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ABSTRACT

We investigate whether multinational enterprises (MNEs) create high quality jobs than domestic firms in least-developed countries. We argue that the quality of jobs offered by MNEs may differ depending on their two alternative entry modes, that is, greenfields (GRFs) versus joint ventures (JVs). Using 2005-2017 firm-level Cameroonian data, we find that relative to local firms, MNEs offer more secure jobs through lower speeds and greater half-lives of employment adjustment as well as lower elasticity of employment, and they also offer high-wage jobs. GRFs and JVs also offer more secure jobs than local firms, but through different mechanisms, i.e., employment adjustment processes for the former and wage elasticity for the latter, and their generous wage policies differ across skill groups and occupations. In contrast, skill-intensive MNEs and namely GRFs employ less unskilled workers while skill-intensive JVs enhance managerial and technical occupations. We also find that capital-intensive JVs have a significantly positive impact on both non-production and production employment and generate less jobs in managerial and technical occupations. These results hold for the intensity of foreign ownership and firm exit.

Keywords: Multinational enterprises, foreign entry mode, job quality, Cameroon

JEL Classification: F23, J23, J24

1. INTRODUCTION

In recent decades, the countries south of the Sahara (Africa) devoted substantial efforts to attract multinational enterprises (MNEs).[1] One of the primary motivations behind this effort is to create not only a higher number of jobs but also jobs of higher quality. From the employee's perspective, qualified jobs typically offer two key benefits: job security and higher wages (Javorcik, 2015). Job security is measured through the persistence and elasticity of labour demand while better paid jobs are associated with the extent of the wage premium. From the perspective of least-developed countries, good employment is characterized by its potential to significantly contribute to poverty alleviation. This type of employment is typically intensive in unskilled labor, which is often the most abundant factor of production in these countries. MNEs have larger scale and hence may significantly contribute to 'good' jobs creation through e.g. new production firms and the payment of higher wages (te Velde and Morrisey, 2003). In general, a distinction is made between wholly owned or greenfields (GRFs) and joint ventures (JVs) foreign entry (see Javorcik and Saggi, 2010). The job quality advantage of MNEs is also likely to depend upon these two modes of foreign entry because of the technological gap between both types of multinationals.

The other side of the coin is that a greater presence of MNEs also generates fear of job insecurity. The reasons are manifold: MNEs are usually more flexible in terms of employment management; they are more likely to shut down than national firms, generating job losses (Görg and Strobl, 2003; Dhyne et al., 2015). Likewise, technology brought by foreign investors is often portrayed as coming at the expense of jobs, namely the abundant unskilled ones in African economies, generating risks of widespread technological unemployment. There is evidence in least-developed countries that multinationals have been associated with skill-biased technical change by drawing less on less skilled workers with which they are vastly endowed (Waldkirch et al., 2009; Atalay et al., 2018). The role of multinational enterprises (MNEs) and their various forms in creating high-quality jobs in Africa remains largely unexplored. This is a

[1] As Coniglio et al. (2015) point out, Africa is a continent that is attracting a large inflow of investments both from rich OECD countries and from emerging and developing economies. For instance, absolute FDI flows to Africa have increased to US$15.182 billion in 2001, US$20.6 billion in 2005, US$37.3 billion in 2008 and US$42.7 billion in 2011 (Bartels et al., 2014). Furthermore, Amendolagine et al. (2013) note that from 2000 till 2008, FDI inward stocks increased in Africa by 160% compared to an increase of 107.4% in the global economy during the same period.

surprising oversight, given that job creation is a top priority for many African countries struggling with widespread unemployment. Moreover, to the best of our knowledge, no empirical study has investigated how different types of MNEs, specifically greenfield investments (GRFs) and joint ventures (JVs), contribute to the quality of jobs offered by foreign affiliates compared to local producers.

In this paper, we investigate the differences in job quality between domestic and multinational firms, with a specific focus on the impact of greenfield investments (GRFs) and joint ventures (JVs). To achieve this, we address three key research questions: First, do workers in multinational enterprises (MNEs) experience greater job insecurity compared to those in domestic firms? Second, do MNEs offer higher wages than their local counterparts? Third, do more skill and capital-intensive MNEs provide more secure jobs than locally owned enterprises? Our study utilizes firm-level data from the Cameroonian industrial sector, covering the period from 2005 to 2017. The Cameroonian case study provides a valuable contribution to the existing literature on foreign firms and job quality for several compelling reasons. Firstly, Cameroon exerted concerted efforts to attract foreign direct investment (FDI) since the early 1990s. The country implemented substantial privatization reforms, eliminated or reduced restrictions on FDI, and established a legislative framework and investment charter that actively promotes foreign investment. This deliberate shift towards a more investment-friendly environment makes Cameroon an ideal setting for examining the impact of foreign investment on job quality. Secondly, many young Cameroonians are underemployed in the informal sector, and without increases in modern sector employment, they will continue to seek a meagre existence doing informal jobs or working in a subsistence agriculture. Bringing this workforce into the modern sector employment would significantly improve the overall welfare in the country. Finally, Kosova (2010: 862) points out that '*a single country helps to avoid the empirical difficulties with controlling for cross-country differences that affect FDI inflows*.

Our empirical approach consists of several steps. The first contribution of this paper is to empirically identify the security of jobs offered by foreign-owned firms relative to local firms. For this purpose, we estimate dynamic labour demand functions for different skill groups and occupations, including the interactions of the dummy for foreign ownership with the lagged dependent employment and wage variable. In this manner, we are able to check whether the persistence and elasticity of employment differ between domestic and multinational firms, respectively. The possible endogeneity is solved by performing Generalized Method of Moments (GMM) estimations. In a second

step, we investigate whether multinational firms pay higher wages than domestic firms by estimating a standard Mincerian wage equation for each type of job and occupation. The relationship between foreign ownership and wages is captured by including a dummy variable indicating the foreign ownership status of the firm. We estimate the different models by OLS and robust regressions. In a final step, multinationals' attributes such as skill and capital intensities are supposed to affect their employment. We test this hypothesis by estimating dynamic labour demand functions for different types of employment and job task, including the skill and capital intensity variables free standing and interacted with the foreign ownership dummy variable. In this way, we are able to examine whether skill- and capital-intensive multinationals create more secure jobs relative to indigenous firms. Again, the possible endogeneity is accounted for by performing GMM estimations. A final contribution of the paper is to separate out the impact of JVs and GRFs on the quality of jobs. In that undertaking, for each aspect of job quality, we include in one regression two sets of interaction terms in order to test the hypothesis that the skill and capital intensities of production affect the job effects of JVs and GRFs. In this way, JVs and GRFs can be compared to national firms and to each other.

