.03**	-0.005	-0.01
	[0.03]	[0.01]	[0.03]	[0.01]	[0.02]	[0.006]
foreign backward link	0.02	-0.02	0.08***	0.02	0.02	-0.005
	[0.03]	[0.02]	[0.03]	[0.01]	[0.02]	[0.006]
local forward link	0.04*	-0.02*	0.02	0.007	0.06***	0.02***
	[0.02]	[0.01]	[0.02]	[0.01]	[0.02]	[0.004]
export status	0.1***	-0.06***	0.06***	0.06***	0.006	-0.004
	[0.03]	[0.01]	[0.02]	[0.01]	[0.02]	[0.004]
import competition	-0.009	0.008	0.03	-0.01	0.005	0.005
	[0.03]	[0.02]	[0.03]	[0.01]	[0.02]	[0.005]
local competition	0.005	-0.008	0.03	0.002	0.004	0.003
	[0.03]	[0.01]	[0.03]	[0.01]	[0.02]	[0.004]
Obs	2513	2513	2510	2506	2508	2498
R^2	0.88	0.23		0.23		0.040
$Pseudo - R^2$			0.13		0.092	
$Log - likelihood$			-1451.5		-1006.4	
F-test H_0: $\beta_{parentHI} = \beta_{parentLMI}$ (P-value)	0.53	0.17	0.53	0.14	0.10	0.70

Notes: OLS estimations with country and industry dummies in columns 1, 2, 4, and 6. Probit estimations with country and industry dummies in columns 3 and 5. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. All non-dummy dependent variables are also in logs except for those which represent non-monetary shares. The coefficient estimates in columns 3 and 5 represent marginal effects. For the description of the variables, see Table B13.

Table B3: Employment (total, permanent, temporary, part-time) and parent location of foreign-owned firms (China and India excluded from LMI group)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var:	total employment	permanent employment (share)	temporary employment (dummy)	temporary employment (share)	part-time employment (dummy)	part-time employment (share)
parent HI	-0.05	0.01	**-0.08***	-0.01	-0.03	0.001
	[0.05]	[0.02]	**[0.04]**	[0.02]	[0.04]	[0.007]
parent LMI (excl. China/India)	**-0.1****	**0.06****	-0.06	**-0.05****	0.02	-0.003
	[0.04]	**[0.02]**	[0.06]	**[0.02]**	[0.05]	[0.005]
sales	0.9***	0.04***	0.006	-0.04***	0.02**	-0.003
	[0.01]	[0.005]	[0.009]	[0.005]	[0.007]	[0.002]
productivity	-0.9***	-0.05***	0.005	0.05***	-0.03***	0.001
	[0.02]	[0.007]	[0.01]	[0.007]	[0.010]	[0.003]
skill intensity	0.003***	-0.001***	0.001*	0.001***	0.0007	0.00003
	[0.0008]	[0.0004]	[0.0006]	[0.0004]	[0.0005]	[0.0001]
wage	0.04***	-0.005	0.0008	0.007	-0.009	-0.002
	[0.01]	[0.005]	[0.009]	[0.005]	[0.007]	[0.002]
training	-0.02	0.01	0.001	-0.02*	0.02	0.004
	[0.02]	[0.010]	[0.02]	[0.009]	[0.02]	[0.004]
capital intensity	0.02***	-0.008**	0.01**	0.008**	0.01***	0.0005
	[0.008]	[0.004]	[0.007]	[0.003]	[0.005]	[0.001]
input intensity	0.009	-0.005	-0.0004	0.005	-0.007	0.0009
	[0.009]	[0.004]	[0.008]	[0.003]	[0.005]	[0.001]
firm age	0.0003	0.00005	0.0002	-0.00006	0.0003	0.00002
	[0.0006]	[0.0003]	[0.0006]	[0.0003]	[0.0005]	[0.0001]
affiliated parties	-0.01	-0.002	0.03**	0.004	0.02	-0.001
	[0.01]	[0.007]	[0.01]	[0.006]	[0.01]	[0.002]
local backward link	0.03	-0.02*	0.09***	0.03**	-0.004	-0.01
	[0.03]	[0.01]	[0.03]	[0.01]	[0.02]	[0.006]
foreign backward link	0.02	-0.02	0.08***	0.02	0.02	-0.005
	[0.03]	[0.02]	[0.03]	[0.01]	[0.02]	[0.006]
local forward link	0.04*	-0.02*	0.02	0.008	0.06***	0.02***
	[0.02]	[0.01]	[0.02]	[0.01]	[0.02]	[0.004]
export status	0.1***	-0.06***	0.06***	0.06***	0.007	-0.003
	[0.03]	[0.01]	[0.02]	[0.01]	[0.02]	[0.004]
import competition	-0.008	0.008	0.03	-0.01	0.003	0.005
	[0.03]	[0.01]	[0.03]	[0.01]	[0.02]	[0.005]
local competition	0.007	-0.009	0.03	0.003	0.003	0.003
	[0.02]	[0.01]	[0.03]	[0.01]	[0.02]	[0.004]
Obs	2513	2513	2510	2506	2508	2498
R^2	0.88	0.23		0.23		0.040
$Pseudo - R^2$			0.13		0.092	
$Log - likelihood$			-1451.5		-1007.1	
F-test H_0: $\beta_{parentHI} = \beta_{parentLMI}$ (P-value)	0.37	0.10	0.66	0.14	0.35	0.49

Notes: OLS estimations with country and industry dummies in columns 1, 2, 4, and 6. Probit estimations with country and industry dummies in columns 3 and 5. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. All non-dummy dependent variables are also in logs except for those which represent non-monetary shares. The coefficient estimates in columns 3 and 5 represent marginal effects. For the description of the variables, see Table B13.

Table B4: Unpaid workers, production shifts and parent location of foreign-owned firms

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var:	unpaid work (dummy)	unpaid work (share)	one production shift	two production shifts	three production shifts	production shift intensity
parent HI	-0.05	-0.009	0.02	0.002	-0.009	**0.02*** **
	[0.03]	[0.009]	[0.05]	[0.05]	[0.03]	**[0.006]**
parent LMI	-0.05	-0.005	0.009	-0.02	0.03	0.007
	[0.03]	[0.008]	[0.05]	[0.06]	[0.03]	[0.007]
sales	-0.004	-0.007**	-0.1***	0.05***	0.06***	-0.04***
	[0.006]	[0.003]	[0.008]	[0.009]	[0.006]	[0.002]
productivity	0.002	0.008**	0.09***	-0.05***	-0.05***	0.04***
	[0.008]	[0.004]	[0.01]	[0.02]	[0.009]	[0.003]
skill intensity	-0.0004	0.0006	-0.0003	0.0002	0.0002	0.0004
	[0.0004]	[0.0007]	[0.0007]	[0.0008]	[0.0005]	[0.0003]
wage	-0.007	-0.004	0.002	-0.0004	-0.0009	-0.0007
	[0.006]	[0.003]	[0.009]	[0.010]	[0.007]	[0.001]
training	0.03**	0.0006	-0.03	0.008	0.02*	0.003
	[0.01]	[0.004]	[0.02]	[0.02]	[0.01]	[0.003]
capital intensity	0.002	-0.002	-0.002	-0.005	0.007	0.001
	[0.005]	[0.001]	[0.007]	[0.007]	[0.005]	[0.001]
input intensity	0.0007	-0.0005	-0.02**	0.008	0.01*	0.0004
	[0.005]	[0.0009]	[0.009]	[0.009]	[0.006]	[0.001]
firm age	-0.00002	0.00001	0.0006	-0.0005	-0.0001	0.0001
	[0.0004]	[0.00009]	[0.0006]	[0.0007]	[0.0004]	[0.00009]
affiliated parties	0.0005	0.004	0.004	0.01	-0.02*	-0.00008
	[0.009]	[0.003]	[0.01]	[0.02]	[0.009]	[0.002]
local backward link	-0.002	0.005	-0.005	0.04	-0.04**	0.004
	[0.02]	[0.004]	[0.03]	[0.04]	[0.02]	[0.004]
foreign backward link	-0.01	-0.007	0.04	-0.004	-0.04**	-0.01**
	[0.02]	[0.01]	[0.03]	[0.03]	[0.02]	[0.005]
local forward link	-0.009	0.002	0.01	-0.01	0.004	0.002
	[0.02]	[0.003]	[0.03]	[0.03]	[0.02]	[0.005]
export status	0.007	0.010	-0.02	0.02	0.007	0.002
	[0.02]	[0.006]	[0.02]	[0.03]	[0.02]	[0.004]
import competition	0.02	-0.003	0.09***	-0.1***	0.04*	-0.002
	[0.02]	[0.004]	[0.03]	[0.03]	[0.02]	[0.005]
local competition	0.01	0.006	0.07**	-0.1***	0.04**	-0.002
	[0.02]	[0.004]	[0.03]	[0.03]	[0.02]	[0.004]
Obs	2350	2442	1956	1848	1912	1960
R^2		0.021				0.53
$Pseudo - R^2$	0.092		0.27	0.12	0.29	
$Log - likelihood$	-679.7		-954.9	-977.3	-471.8	
F-test H_0: $\beta_{parentHI} = \beta_{parentLMI}$ (P-value)	0.90	0.32	0.86	0.76	0.29	0.047

Notes: OLS estimations with country and industry dummies in columns 2 and 6. Probit estimations with country and industry dummies in columns 1, 3, 4, and 5. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. All non-dummy dependent variables are also in logs except for those which represent non-monetary shares. The coefficient estimates in columns 1, 3, 4, and 5 represent marginal effects. For the description of the variables, see Table B13.