Our four main sets of findings are as follows. First, we find that relative to indigenous firms, MNEs offer more secure jobs because of lower speeds and greater half-lives of employment adjustment as well as lower elasticities of labour demand. When we distinguish between GRFs and JVs, our findings suggest that jobs in both GRFs and JVs are also more secure than those in domestic firms, but through different mechanisms entailing labour adjustment processes and the elasticity of labour demand in the former and latter type of multinationals, respectively. Second, both GRFs and JVs offer a higher pay than domestic firms, but their generous wage policies differ across skill groups and occupations. Third, the skill intensity of MNEs substitutes unskilled workers, while their capital intensity complements both skilled and unskilled jobs. Finally, GRFs and JVs differ in terms of the moderating role of skill and capital intensities: skill-intensive GRFs make little use of unskilled jobs and the impact is quantitatively big, suggesting that it is mainly the skill-intensive GRFs that are less beneficial for unskilled employees; skill-intensive JVs enhance the use of workers in senior managerial and technical occupations; capital-intensive JVs benefit both skilled and unskilled jobs and depress the employment in senior managerial and technical occupations. The previous results do not differ in manufacturing and services industries and are robust to the intensity of foreign ownership and firm exit.

Earlier empirical studies gave much more attention to the effects of international trade on labour markets than to the impacts of FDI inflows (see e.g. Hasan et al., 2007; Mouelhi, 2007; Njikam, 2016 among others). Thus, very little has been done in evaluating the differences in the quality of jobs generated by MNEs relative to domestic firms. Some exceptions, to our knowledge, are Coniglio et al. (2015) and Blanas et al. (2019). However, these studies employed single year cross-sectional data which misses the opportunity to explore the long run differences in the job quality between MNEs and domestic firms and to obtain robust results. In addition, the differentiation of MNEs by entry mode (e.g. GRFs versus JVs) in creating 'good' jobs is the neglected field in those studies. Overall, we contribute to the literature in three aspects. First, we explore the differences between MNEs and domestic firms in job quality, captured in terms of the (i) persistence and wage elasticity of labour demand, (ii) the extent of the wage premium, and (iii) labour demand effect of MNEs' skill and capital intensity. Second, we conduct separate analyses for the GRFs and JVs entries. To our knowledge, we are the first to discriminate between the GRFs and JVs within one setting. We finally conduct separate analyses for the manufacturing and largely unexplored services industries. Of note, and unlike past studies, we distinguish between different skill groups of employees and job tasks to examine if differences in job quality may be caused by firm-level differences in the workforce. This issue of job quality is of high policy relevance for several reasons. First, the figures on population and employment in Africa show an urgent need for job creation, namely for 'good' jobs.[2] Second, employment quality plays a role in reducing poverty and income inequality. Third, the generation of better and higher-paid jobs is closely connected with economic development. Finally, an empirical evaluation of these questions could provide insights for the design of appropriate policies to attract MNEs in Africa.

The paper is organized as follows. Section 2 provides a theoretical overview of potential channels through which MNEs as well as the different types of MNEs, GRFs and JVs, may affect job quality. Section 3 presents the data. Section 4 outlines the methodology employed. Section 5 presents and discusses the results. Section 6 concludes.

[2] With the working-age population predicted to increase by about 55.3% in 15 years (e.g. from 548 millions in 2015 to 851 millions in 2030, Blanas et al., 2019) job creation poses a significant developmental problem in countries south of the Sahara (Africa). Furthermore, few African workers are employed in the modern industrial sector. That is, many young African make a living in the informal sector where productivity and wages are very low. Therefore, there is an urgent need for creating new and qualified jobs.

2. MNES, MODE OF ENTRY AND JOB QUALITY

Inward FDI is often welcomed in less developed countries (LDCs) due to its potential to generate employment opportunities. Compared to domestic firms, foreign affiliates tend to be more efficient, possess better export market knowledge, and have greater access to financing (Glass and Saggi, 2002; Almeida, 2007). These advantages can lead to increased output, which in turn may have a positive impact on employment. Moreover, the higher productivity of multinational enterprises (MNEs) can benefit domestic employment through spillover effects, such as improving the productivity of host country firms and leading to larger firm sizes, ultimately resulting in increased employment. However, the presence of MNEs can also significantly influence job quality, particularly in terms of job insecurity (Andrews et al., 2012). For instance, jobs in MNEs may be less secure due to their "footloose" nature or more elastic labour demand. This elasticity can lead to increased volatility in wages and employment, resulting in higher worker insecurity. On the other hand, foreign affiliates tend to be more productive and less likely to shut down, providing greater job persistence and consequently, job security.

Another crucial aspect of job quality associated with foreign affiliates is their propensity to create high-wage job opportunities. MNEs pay higher wages than domestic firms and this wage premium likely makes employees feel more secure (Pittiglio et al., 2015). The wage premium offered by multinational enterprises (MNEs) can be attributed to several factors. Firstly, MNEs may pay higher wages to prevent their productivity advantage from being transferred to competing firms through employee turnover (Fosfuri et al., 2001). Secondly, MNEs may engage in rent-sharing arrangements with their employees, leading to higher wages (Budd et al., 2005). Thirdly, MNEs may pay efficient wages to motivate workers due to high monitoring costs associated with asymmetric information problems. Lastly, MNEs may offer higher wages to compensate for the lower job security resulting from their higher likelihood of closure and more elastic labour demand (Bernard and Sjöholm, 2003; Fabri et al., 2003). However, the wage premium offered by MNEs' might be associated with the (i) selectivity bias i.e. cherry-picking (Almeida, 2007), (ii) takeover of existing firms in order to keep personnel and firm-specific knowledge in the company (Sjöholm and Lipsey, 2006), (iii) shakeout and rationalization following acquisition, and (iv) unobservable firm and worker characteristics (e.g. higher ability or greater motivation). This leads to the following hypothesis:

MNEs generate more secure and higher paid jobs than indigenous firms.
There is evidence that MNEs in host LDCs are associated with skill-biased technological change by increasing skilled jobs. Hence, the capital and skill intensity of production are relevant for the employment effects of foreign firms. For example, the labour market segmentation in LDCs may have its root in their globalization through MNEs which have a greater reliance on skill-complementary technology, leading to a higher demand for skilled jobs at the expense of less skilled jobs with which host LDCs are vastly endowed (Waldkirch et al., 2009). However, technologically laggard MNEs may successfully compete for skilled jobs with indigenous firms, leading to a crowding out effect and a net reduction in the domestic sector skilled labour demand.
The previous mentioned three aspects of job quality are likely to differ by the mode of entry of foreign firms (GRFs vs. JVs). Greenfield investments have the highest potential for job creation because they add production capacity while joint ownership entry changes ownership and control over existing assets. For this reason we expect the employment security to differ between GRFs and JVs. The evidence shows that multinationals having more sophisticated technologies are more likely to enter the host-country market through the GRFs route and less likely to engage in JVs (Mattoo et al., 2004). This suggests that technologies of JVs tend to be of an older vintage relative to those used by GRFs affiliates. The entry of GRFs in possession of a technological advantage over JVs yields productivity differences between them, affecting wages directly. The evidence shows that, because of fear of potential competition, MNEs are reluctant to share their more advanced technologies with local partners. Hence, we should expect that GRFs offer higher wages than their JVs counterparts. There is also the possibility of an impact on labour demand: since the state-of-the-art technologies are skill-complementary, GRFs may tend to offer skilled jobs while the reverse might be true for the JVs. This leads to the following second hypothesis of our study:

The quality of jobs created by MNEs differs between GRFs and JVs.
The GRFs and JVs multinationals often differ in their technological advantage, and this technological gap might affect their job quality-enhancing effect. For example, the MNEs with more sophisticated technologies tend to prefer GRFs entry to JVs. Therefore, the former type of MNEs may increase the skill and wage premium for skilled jobs because of their skill-biased technologies while the reverse is true for the latter type of MNEs.

The job quality effects of MNEs have received a scant attention in the literature compared to the MNEs-productivity nexus. Past studies on the effects of foreign presence on labour demand elasticities provide mixed results. The studies include Görg et al. (2009) [Ireland], Hakkala et al. (2010) [Sweden], Buch and Lipponer (2010) [Germany], Senses (2010) [US] and Godart et al. (2013) [U.K.] among others. Foster-McGregor et al. (2015) find that MNEs pay higher average wages than domestic-owned firms while there is little evidence of a positive employment effect of foreign presence. The analysis of Coniglio et al. (2015) suggests substantial differences between foreign investors from the North and the South in terms of both skill intensity and wage premiums. Blanas et al. (2019) find that foreign firms create more stable and secure jobs and pay higher wages to different types of workers than domestic firms. Neither of these studies is concerned with the impact of incoming MNEs by entry mode. We improve over previous studies as we investigate not only the role of MNEs relative to domestic firms, but also the role of the different types of MNEs e.g. GRFs relative to JVs (i.e. the quality of jobs created is also predicted to differ between both types of MNEs).

3. DATA

The analysis is conducted using a new firm-level dataset provided by the Cameroonian National Institute of Statistics (NIS) for the 13-year period spanning 2005 to 2017. The original sample size of 1,045 firms was reduced for various reasons. We focus on firms employing 5 or more workers,[3] and with complete information on the different categories of employees. Further, one advantage of our dataset is the detailed information on the ownership patterns of firms. Therefore, the analysis is restricted to firms that reported ownership status. The final sample thus includes 835 firms in 2-digit 25 industries (18 manufacturing and 7 service sectors) and covers an unbalanced panel of about 4,860 observations.[4]

Job quality variables. We focus on three aspects of job quality. First, from the worker's perspective, two prominent aspects of quality jobs are the employment security and payment of higher wages. For the former aspect, the

[3] Within the Cameroonian context, firms with less than 5 workers usually operate in the informal sector.

[4] We evaluate the representativeness of the final sample by comparing the distributions of the initial and the final sample by industry and ownership. The results in the Table A1 show that the distributions are sufficiently similar. Further, a look at the data indicates that the total exits over the examined period 2005-2017 account for 18.2% of total firms.

persistence of labour demand is important to get at the security of jobs. Also, the increase in labour-demand elasticities may help explain the rise in job insecurity (Rodrik, 1997). Thus, the employment security is proxied by the persistence measured by the length of time it takes to move halfway to a new equilibrium in response to a shock (the half-life of adjustment) and wage elasticity of labour demand. The second aspect of job quality is proxied using the wage premiums. Finally, from the perspective of host LDCs, 'good' jobs draw considerably on less skilled labour with which they are vastly endowed. We proxy this aspect of job quality using skill and capital intensities. To create proxies for these three aspects of job quality, we utilize information on employment of different skill groups and occupations.

Firm-level variables. Our measure of labour is the number of full-time employees per year.[5] There are four types of occupations i.e. (i) senior managers, (ii) senior technicians, (iii) technicians and lower managers, and (iv) employees and labourers. We consider the first three of these occupations as non-production labour comprising skilled workers, and the rest as the production employment, consisting of unskilled workers. As previously stated, another prominent aspect of job quality used is the wages offered to employees. The dataset provides information on the wages paid to different skill groups and different types of job tasks. The wages measured in terms of annual earnings are deflated to 2010 prices using the consumer price index to get a real measure. We compute a firm-level measure of wages by dividing the total wage bill by the number of employees. There are other firm-level variables likely associated with the quality of jobs offered by the firms. As regards the firm-level controls, the cost of capital is measured by the firm-level interest rate paid on long-term credit; the output measure is the firm observed sales measured by the turnover per year; and the capital intensity is the ratio of the total value of fixed assets to total full-time employment.

Foreign ownership variables. A firm is defined as a MNE if between 10-100% of its equity is held by foreign investors. MNEs are defined as a GRFs entry if they are 100% foreign-owned and JVs entry if between 10-99% of their equity is held by foreigners. The domestically owned enterprises are firms with less than 10% of foreign equity.[6]

[5] An important aspect of good jobs consists of part-time, seasonal and contract workers. Unfortunately, our dataset does not provide information on these categories of employment.

[6] The different foreign and domestic ownership variables are time-invariant in the dataset.

Table A2 reports descriptive statistics. Relative to Cameroonian indigenous firms, MNEs significantly employ more labour e.g. total, non-production and production, as well as different job tasks. MNEs also pay higher wages to different types of workers and occupations and the difference is strongly significant in all cases. As expected, MNEs are more productive, more capital intensive, and pay higher costs on capital than local firms and the difference is statistically significant in all cases. Counterintuitively, indigenous Cameroonian producers are 13.4% more skill intensive than the MNEs and the difference is significantly different from zero. Table A2iv shows the allocation of employment by ownership. The figures show that non-production workers are 38.4% of employment in MNEs and 42.4% in domestic firms, and the difference of 4% is strongly significant. Also, production workers are 70.2% and 76.6% of employment in MNEs and domestic firms, respectively and the 6.5% difference is highly significant.

GRFs and JVs also differ relative to indigenous firms, respectively. For example, GRFs offer less employment and occupations as compared with local firms, and the difference is significant except in the case of total and production workers. Table A2iv shows that the allocation of employment differs between GRFs and JVs. For example, 36.8% of non-production employment is at GRFs and 40% is at JVs. In contrast, JVs employ fewer production employees (65%) as compared with 75% in GRFs. However, GRFs pay higher wages to all workers, skill groups and occupations (except to workers in the senior managerial occupation), and this wage gap is statistically significant except in the case of production workers. Finally, GRFs are significantly less skill intensive (5.1%), less capital intensive, less productive and pay lower costs of capital than domestic firms, and the difference is strongly significant in all cases. As regards the JVs, the figures reveal that they significantly offer more jobs and occupations than local firms. For all workers, skill groups and occupations, JVs also offer higher wages, and these wage premiums are statistically significant. The data finally reveal that relative to indigenous Cameroonian firms, JVs are more productive, 14.7 times more capital intensive and face higher capital costs, and in all cases the difference is significant.

In summary, from these descriptive statistics, we can expect the impact of MNEs on job quality to be different between MNEs and domestic firms, and also to be different between GRFs and JVs relative to domestic firms.

Table A3 presents the sector and region breakdown of entry modes chosen by foreign investors. The figures indicate that GRFs outnumber JVs by constituting about 54% of multinationals operating in Cameroon over the study period. However, JVs outnumber GRFs in 14 of the 25 sectors under

study. The GRFs are the dominant form of MNEs in two sectors which are textile & weaving and non-metallic minerals (8.6%, respectively), followed by beverage & tobacco (4.8%), transport equipment (4.6%) and rubber & plastic products (3.6%). The JVs also dominate non-metallic minerals (4.2%), followed by transport equipment (4%), machinery, electrical machinery & apparatus (3.7%) and then other food products (3.7%). For regions, note that GRFs outnumber JVs in seven of 10 regions. Further, the bulk of multinational firms is located in the littoral region e.g. 73.6% of MNEs, 38.5% of GRFs, 35.1% of JVs. Still in the littoral region, 52.2% and 47.7% of multinationals are GRFs and JVs, respectively.