Table B5: Unpaid workers, production shifts and parent location of foreign-owned firms (China excluded from LMI group)

Dep. var:	(1) unpaid work (dummy)	(2) unpaid work (share)	(3) one production shift	(4) two production shifts	(5) three production shifts	(6) production shift intensity
parent HI	-0.05	-0.009	0.02	-0.003	-0.01	**0.02*** **
	[0.03]	[0.009]	[0.05]	[0.05]	[0.03]	**[0.006]**
parent LMI (excl. China)	**-0.06***	-0.004	0.03	-0.04	0.03	0.003
	[0.04]	[0.008]	[0.05]	[0.06]	[0.03]	[0.008]
sales	-0.004	-0.007**	-0.1***	0.05***	0.06***	-0.04***
	[0.006]	[0.003]	[0.008]	[0.009]	[0.006]	[0.002]
productivity	0.002	0.008**	0.09***	-0.05***	-0.05***	0.04***
	[0.008]	[0.004]	[0.01]	[0.02]	[0.009]	[0.003]
skill intensity	-0.0004	0.0006	-0.0003	0.0003	0.0002	0.0004
	[0.0004]	[0.0007]	[0.0007]	[0.0008]	[0.0005]	[0.0003]
wage	-0.007	-0.004	0.002	-0.00005	-0.001	-0.0007
	[0.006]	[0.003]	[0.009]	[0.010]	[0.007]	[0.001]
training	0.03**	0.0006	-0.03*	0.009	0.02*	0.003
	[0.01]	[0.004]	[0.02]	[0.02]	[0.01]	[0.003]
capital intensity	0.002	-0.002	-0.002	-0.005	0.007	0.001
	[0.005]	[0.001]	[0.007]	[0.007]	[0.005]	[0.001]
input intensity	0.0007	-0.0005	-0.02**	0.008	0.01*	0.0004
	[0.005]	[0.0010]	[0.009]	[0.009]	[0.006]	[0.001]
firm age	-0.00001	0.00001	0.0006	-0.0006	-0.0001	0.0001
	[0.0004]	[0.00009]	[0.0006]	[0.0007]	[0.0004]	[0.00009]
affiliated parties	0.0008	0.004	0.003	0.01	-0.02*	0.0001
	[0.009]	[0.003]	[0.01]	[0.02]	[0.009]	[0.002]
local backward link	-0.002	0.005	-0.005	0.04	-0.04**	0.004
	[0.02]	[0.004]	[0.03]	[0.04]	[0.02]	[0.004]
foreign backward link	-0.01	-0.007	0.04	-0.004	-0.04**	-0.01**
	[0.02]	[0.01]	[0.03]	[0.03]	[0.02]	[0.005]
local forward link	-0.010	0.002	0.01	-0.01	0.003	0.001
	[0.02]	[0.003]	[0.03]	[0.03]	[0.02]	[0.005]
export status	0.008	0.010	-0.02	0.02	0.007	0.002
	[0.02]	[0.006]	[0.02]	[0.03]	[0.02]	[0.004]
import competition	0.01	-0.003	0.09***	-0.1***	0.05*	-0.002
	[0.02]	[0.004]	[0.03]	[0.03]	[0.02]	[0.005]
local competition	0.01	0.006	0.07**	-0.1***	0.04**	-0.002
	[0.02]	[0.004]	[0.03]	[0.03]	[0.02]	[0.004]
Obs	2350	2442	1956	1848	1912	1960
R^2		0.020				0.53
$Pseudo - R^2$	0.092		0.27	0.12	0.29	
$Log - likelihood$	-679.3		-954.7	-977.1	-471.9	
F-test H_0: $\beta_{parentHI} = \beta_{parentLMI}$ (P-value)	0.70	0.33	0.91	0.55	0.32	0.028

Notes: OLS estimations with country and industry dummies in columns 2 and 6. Probit estimations with country and industry dummies in columns 1, 3, 4, and 5. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. All non-dummy dependent variables are also in logs except for those which represent non-monetary shares. The coefficient estimates in columns 1, 3, 4, and 5 represent marginal effects. For the description of the variables, see Table B13.