4. ECONOMETRIC SPECIFICATION

As a first step, we investigate the difference between MNEs and domestic firms in the quality of jobs they create as proxied by: (i) job security as measured by the persistence and elasticity of employment; (ii) higher-paid jobs captured through the wage premium; and (iii) differential impact of skill and capital intensity of MNEs on secure or stable jobs. In each case, we separate out the impact of GRFs and JVs on jobs quality.

Job Security: Persistence And Wage Elasticity Of Labour Demand

Our model is based on Hamermesh and Pfann (1996), Slaughter (2001) and Barba-Navaretti et al. (2003). We consider the following specification,

$$\boldsymbol{l_{ijzt} = c + \beta_0 l_{ijzt-s} + \beta_1 w_{ijzt} + \beta_2 y_{ijzt} + \beta_3 r_{ijzt} + \sum_{tj} \delta_{tj}^{YT} Year_t \times Sector_j + \sum_{tz} \delta_{tj}^{ZT} Year_t \times Region_z + \mu_i + \varepsilon_{ijzt}} \quad (1)$$

where $\boldsymbol{l_{ijzt}, y_{ijzt}, w_{ijzt}}$ and $\boldsymbol{r_{ijzt}}$ are (log) employment, real output, wages per employee, and cost of capital in firm i, industry j, region z at time t, respectively. By utilizing the panel aspect of our data, we allow for unobserved heterogeneity ($\boldsymbol{\mu_i}$) which may be correlated with regressors. The interactive sector-by-year and region-by-year fixed effects are added to control for, respectively, unobserved industry trends over the period, and aggregate shocks that may vary across different regions due to, for example, local market conditions. The variable $\boldsymbol{\varepsilon_{ijzt}}$is an iid error term.[7] Our main interest is the lagged dependent variable and

[7] Since all variables are specified in logs, we can interpret the coefficients as elasticities.

the wage rate. Equation 1 includes lagged employment to account for the persistence of employment. The wage variable captures the elasticity of labour demand, whose increase may help explain the rise in job insecurity (Rodrik, 1997). Hence, $\boldsymbol{\beta_0}$ captures the persistence of labour demand whereas the coefficient $\boldsymbol{\beta_1}$ measures the short-term wage elasticity of labour demand.

To evaluate whether the persistence and wage elasticity of labour demand differ between MNEs and domestic firms, Equation 1 is augmented by a dummy variable for MNEs ($\boldsymbol{mne_{ijz}}$). This dummy variable is interacted with the variables of interest in order to derive different sets of coefficients for MNEs and domestic firms, respectively. In addition to size, foreign ownership might also affect the persistence and wage elasticity of labour demand through its effect on another firm-level output. Hence, we include an additional interaction variable in the model. This leads to the following equation:

$$\boldsymbol{l_{ijzt} = \propto_0^g + \beta_0^g l_{ijzt-s} + \beta_1^g w_{ijzt} + \beta_2^g y_{ijzt} + \beta_3^g r_{ijzt} + \beta_4^g (l_{ijzt-s} \times mne_{ijz}) + \beta_5^g (w_{ijzt} \times mne_{ijz}) + \beta_6^g (y_{ijzt} \times mne_{ijz}) + \sum_{tj} \delta_{tj}^{YT} Year_t \times Sector_j + \sum_{tz} \delta_{tj}^{ZT} Year_t \times Region_z + \mu_i + \varepsilon_{ijzt}} \quad (2)$$

where g represents the different skill groups and job tasks. The interaction $l_{ijzt-s} \times mne_{ijz}$ permits the persistence of labour demand to differ between MNEs and domestic firms.[8] Thus, the coefficient β_0^g measures the persistence of labour demand in domestic firms ($1 - \beta_0$= speed of adjustment) whereas the sum of the estimated coefficients $\beta_0^g + \beta_4^g$ captures the persistence of labour demand in MNEs ($1 - \beta_0^g - \beta_4^g$= speed of adjustment). If the coefficient β_4^g is negative and statistically significant, then the speed of labour adjustment is higher in MNEs than in domestic firms. Our second measure of employment persistence is the half-life of employment adjustment process. It captures the degree of employment inertia and this context it measures the length of time it takes to move halfway to a new equilibrium in response to a shock. The half-life of adjustment is calculated as the ratio of the log of one half to the log of the estimated lagged dependent variable coefficient (Fajnzylber and Maloney, 2005). Likewise, the interaction $w_{ijzt} \times mne_{ijz}$ allows the wage elasticity to differ between MNEs and domestic firms. We focus on the coefficients β_1^g and β_5^g. β_1^g is the short-run elasticity of labour demand with respect to wages for domestic firms and we expect a negative sign for wage. The sum of the estimated coefficients $\beta_1^g + \beta_5^g$ is the

[8] The dummy variable mne_{ijz} is time-invariant. So, intercept differences between domestic and foreign firms are captured by μ_i, the firm fixed effect.

corresponding short-run wage elasticity for MNEs. β_5^g should be negative and significant if MNEs have a higher wage elasticity of labour demand than domestic firms.

From Equation (2), and in the case of one lagged dependent variable ($s = 1$), for example, $\beta_1^g/1-\beta_0^g$ measures the long-run wage elasticity for local firms and the corresponding estimate for MNEs is $(\beta_1^g+\beta_5^g)/(1-\beta_0^g-\beta_4^g$.[9] The impact of MNEs and local firms on employment is expressed as follows, $(\beta_1^g/1-\beta_0^g)\times\overline{l_g}$ and $(\beta_1^g+\beta_5^g/1-\beta_0^g-\beta_4^g)\times\overline{l_g}$ where $\overline{l_g}$ is the mean value of the employment for the g different skill groups and occupations.

Next, we separate out the impact of GRFs and JVs on job security. To do so, two interaction terms are included in Equation (1) as follows,

$$l_{ijzt} = \propto_0^g + \beta_0^g l_{ijzt-s} + \beta_1^g w_{ijzt} + \beta_2^g y_{ijzt} + \beta_3^g r_{ijzt} + \beta_4^g\left(l_{ijzt-s}\times grf_{ijz}\right) + \beta_5^g\left(l_{ijzt-s}\times jv_{ijz}\right) + \beta_6^g\left(w_{ijzt}\times grf_{ijz}\right) + \beta_7^g\left(w_{ijzt}\times jv_{ijz}\right) + \beta_8^g\left(y_{ijzt}\times grf_{ijz}\right) + \beta_9^g(y_{ijzt}\times jv_{ijz}) + \sum_{tj}\delta_{tj}^{YT}\,Year_t\times Sector_j + \sum_{tz}\delta_{tj}^{ZT}\,Year_t\times Region_z + \mu_i + \varepsilon_{ijzt} \quad (3)$$

Equation (3) shows how the persistence and elasticity of labour demand differ between GRFs and JVs relative to domestic firms. The speed of employment adjustment is given by $1-\beta_0^g$ for domestic firms, $\beta_0^g-\beta_4^g$ for GRFs, and $1-\beta_0^g-\beta_5^g$ for JVs. We can compute the short-run wage elasticity for domestic firms β_1^g, GRFs $\beta_1^g+\beta_6^g$ and JVs $\beta_1^g+\beta_7^g$ as well as the long-run wage elasticity for domestic firms $\beta_1^g/1-\beta_0^g$, GRFs $\beta_1^g+\beta_6^g/1-\beta_0^g-\beta_4^g$ and for JVs $\beta_1^g+\beta_7^g/1-\beta_0^g-\beta_5^g$. We can also determine the impact on employment of domestic firms $(\beta_1^g/1-\beta_0^g)\times\bar{l}g$, GRFs $(\beta_1^g+\beta_6^g/1-\beta_0^g-\beta_4^g)\times\bar{l}g$ and JVs $(\beta_1^g+\beta_7^g/1-\beta_0^g-\beta_5^g)\times\bar{l}g$.

As previously indicated, Equations (2) and (3) are estimated separately for different skill groups and job tasks. One advantage with both specifications is that we can include cross-elasticities for different skill groups and occupations. In particular, we can, for example, examine how the demand for production workers is affected by a wage increase for non-production workers by simultaneously including the production and non-production wages. The fixed effects estimates are biased because the residuals are correlated with the endogenous variables. We use the one-step system GMM estimator proposed by Blundell and Bond (1998) which allows unbiased coefficients to be estimated in dynamic panels.[10] We treat firm-level wages, sales, cost of capital,

[9] We use the Delta method to calculate the corresponding standard errors (Greene, 2000: 298–99).

[10] The system GMM is generally preferred over difference GMM if the dependent variable (employment) is close to a random walk i.e. if it is stationary. However, we cannot apply

the interaction terms between lagged dependent variable and foreign ownership, wages and foreign ownership, and between output and foreign ownership as endogenous, and we use the second lag and earlier as instruments. The sets of year-by-sector and year-by-region dummies are treated as exogenous, and they are included in the set of instrumental variables.

Higher-Paid Jobs: Wage Premium

In the second step of our analysis, we explore whether MNEs pay higher wages than their domestic counterparts. To do so, we estimate the following standard Mincerian equation,

$$w_{ijrt}^{g} = \beta_0^g + \beta_1^g mne_{ijr} + \beta_2^g y_{ijrt} + \beta_3^g r_{ijrt} + \beta_4^g z_{ijrt} + \sum_{tj} \delta_{tj}^{YT} Year_t \times Sector_j + \sum_{tr} \delta_{tj}^{ZT} Year_t \times Region_r + \mu_i + \varepsilon_{ijrt} \quad (4)$$

where w_{ijrt}^{g} is (log) of wage rate of g different skill groups and job tasks. mne_{ijr} is the MNEs dummy that is equal to one if the firm is foreign-owned, and zero otherwise; it included to assess which types of workers benefit from foreign or domestic ownership. Thus, β_1^g is the parameter of interest, capturing the wage premium of MNEs relative to domestic firms. Specifically, the coefficient β_1^g is the percentage increase in wages enjoyed by a worker because s/he is employed in MNEs. If the coefficient of the MNEs dummy is positive and significant, it provides evidence that MNEs pay higher wages than domestic firms. z_{ijrt} captures additional factors affecting a firm's wage level e.g. firm-level skill and capital intensity; for example, a multinational could pay high wages due to its intensive use of non-production workers whereas capital-intensive MNEs may offer higher or lower wages. The rest of the variables are defined as in Equation (1).

Next, we also divide foreign-owned firms into two groups: GRFs and JVs. We test whether both types of multinationals are different in terms of wage premium relative to domestic firms. Again, we consider the following standard Mincerian wage equation,

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standard panel unit root tests to check whether employment is stationary due to the unbalanced nature of our panel and the short time series dimensions (T=seven years). Thus, we follow Roodman (2009) and use an indirect method of assessing the appropriateness of choosing system over difference GMM i.e. we estimate equation (2) using an OLS and a within-panel model and check whether the system GMM coefficient of the lagged employment lies within the range of OLS and within-panel lagged coefficients.

$$w_{ijrt}^{g} = \beta_0^g + \beta_1^g grf_{ijr} + \beta_2^g jv_{ijr} + \beta_3^g y_{ijrt} + \beta_4^g r_{ijrt} + \beta_5^g z_{ijrt} + \sum_{tj} \delta_{tj}^{YT} Year_t \times Sector_j + \sum_{tr} \delta_{tj}^{ZT} Year_t \times Region_r + \mu_i + \varepsilon_{ijrt} \quad (5)$$

where grf_{ijr} denotes the GRFs dummy, which equals one if the foreign-owned firm is a GRFs, and zero otherwise; jv_{ijr} is the JVs dummy that is equal to one if the foreign-owned firm is a GRFs, and zero otherwise. The estimated coefficients β_1^g and β_2^g represent the wage premium of GRFs and JVs relative to local firms, respectively. Equations (4) and (5) are estimated using the OLS and robust regression methods.[11]

Job Security Effects Of Multinationals' Skill And Capital Intensity

We allow the multinationals' labour demand to be heterogeneous according to their skill and capital intensity. In order to check whether foreign presence has a differential effect on the different types of employment, we introduce the skill and capital intensity variables directly into the specification free standing and interacted with the MNEs dummy variable. The resulting dynamic labour demand function is written as follows,

$$l_{ijzt}^{g} = \propto_0^g + \beta_0^g l_{ijzt-s} + \beta_1^g w_{ijzt} + \beta_2^g y_{ijzt} + \beta_3^g r_{ijzt} + \beta_4^g SL_{ijzt} + \beta_5^g KL_{ijzt} + \beta_6^g SI_{ijzt} \times mne_{ijz} + \beta_7^g KI_{ijzt} \times mne_{ijz} + \sum_{tj} \delta_{tj}^{YT} Year_t \times Sector_j + \sum_{tz} \delta_{tj}^{ZT} Year_t \times Region_z + \mu_i + \varepsilon_{ijzt} \quad (6)$$

where SI_{ijzt} and KL_{ijzt} are skill intensity and capital intensity. The remaining variables are defined in the same way as in the previous equations. Our main interest is on the coefficients β_6^g and β_7^g as they allow us to check whether the job effects of multinationals varies along two firm attributes e.g. capital and skill intensity. More capital-intensive producers are expected to generate less job. Also, a higher capital intensity of MNEs may reduce their job effect. But, if physical and human capital are complementary inputs, non-production workers may benefit from foreign ownership in more capital-intensive firms. The MNEs job effect is also likely to depend on the workforce composition. For example, if the multinationals draw heavily on production (non-production) job, they should have a larger effect on job in more production (non-production) job-intensive firms. The interaction term $SI_{ijzt} \times mne_{ijz}$ in the estimations for production and non-production job will offer insights to this effect. But, if the MNEs draws on both production and non-production jobs,

[11] Fu and Wu (2013) use the same techniques in the China's manufacturing sector.

the previous effects could cancel and the interaction term between foreign ownership and skill intensity would be statistically insignificant.