Table B6: Unpaid workers, production shifts and parent location of foreign-owned firms (China and India excluded from LMI group)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var:	unpaid work (dummy)	unpaid work (share)	one production shift	two production shifts	three production shifts	production shift intensity
parent HI	-0.05	-0.009	0.02	-0.008	-0.008	**0.02*** **
	[0.03]	[0.009]	[0.05]	[0.05]	[0.03]	**[0.006]**
parent LMI (excl. China/India)	**-0.06***	-0.006	0.05	-0.09	0.04	0.004
	[0.04]	[0.007]	[0.06]	[0.08]	[0.03]	[0.009]
sales	-0.004	-0.007**	-0.1***	0.05***	0.06***	-0.04***
	[0.006]	[0.003]	[0.008]	[0.009]	[0.006]	[0.002]
productivity	0.002	0.008**	0.09***	-0.05***	-0.05***	0.04***
	[0.008]	[0.004]	[0.01]	[0.02]	[0.009]	[0.003]
skill intensity	-0.0004	0.0006	-0.0003	0.0002	0.0002	0.0004
	[0.0004]	[0.0007]	[0.0007]	[0.0008]	[0.0005]	[0.0003]
wage	-0.007	-0.004	0.001	0.0003	-0.001	-0.0007
	[0.006]	[0.003]	[0.009]	[0.010]	[0.007]	[0.001]
training	0.03**	0.0006	-0.03*	0.009	0.02*	0.003
	[0.01]	[0.004]	[0.02]	[0.02]	[0.01]	[0.003]
capital intensity	0.002	-0.002	-0.002	-0.004	0.007	0.001
	[0.005]	[0.001]	[0.007]	[0.007]	[0.005]	[0.001]
input intensity	0.0006	-0.0005	-0.02**	0.007	0.01*	0.0005
	[0.005]	[0.0009]	[0.009]	[0.009]	[0.006]	[0.001]
firm age	0.000005	0.00001	0.0006	-0.0006	-0.0001	0.0001
	[0.0004]	[0.00009]	[0.0006]	[0.0007]	[0.0004]	[0.00009]
affiliated parties	-0.00004	0.004	0.003	0.01	-0.02*	0.0002
	[0.009]	[0.003]	[0.01]	[0.02]	[0.009]	[0.002]
local backward link	-0.002	0.005	-0.006	0.04	-0.04**	0.004
	[0.02]	[0.004]	[0.03]	[0.04]	[0.02]	[0.004]
foreign backward link	-0.01	-0.007	0.04	-0.004	-0.04**	-0.01**
	[0.02]	[0.01]	[0.03]	[0.03]	[0.02]	[0.005]
local forward link	-0.009	0.002	0.01	-0.02	0.005	0.001
	[0.02]	[0.003]	[0.03]	[0.03]	[0.02]	[0.005]
export status	0.008	0.010	-0.02	0.02	0.007	0.002
	[0.02]	[0.006]	[0.02]	[0.03]	[0.02]	[0.004]
import competition	0.02	-0.003	0.09***	-0.1***	0.05*	-0.002
	[0.02]	[0.004]	[0.03]	[0.03]	[0.02]	[0.005]
local competition	0.01	0.006	0.07**	-0.1***	0.04**	-0.002
	[0.02]	[0.004]	[0.03]	[0.03]	[0.02]	[0.004]
Obs	2350	2442	1956	1848	1912	1960
R^2		0.021				0.53
$Pseudo - R^2$	0.092		0.27	0.12	0.29	
$Log - likelihood$	-679.6		-954.6	-976.5	-471.6	
F-test H_0: $\beta_{parentHI} = \beta_{parentLMI}$ (P-value)	0.67	0.59	0.71	0.30	0.18	0.069

Notes: OLS estimations with country and industry dummies in columns 2 and 6. Probit estimations with country and industry dummies in columns 1, 3, 4, and 5. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. All non-dummy dependent variables are also in logs except for those which represent non-monetary shares. The coefficient estimates in columns 1, 3, 4, and 5 represent marginal effects. For the description of the variables, see Table B13.