Next, we compare the job security effects of GRFs and JVs skill and capital intensity. For that, we estimate the following equation,

$$l_{ijzt}^{g} = \propto_0^g + \beta_0^g l_{ijzt-s} + \beta_1^g w_{ijzt} + \beta_2^g y_{ijzt} + \beta_3^g r_{ijzt} + \beta_4^g SL_{ijzt} + \beta_5^g KL_{ijzt} + \beta_6^g SI_{ijzt} \times grf_{ijz} + \beta_7^g KI_{ijzt} \times grf_{ijz} + \beta_8^g SI_{ijzt} \times jv_{ijz} + \beta_9^g KI_{ijzt} \times jv_{ijz} + \sum_{tj} \delta_{tj}^{YT} Year_t \times Sector_j + \sum_{tz} \delta_{tj}^{ZT} Year_t \times Region_z + \mu_i + \varepsilon_{ijzt} \quad (7)$$

Both Equations (6) and (7) are estimated using the one-step system GMM method. We treat firm-level variables e.g. employment, wages, output and cost of capital as endogenous, and we use the second lag and earlier as instruments. We treat firm-level skill and capital intensity as well as their interactions with foreign ownership as predetermined, and we use the first lag and earlier as instruments. The sets of year-by-sector and year-by-region dummies are treated as exogenous, and they are included in the set of instrumental variables.

5. RESULTS

This section presents and discusses the results. It starts with the baseline results. It then presents the results on the heterogeneity across industries (e.g., manufacturing versus services sectors). Robustness tests are finally carried out.

Baseline Results

A. Persistence And Wage Elasticity of Labour Demand

We test whether the persistence and wage elasticity of employment differ between MNEs and domestic firms. Table A4 presents a comparison of different estimators. In all cases, the one-step system GMM coefficients on the lagged dependent variable lie between OLS and FE estimates, suggesting that they are efficient. The different specifications are valid as we fail to reject the hypothesis of no second-order autocorrelation and of the Hansen test of overidentification of instruments.

Turning to the one-step system GMM estimates in Table 1, we find a positive and statistically significant coefficient on the lagged dependent variable and firm-level sales. As expected, the estimate on the wage variable is negative and statistically significant in most cases, indicating that the employment falls if wages increase; also, and most cases the point estimates are within the range of those found in past studies (e.g. Barba-Navaretti et al., 2003; Görg et al., 2009; Buch and Lipponer, 2010). We test whether the persistence and wage elasticity of labour demand differ between MNEs and domestic firms by including interaction terms.[12] For non-production workers and senior technicians, the estimate on the interaction between lagged endogenous employment and MNEs dummy is positive and statistically significant. This suggests a greater persistence of non-production jobs and jobs in senior technical occupation in MNEs than in domestic firms. However, the differences between MNEs and domestic firms are not statistically significant in the remaining cases. For the wage elasticity, we do not find any statistically significant differences for total, non-production and production employment. For all job tasks, the interaction term is positively signed and statistically significant, implying that MNEs have less-elastic demands for jobs in all occupations than local firms.

[12] The variables were mean-centered prior to the creation of their interaction terms (Whisman and McClelland, 2005).

Another main contribution of this paper is to separate the impact of GRFs and JVs on job security still relative to domestic firms. Hence, in a next step, we check for it by including two groups of interaction terms. The results of labour demand regressions also reported in Table 1 reveal interesting differences between both types of multinationals. Employment is in general more persistent in JVs than in GRFs, in particular for production employees and workers in senior managerial and technical occupations (0.932, 0.802 and 0.71 vs. 0.303, 0.593 and 0.316, respectively). For all skill groups and occupations, GRFs seem to be on average less wage elastic (in absolute terms) than JVs as it is apparent from the positive and statistically significant interaction term between GRFs ownership and wages.

Table 1. Labour demand regressions

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
i. MNEs vs. domestic firms						
$Labour_{t-1}$	0.512***	0.298**	0.277***	0.523***	0.343***	0.273***
	(0.096)	(0.148)	(0.068)	(0.106)	(0.089)	(0.073)
$Labour_{t-1}$ × mne	0.173	0.175**	-0.012	0.137	0.286**	0.126
	(0.160)	(0.090)	(0.071)	(0.143)	(0.134)	(0.126)
Wage	-0.055	-0.182	-0.512***	-0.465***	-0.544***	-1.004***
	(0.070)	(0.117)	(0.097)	(0.110)	(0.137)	(0.151)
Wage×mne	-0.022	-0.004	-0.104	0.283**	0.243	0.208**
	(0.169)	(0.133)	(0.088)	(0.136)	(0.157)	(0.101)
Sales	0.141***	0.102	0.167***	0.153***	0.265***	0.183***
	(0.063)	(0.074)	(0.056)	(0.048)	(0.095)	(0.063)
Sales×mne	-0.050	-0.017	0.160***	-0.111	-0.093	-0.075
	(0.121)	(0.120)	(0.055)	(0.084)	(0.115)	(0.095)
Cost of capital	0.020	0.095***	0.032	0.008	-0.002	0.019
	(0.028)	(0.032)	(0.028)	(0.033)	(0.034)	(0.035)
Constant	1.008**	2.556**	0.377	2.001***	0.393	-0.199
	(0.531)	(1.208)	(0.0621)	(0.641)	(1.009)	(0.714)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
AR2 (p-value)	0.102	0.766	0.523	0.388	0.187	0.157
Hansen (p-value)	0.293	0.654	1.000	1.000	1.000	1.000
Observations	3,973	2,477	2,605	1,284	1,283	1,348
ii. GRFs vs. JVs entries						
$Labour_{t-1}$	0.517***	0.279***	0.321***	0.469***	0.367***	0.330***
	(0.088)	(0.084)	(0.080)	(0.092)	(0.082)	(0.072)
$Labour_{t-1}$ ×grf	-0.006	0.163	-0.018	-0.085	-0.051	0.157
	(0.173)	(0.168)	(0.153)	(0.162)	(0.150)	(0.127)
$Labour_{t-1}$ ×jv	0.170	0.081	0.611***	0.327***	0.343**	-0.016
	(0.219)	(0.159)	(0.228)	(0.141)	(0.154)	(0.151)

Wage	-0.107**	-0.154	-0.514***	-0.469***	-0.625***	-0.886***
	(0.059)	(0.104)	(0.107)	(0.091)	(0.122)	(0.127)
Wage×grf	0.363**	0.305**	0.249*	0.231**	0.184	0.303***
	(0.180)	(0.151)	(0.151)	(0.119)	(0.134)	(0.110)
Wage×jv	-0.107	-0.223	0.204	0.182	-0.019	0.148
	(0.212)	(0.159)	(0.210)	(0.135)	(0.146)	(0.104)
Sales	0.178***	0.174***	0.212***	0.143***	0.209***	0.172***
	(0.054)	(0.054)	(0.058)	(0.040)	(0.062)	(0.049)
Sales×grf	-0.061	-0.210	-0.036	-0.051	-0.019	-0.160**
	(0.114)	(0.138)	(0.109)	(0.087)	(0.100)	(0.080)
Sales×jv	0.025	0.213	-0.244	-0.016	0.092	0.060
	(0.178)	(0.146)	(0.161)	(0.091)	(0.097)	(0.097)
Cost of capital	0.018	0.064**	0.041	-0.010	-0.003	0.025
	(0.027)	(0.029)	(0.027)	(0.026)	(0.028)	(0.031)
Constant	0.723	1.395	-0.091	2.316***	0.777	0.089
	(0.483)	(0.942)	(0.654)	(0.538)	(0.719)	(0.575)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
AR2 (p-value)	0.222	0.749	0.482	0.589	0.124	0.0146
Hansen (p-value)	1.000	0.502	1.000	1.000	1.000	1.000
Observations	3,973	2,477	2,605	1,284	1,283	1,348

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). Cross-elasticities for different skill groups and occupations are not reported but are available upon request. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

Source: Own calculations based on NIS.

The results in Table 1 however do not allow reading of neither the measures of job persistence (e.g. the speed and half-life of labour adjustment processes) nor the short- and long-run labour demand elasticities in MNEs as compared with domestic firms. Table 2 reports these estimates. As concerns the quantitative importance of our estimates, we compute the percent different of estimates between MNEs and domestic firms. From Table 1, we know that non-production and senior technical jobs in MNEs are more persistent than in domestic firms. Table 2 confirms this result: the adjustment speeds of non-production and workers in senior technical occupation are 56.6% and 77.1% lower in MNEs than in local firms, respectively; the half-lives of non-production employees and senior technicians are of around 11.1 and 17.9 months in MNEs compared to 6.9 and 7.8 months in national firms, respectively. The results in Table 2 also suggest a greater persistence of total and employment in senior managerial and technical and lower managerial occupations in MNEs than in domestic firms, but the differences are not statistically significant. For total, non-production and production employment, the results in Table 1 revealed insignificant above-average wage elasticities for MNEs and significant below-average wage elasticities of all job tasks for MNEs. The results in Table 2 appear supportive: short-run wage elasticities of total, non-production and production employment are 28.6, 2.2 and 16.9% higher in MNEs than in local firms while the short-run wage elasticities of all occupations are lower in MNEs relative to domestic firms. The same trends are found with regard to long-run labour demand elasticities.

Turning to the quantitative importance of the GRFs and JVs estimates, the results reported in Table 2 indicate that the fastest adjustment processes are found in GRFs entries, where the speeds and half-lives of the adjustment process are higher in GRFs than JVs in most specifications. In most cases, the short- and long-run labour-demand elasticities for JVs are higher than those for GRFs entries.

Overall, employment in MNEs is more persistent than in domestic firms. There is no difference in total, non-production and production wage elasticities between MNEs and domestic firms and the wage elasticity is lower in MNEs than in local firms, in particular for the different types of job occupations. Thus, employment is more secure in MNEs than in domestic Cameroonian firms. We also conclude by noting that both GRFs and JVs multinationals also make the lives of workers less insecure but through different mechanisms: while the former works through adjustment processes (e.g. speed and half-life) the latter works through the wage elasticity. This is consistent with the findings by Buch and Lipponer (2010) using a Germany firms.

The summary of the calculations for the impacts of different types of ownership on employment using the long-run wage elasticities is presented in Table A5. The multinationals and local firms are associated with jobs lost in Cameroonian industrial sector, except the GRFs multinationals in the cases of total and non-production employment. In all cases, and not surprisingly, the production workers are the hardest hit group. Equally, the results for the different types of occupation show that multinational and local firms have reduced the employment during the study period and the magnitudes are large for workers in the technical and lower managerial occupation. Finally, and regarding the distinction between GRFs and JVs, job losses occurred the most in JVs than in GRFs.

Table 2. Speed and half-lives of adjustment, and short- and long-run elasticities by ownership status

	MNEs vs. domestic firms			GRFs vs. JVs		
	MNEs	Domestic firms	% difference	GRFs	JVs	% difference
i. Speed of adjustment						
Total labour	0.315*** (0.131)	0.488*** (0.096)	+54.95	0.489*** (0.146)	0.313 (0.197)	-35.99
Non-production	0.527*** (0.141)	0.825*** (0.090)	+56.55	0.558*** (0.149)	0.640*** (0.160)	+14.70
Production	0.734*** (0.059)	0.723*** (0.068)	-1.50	0.697*** (0.125)	0.068 (0.209)	-90.24
Senior manager	0.340*** (0.111)	0.477*** (0.106)	+40.29	0.616*** (0.161)	0.203** (0.104)	-67.05
Senior technician	0.371*** (0.124)	0.657*** (0.089)	+77.09	0.685*** (0.153)	0.290*** (0.123)	-57.66
Technician & lower manger	0.601*** (0.106)	0.727*** (0.073)	+20.97	0.513*** (0.125)	0.686*** (0.124)	+33.72
ii. Half-life of adjustment[a]						
Total labour	1.833 (22 months)	1.035 (12.4 months)	-43.53	1.033 (12.4 months)	1.843 (22 months)	+78.38
Non-production	0.927 (11.1 months)	0.572 (6.9 months)	-38.30	0.849 (10.2 months)	0.678 (8.1 months)	-20.08
Production	0.523 (6.3 months)	0.540 (6.5 months)	+3.27	0.580 (7 months)	9.846 (118.2 months)	+1596.97
Senior manager	1.671	1.071	-35.89	0.725	3.050	+320.50

	(20 months)	(12.9 months)		(8.7 months)	(36.6 months)	
Senior technician	1.494 (17.9 months)	0.648 (7.8 months)	-56.63	0.601 (7.2 months)	2.025 (24.3 months)	+237.05
Technician & lower manger	0.755 (9.1 months)	0.534 (6.4 months)	-29.27	0.964 (11.6 months)	0.599 (7.2 months)	-37.88
iii. Short-run wage elasticity[b]						
Total labour	-0.077 (0.144)	-0.055 (0.070)	-28.57	0.256* (0.160)	-0.214 (0.204)	-183.59
Non-production	-0.186 (0.171)	-0.182 (0.117)	-2.15	0.152 (0.158)	-0.377** (0.189)	-348.03
Production	-0.616*** (0.077)	-0.512*** (0.097)	-16.88	-0.265** (0.126)	-0.309* (0.189)	+16.60
Senior manager	-0.182 (0.130)	-0.465*** (0.110)	+155.49	-0.238** (0.124)	-0.287** (0.146)	+20.59
Senior technician	-0.301** (0.147)	-0.544*** (0.137)	+80.73	-0.441*** (0.137)	-0.644** (0.139)	+46.03
Technician & lower manger	-0.796*** (0.122)	-1.004*** (0.151)	+26.13	-0.584*** (0.123)	-0.738** (0.138)	+26.37
iv. Long-run wage elasticity[c]						
Total labour	-0.245 (0.414)	-0.113 (0.152)	-53.88	0.523 (0.353)	-0.683 (0.490)	+230.59
Non-production	-0.354 (0.315)	-0.221 (0.136)	-37.57	0.272 (0.295)	-0.589** (0.289)	-316.54