Table B7: Average wage and parent location of foreign-owned firms

	(1)	(2)	(3)	(4)
Dep. var:	average wage	wage for production workers	wage for non-production workers	wage for managerial workers
parent HI	**0.385*** **	**0.250** **	**0.279*** **	**0.350*** **
	[0.094]	**[0.102]**	**[0.099]**	**[0.102]**
parent LMI	**0.364** **	0.057	**0.166** **	**0.369*** **
	[0.142]	[0.077]	**[0.082]**	**[0.099]**
sales	-0.038*	0.039***	0.108***	0.103***
	[0.022]	[0.015]	[0.016]	[0.016]
productivity	0.320***	0.041*	0.011	0.022
	[0.048]	[0.024]	[0.029]	[0.028]
skill intensity	0.004***	0.003*	0.001	-0.001
	[0.002]	[0.002]	[0.001]	[0.001]
training	0.087**	0.046	0.115***	0.107***
	[0.041]	[0.035]	[0.035]	[0.034]
capital intensity	0.075***	0.007	-0.013	0.005
	[0.019]	[0.011]	[0.013]	[0.013]
input intensity	0.065**	0.008	-0.002	0.017
	[0.029]	[0.015]	[0.018]	[0.017]
firm age	0.005***	0.003***	0.002**	0.003***
	[0.001]	[0.001]	[0.001]	[0.001]
affiliated parties	-0.019	0.038	-0.008	0.023
	[0.033]	[0.029]	[0.026]	[0.025]
local backward link	0.099*	0.072	-0.078	-0.004
	[0.056]	[0.049]	[0.052]	[0.049]
foreign backward link	0.115*	0.071	0.100**	0.050
	[0.064]	[0.046]	[0.047]	[0.045]
local forward link	0.036	0.027	0.058	0.043
	[0.053]	[0.049]	[0.053]	[0.049]
export status	0.040	0.101**	0.120**	0.029
	[0.055]	[0.049]	[0.049]	[0.048]
import competition	-0.035	-0.044	-0.018	-0.073
	[0.067]	[0.053]	[0.057]	[0.055]
local competition	-0.096*	0.053	-0.045	-0.032
	[0.054]	[0.049]	[0.050]	[0.048]
Obs	2513	2384	2361	2439
R^2	0.83	0.90	0.89	0.90
F-test H_0: $\beta_{parentHI} = \beta_{parentLMI}$ (P-value)	0.89	0.046	0.25	0.87

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are in logs. For the description of the variables, see Table B13.

Table B8: Average wage and parent location of foreign-owned firms (China excluded from LMI group)

	(1)	(2)	(3)	(4)
Dep. var:	average wage	wage for production workers	wage for non-production workers	wage for managerial workers
parent HI	**0.403*** **	**0.244** **	**0.277*** **	**0.338*** **
	[0.093]	**[0.103]**	**[0.098]**	**[0.101]**
parent LMI (excl. China)	**0.486*** **	0.037	**0.174** **	**0.360*** **
	[0.145]	[0.077]	**[0.083]**	**[0.101]**
sales	-0.039*	0.040***	0.108***	0.104***
	[0.022]	[0.015]	[0.016]	[0.016]
productivity	0.321***	0.040*	0.011	0.020
	[0.048]	[0.024]	[0.029]	[0.028]
skill intensity	0.004***	0.003*	0.001	-0.001
	[0.002]	[0.002]	[0.001]	[0.001]
training	0.083**	0.046	0.114***	0.106***
	[0.041]	[0.035]	[0.035]	[0.034]
capital intensity	0.076***	0.007	-0.013	0.006
	[0.019]	[0.011]	[0.013]	[0.013]
input intensity	0.064**	0.008	-0.002	0.017
	[0.029]	[0.015]	[0.018]	[0.017]
firm age	0.005***	0.003***	0.002**	0.003***
	[0.001]	[0.001]	[0.001]	[0.001]
affiliated parties	-0.023	0.040	-0.007	0.028
	[0.033]	[0.030]	[0.025]	[0.025]
local backward link	0.096*	0.072	-0.080	-0.007
	[0.055]	[0.049]	[0.052]	[0.049]
foreign backward link	0.113*	0.071	0.099**	0.049
	[0.064]	[0.046]	[0.047]	[0.044]
local forward link	0.042	0.025	0.058	0.040
	[0.053]	[0.049]	[0.053]	[0.049]
export status	0.038	0.101**	0.118**	0.026
	[0.055]	[0.049]	[0.049]	[0.048]
import competition	-0.029	-0.044	-0.017	-0.072
	[0.067]	[0.054]	[0.057]	[0.055]
local competition	-0.091*	0.052	-0.045	-0.033
	[0.054]	[0.049]	[0.050]	[0.048]
Obs	2513	2384	2361	2439
R^2	0.83	0.90	0.89	0.90
F-test H_0: $\beta_{parentHI} = \beta_{parentLMI}$ (P-value)	0.60	0.025	0.31	0.84

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are in logs. For the description of the variables, see Table B13.

Table B9: Average wage and parent location of foreign-owned firms (China and India excluded from LMI group)

Dep. var:	(1) average wage	(2) wage for production workers	(3) wage for non-production workers	(4) wage for managerial workers
parent HI	**0.390*** **	**0.240** **	**0.259*** **	**0.335*** **
	[0.094]	**[0.101]**	**[0.096]**	**[0.100]**
parent LMI (excl. China/India)	**0.540*** **	0.025	0.124	**0.430*** **
	[0.164]	[0.081]	[0.091]	**[0.113]**
sales	-0.039*	0.040***	0.109***	0.103***
	[0.022]	[0.015]	[0.016]	[0.016]
productivity	0.321***	0.040*	0.010	0.021
	[0.048]	[0.024]	[0.029]	[0.027]
skill intensity	0.004***	0.003*	0.001	-0.001
	[0.002]	[0.002]	[0.001]	[0.001]
training	0.081**	0.046	0.114***	0.104***
	[0.041]	[0.035]	[0.035]	[0.034]
capital intensity	0.075***	0.007	-0.013	0.006
	[0.019]	[0.011]	[0.013]	[0.013]
input intensity	0.064**	0.008	-0.002	0.016
	[0.029]	[0.015]	[0.018]	[0.017]
firm age	0.005***	0.003***	0.002**	0.003***
	[0.001]	[0.001]	[0.001]	[0.001]
affiliated parties	-0.019	0.041	-0.001	0.028
	[0.033]	[0.029]	[0.025]	[0.024]
local backward link	0.098*	0.072	-0.079	-0.007
	[0.055]	[0.049]	[0.052]	[0.049]
foreign backward link	0.117*	0.071	0.101**	0.052
	[0.064]	[0.046]	[0.047]	[0.044]
local forward link	0.038	0.023	0.052	0.038
	[0.052]	[0.049]	[0.053]	[0.048]
export status	0.038	0.101**	0.119**	0.028
	[0.055]	[0.049]	[0.049]	[0.048]
import competition	-0.034	-0.045	-0.021	-0.073
	[0.067]	[0.053]	[0.057]	[0.055]
local competition	-0.099*	0.051	-0.050	-0.037
	[0.054]	[0.049]	[0.050]	[0.047]
Obs	2513	2384	2361	2439
R^2	0.83	0.90	0.89	0.90
F-test H_0: $\beta_{parentHI} = \beta_{parentLMI}$ (P-value)	0.38	0.026	0.22	0.44

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are in logs. For the description of the variables, see Table B13.

Table B10: Average wage in foreign and domestic MNEs

Dep. var:	(1) average wage	(2) wage for production workers	(3) wage for non-production workers	(4) wage for managerial workers
foreign	0.047	0.059	**0.218****	0.162
	[0.128]	[0.113]	**[0.110]**	[0.127]
sales	0.045	0.110***	0.085**	0.095**
	[0.039]	[0.031]	[0.034]	[0.038]
productivity	0.203**	-0.034	0.031	0.058
	[0.087]	[0.044]	[0.048]	[0.053]
skill intensity	0.010***	0.007*	0.003	-0.000005
	[0.003]	[0.004]	[0.002]	[0.003]
training	0.211**	0.111	0.237***	0.137*
	[0.089]	[0.083]	[0.072]	[0.082]
capital intensity	0.035	0.019	-0.001	0.004
	[0.045]	[0.022]	[0.023]	[0.029]
input intensity	0.009	-0.004	-0.011	-0.004
	[0.067]	[0.031]	[0.029]	[0.038]
firm age	0.003	0.004**	0.001	0.002
	[0.002]	[0.002]	[0.002]	[0.002]
affiliated parties	0.003	0.030	-0.028	0.015
	[0.048]	[0.045]	[0.035]	[0.039]
local backward link	0.024	0.167	-0.136	0.016
	[0.136]	[0.107]	[0.126]	[0.123]
foreign backward link	0.052	0.285**	0.152	-0.020
	[0.175]	[0.131]	[0.133]	[0.159]
local forward link	-0.120	-0.110	0.046	-0.035
	[0.108]	[0.085]	[0.079]	[0.089]
export status	-0.112	0.011	0.011	-0.088
	[0.103]	[0.080]	[0.084]	[0.105]
import competition	0.012	-0.171*	0.007	-0.102
	[0.138]	[0.094]	[0.109]	[0.111]
local competition	-0.003	-0.115	-0.055	-0.087
	[0.121]	[0.085]	[0.083]	[0.093]
Obs	501	471	492	493
R^2	0.84	0.89	0.89	0.87

Notes: OLS estimations with country and industry dummies in all columns. The sample does not include domestic non-MNEs. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are in logs. For the description of the variables, see Table B13.

Table B11: Average wage and foreign ownership (rule of law)

Dep. var:	(1) average wage	(2) wage for production workers	(3) wage for non-production workers	(4) wage for managerial workers
foreign	0.960***	0.213	0.335*	0.719***
	[0.257]	[0.190]	[0.194]	[0.214]
foreign * rule of law	**-0.011*** **	-0.002	-0.001	**-0.007** **
	[0.004]	[0.003]	[0.003]	**[0.003]**
sales	-0.038*	0.040***	0.107***	0.104***
	[0.022]	[0.015]	[0.016]	[0.016]
productivity	0.315***	0.039	0.010	0.017
	[0.048]	[0.024]	[0.029]	[0.027]
skill intensity	0.005***	0.003*	0.001	-0.001
	[0.001]	[0.002]	[0.001]	[0.001]
training	0.094**	0.044	0.116***	0.112***
	[0.041]	[0.035]	[0.035]	[0.034]
capital intensity	0.077***	0.009	-0.012	0.007
	[0.019]	[0.011]	[0.013]	[0.013]
input intensity	0.066**	0.007	-0.002	0.018
	[0.029]	[0.015]	[0.018]	[0.017]
firm age	0.005***	0.003***	0.002**	0.003***
	[0.001]	[0.001]	[0.001]	[0.001]
affiliated parties	-0.014	0.051*	-0.015	0.020
	[0.034]	[0.029]	[0.025]	[0.025]
local backward link	0.103*	0.076	-0.075	-0.000
	[0.056]	[0.049]	[0.051]	[0.049]
foreign backward link	0.118*	0.069	0.096**	0.047
	[0.064]	[0.046]	[0.047]	[0.044]
local forward link	0.032	0.020	0.069	0.044
	[0.054]	[0.051]	[0.054]	[0.050]
export status	0.030	0.105**	0.115**	0.018
	[0.055]	[0.049]	[0.049]	[0.048]
import competition	-0.046	-0.050	-0.023	-0.082
	[0.067]	[0.053]	[0.056]	[0.055]
local competition	-0.098*	0.050	-0.041	-0.035
	[0.054]	[0.049]	[0.050]	[0.048]
Obs	2517	2387	2364	2442
R^2	0.83	0.89	0.89	0.90

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are in logs. For the description of the variables, see Table B13.

Table B12: Average wage and foreign ownership (social protection)

Dep. var:	(1) average wage	(2) wage for production workers	(3) wage for non-production workers	(4) wage for managerial workers
foreign	1.133**	0.406	0.988**	2.315***
	[0.503]	[0.401]	[0.480]	[0.532]
foreign * social protection	-0.236	-0.085	-0.214	**-0.580*** **
	[0.145]	[0.112]	[0.132]	**[0.149]**
sales	-0.036	0.041***	0.108***	0.107***
	[0.022]	[0.015]	[0.016]	[0.016]
productivity	0.316***	0.039	0.009	0.014
	[0.048]	[0.024]	[0.029]	[0.027]
skill intensity	0.005***	0.003*	0.001	-0.001
	[0.002]	[0.002]	[0.001]	[0.001]
training	0.090**	0.044	0.116***	0.112***
	[0.041]	[0.035]	[0.035]	[0.034]
capital intensity	0.076***	0.009	-0.012	0.007
	[0.019]	[0.011]	[0.013]	[0.013]
input intensity	0.065**	0.007	-0.002	0.019
	[0.029]	[0.015]	[0.018]	[0.017]
firm age	0.005***	0.003***	0.002**	0.003***
	[0.001]	[0.001]	[0.001]	[0.001]
affiliated parties	-0.016	0.050*	-0.016	0.017
	[0.034]	[0.029]	[0.025]	[0.025]
local backward link	0.100*	0.075	-0.077	-0.006
	[0.056]	[0.049]	[0.051]	[0.049]
foreign backward link	0.114*	0.069	0.096**	0.048
	[0.064]	[0.046]	[0.047]	[0.044]
local forward link	0.036	0.019	0.068	0.042
	[0.054]	[0.051]	[0.054]	[0.049]
export status	0.033	0.105**	0.116**	0.020
	[0.055]	[0.049]	[0.049]	[0.048]
import competition	-0.043	-0.049	-0.022	-0.080
	[0.067]	[0.053]	[0.056]	[0.054]
local competition	-0.095*	0.051	-0.040	-0.033
	[0.054]	[0.049]	[0.050]	[0.047]
Obs	2517	2387	2364	2442
R^2	0.83	0.89	0.89	0.90

Notes: OLS estimations with country and industry dummies in all columns. Dummies take value 1 if the statement holds, and 0 otherwise. All non-dummy explanatory variables are in logs except for skill intensity and firm age. The dependent variables are in logs. For the description of the variables, see Table B13.

Table B13: Description of variables

Variable	Description
foreign	the firm is foreign-owned (dummy)
parent HI	the parent of the foreign-owned firm is located in a high-income country (dummy)
parent LMI	the parent of the foreign-owned firm is located in a low/middle-income country (dummy)
parent LMI (excl. China/India)	the parent of the foreign-owned firm is located in a low/middle-income country (China and India excluded from LMI group) (dummy)
parent LMI (excl. China)	the parent of the foreign-owned firm is located in a low/middle-income country (China excluded from LMI group) (dummy)
greenfield FDI	the foreign-owned firm has been created as greenfield FDI (dummy)
MOFA	the firm is owned by a foreign investor by at least 50% (dummy)
market access	principal motive of foreign investor to invest in the host country: access new markets (dummy)
low cost	principal motive of foreign investor to invest in the host country: lower production cost (dummy)
input access	principal motive of foreign investor to invest in the host country: access to natural resources/inputs (dummy)
join partner	principal motive of foreign investor to invest in the host country: collaboration with a specific partner (dummy)
export back home	principal motive of foreign investor to invest in the host country: export back to home country (dummy)
TA benefits	principal motive of foreign investor to invest in the host country: benefits from a trade agreement (dummy)
sales	total sales
productivity	labour productivity (total sales to total permanent full-time employment)
skill intensity	share of the number of technical, supervisory and managerial employees in total number of employees
(average) wage	ratio of total wage bill to total number of permanent full-time employees
training	the firm provides formal internal/external training to its employees (dummy)
capital intensity	ratio of capital stock to total number of employees
input intensity	ratio of value of inputs to total number of employees
firm age	years since the foundation of the firm
affiliated parties	total number of affiliated establishments of the firm
local backward link	the firm has local backward linkages (dummy)
foreign backward link	the firm has international backward linkages (dummy)
local forward link	the firm has local forward linkages (dummy)
export status	the firm has exports (dummy)
import competition	main source of competition faced by the firm: imports (dummy)
local competition	main source of competition faced by the firm: locally-owned firms (dummy)
total employment	total number of employees (permanent full-time, temporary, part-time)
permanent employment (share)	share of permanent full-time employees in total number of employees
temporary employment (dummy)	the firm has temporary employees (dummy)
temporary employment (share)	share of temporary employees in total number of employees
part-time employment (dummy)	the firm has part-time employees (dummy)
part-time employment (share)	share of part-time employees in total number of employees
permanent full-time production workers (share)	share of permanent full-time production/manual workers in total number of permanent full-time workers
permanent full-time non-production workers (share)	share of permanent full-time clerical/administrative and sales workers in total number of permanent full-time workers
permanent full-time managerial workers (share)	share of permanent full-time technical, managerial, and supervisory workers in total number of permanent full-time workers
permanent full-time female workers (share)	share of permanent full-time female workers in total number of permanent full-time workers
permanent full-time female production workers (share)	share of permanent full-time female production/manual workers in total number of permanent full-time production/manual workers
permanent full-time female non-production workers (share)	share of permanent full-time female clerical/administrative and sales workers in total number of permanent full-time clerical/administrative and sales workers
permanent full-time female managerial workers (share)	share of permanent full-time female technical, managerial, and supervisory workers in total number of permanent full-time technical, managerial, and supervisory workers
permanent full-time foreign workers (share)	share of permanent full-time foreign workers in total number of permanent full-time workers
permanent full-time foreign production workers (share)	share of permanent full-time foreign production/manual workers in total number of permanent full-time production/manual workers
permanent full-time foreign non-production workers (share)	share of permanent full-time foreign clerical/administrative and sales workers in total number of permanent full-time clerical/administrative and sales workers
permanent full-time foreign managerial workers (share)	share of permanent full-time foreign technical, managerial, and supervisory workers in total number of permanent full-time technical, managerial, and supervisory workers
unpaid work (dummy)	the firm has unpaid workers (dummy)
unpaid work (share)	ratio of total number of unpaid workers to total employment
one production shift	the firm has one production shift per day (dummy)
two production shifts	the firm has two production shifts per day (dummy)
three production shifts	the firm has three production shifts per day (dummy)
production shift intensity	ratio of number of production shifts per day to total employment
average training intensity	ratio of total expenditure in training of workers to total number of permanent full-time workers
training intensity of production workers	ratio of total expenditure in training of production workers to total number of permanent full-time production/manual workers
training intensity of non-production workers	ratio of total expenditure in training of clerical/administrative and sales workers to total number of permanent full-time clerical/administrative and sales workers
training intensity of managerial workers	ratio of total expenditure in training of technical, managerial, and supervisory workers to total number of permanent full-time technical, managerial, and supervisory workers
wage for production workers	monthly wage of production/manual workers
wage for non-production workers	monthly wage of clerical/administrative and sales workers
wage for managerial workers	monthly wage of technical, managerial, and supervisory workers
firing cost	the number of weeks a worker is paid after she is laid off (source: World Bank World Development Indicators)
governance	Ibrahim Index of African Governance (0–100) (source: Mo Ibrahim Foundation)
rule of law	rule of law index (0–100) (source: Mo Ibrahim Foundation)
social inclusion	social inclusion index (1–6) (source: World Bank World Development Indicators)
social protection	social protection index (1–6) (source: World Bank World Development Indicators)

Notes: Authors' notation.