Production	-0.839***	-0.708***	-15.61	-0.380**	-4.545	+1096.05
		(0.130)		(0.184)	(12.708)	
	(0.124)					
Senior manager	-0.537	-0.976***	+81.75	-0.387**	-1.413**	+265.12
	(0.349)	(0.258)		(0.211)	(0.701)	
Senior technician	-0.811**	-0.829***	+2.22	-0.644***	-2.220***	+244.72
	(0.369)	(0.256)		(0.216)	(0.992)	
Technician & lower manger	-1.324***	-1.382***	+4.38	-1.138***	-1.077***	-5.36
	(0.232)	(0.218)		(0.229)	(0.243)	

Notes: [a] The half-life adjustment is calculated as $\ln(0.5)/\ln(\rho)$, where ρ is the coefficient of the lagged dependent variable. [b] The short-run wage elasticities for multinationals (MNEs, GRFs and JVs) are obtained through a linear combination between the estimates of wages and the cross-effect of foreign ownership type with wages using the Stata command 'lincom'. [c] The long-run elasticities and the associated standard errors are estimated using the Stata command 'nlcom'. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.
Source: Own calculations based on NIS.

B. Wage Premium by Ownership Type

We begin our analysis by running OLS and robust regressions on the wages of different skill groups and occupations. The results are reported in Table 3. First, we ask whether MNEs in Cameroon pay higher wages than domestically owned firms. Consistent with previous studies, the robust regression results show that the coefficient on the MNEs dummy variable is positive and statistically significant in all specifications. The positive sign indicates that ceteris paribus MNEs offer significantly more generous wage policies than local firms. The MNEs wage premium is highest for non-production employees and lowest for senior managers. MNEs pay non-production workers 50.9% more than domestic firms, while senior managers receive 14.9% higher wages at MNEs. This result is consistent with Martins (2011) case of Portuguese manufacturing and services firms.

The next important issue is whether the foreign ownership wage premium is heterogeneous with respect to the mode of foreign entry. To address this problem, we disaggregate the multinational firms into GRFs and JVs, where motivation and investment behaviour differ substantially. Table 3 reports the results. Both types of multinationals on average also pay higher wages than domestic firms. The GRFs and JVs pay less to workers in senior managerial occupation, 11.7% and 19%, respectively. However, while GRFs pay higher wages to technicians and lower managers (57% more than domestically owned firms) the JVs wage premium is higher for senior technicians (45.4% more than indigenous firms).

With respect to the control variables, the firm size in terms of sales and the capital-labour ratio have a significantly positive effect on wages, suggesting that larger and capital-intensive firms offer higher wages. The effect of the skill intensity systematically differs across specifications as regards the production employment, the proportion of non-production labour has a significantly positive effect on wages, suggesting that more skill-intensive firms offer higher wages to production employees. The reverse is true in the remaining cases. The costs of capital variable is negatively related to wage levels, indicating that firms facing higher cost of capital offer lower wages.

Overall, we found strong evidence that multinationals offer more generous wage policies relative to their domestic counterparts. Likewise, the GRFs and JVs wage premium is confirmed, but their generous wage policies differ across skill groups and job tasks. The wage differentials are in the range of 10-70% found by previous studies. Many possible reasons for multinationals willingness to pay higher wages have been offered: attract better workers given the limited knowledge of local labour markets, limit employees turnover and the associated leakage of the technology to rival firms. This result echoes

the findings in Aitken et al. (1996), te Velde and Morrissey (2003), Sjöholm and Lipsey (2006), Feliciano and Lipsey (2006), Blanas et al. (2019).

Table 3. Wage premium across employment and foreign ownership types

Variable	All (1)		Non-production (2)		Production (3)		Senior manager (4)		Senior technician (5)		Technician & lower manager (6)	
	OLS	Robust	OLS	Robust	OLS	Robust	OLS	Robust	OLS	Robust	OLS	Robust
i. *MNEs vs. domestic firms*												
MNEs	0.404***	0.267***	0.622***	0.509***	0.446***	0.325***	0.286***	0.149***	0.602***	0.457***	0.568***	0.494***
dummy	(0.057)	(0.044)	(0.095)	(0.063)	(0.082)	(0.045)	(0.101)	(0.063)	(0.119)	(0.064)	(0.087)	(0.050)
Sales (log)	0.371***	0.363***	0.531***	0.577***	0.386***	0.369***	0.512***	0.584***	0.452***	0.473***	0.383***	0.359***
	(0.011)	(0.009)	(0.026)	(0.012)	(0.026)	(0.009)	(0.032)	(0.012)	(0.033)	(0.012)	(0.027)	(0.010)
Cost of	-0.017**	-0.014**	0.033**	0.018**	-0.022	-	0.036**	-0.002	-0.006	-0.021**	-0.025	-
capital (log)	(0.009)	(0.007)	(0.019)	(0.010)	(0.019)	0.020***	(0.020)	(0.010)	(0.023)	(0.010)	(0.019)	0.031***
						(0.007)						(0.008)
Capital	0.003***	0.003***	0.004	0.002***	0.003***	0.002***	0.002***	0.002***	0.002***	0.002***	0.001	0.003***
intensity	(0.0005)	(0.0004)	(0.008)	(0.0004)	(0.001)	(0.0004)	(0.0005)	(0.0005)	(0.001)	(0.001)	(0.001)	(0.0003)
Skill	0.861***	0.600***	-	-	3.519***	3.061***	-	-	-	-	-	-
intensity	(0.081)	(0.063)	1.035***	0.911***	(0.182)	(0.085)	0.548***	0.739***	0.848***	1.315***	1.784***	2.092***
			(0.185)	(0.086)			(0.189)	(0.104)	(0.214)	(0.105)	(0.144)	(0.069)
Constant	-	-	-0.187	-0.591	-	-	-0.524	-0.815	-0.628	-0.423	-0.738	-0.194
	2.273***	2.091***	(0.781)	(0.924)	4.452***	4.130***	(0.784)	(0.821)	(0.735)	(0.803)	(0.776)	(0.692)
	(0.812)	(0.628)			(0.744)	(0.616)						
Observations	2,831	2,826	3,541	3,536	2,552	2,548	2,000	1,989	1,881	1,877	3,143	3,143
ii. *GRFs vs. JVs*												
GRFs dummy	0.364***	0.217***	0.650***	0.559***	0.415***	0.300***	0.270***	0.117***	0.615***	0.461***	0.626***	0.570***
	(0.068)	(0.052)	(0.111)	(0.075)	(0.092)	(0.054)	(0.119)	(0.073)	(0.145)	(0.080)	(0.104)	(0.061)
JVs dummy	0.462***	0.339***	0.586***	0.450***	0.487***	0.356***	0.310***	0.190***	0.589***	0.453***	0.509***	0.418***
	(0.075)	(0.058)	(0.116)	(0.081)	(0.096)	(0.058)	(0.124)	(0.080)	(0.139)	(0.078)	(0.101)	(0.063)
Sales (log)	0.369***	0.360***	0.532***	0.578***	0.385***	0.368***	0.512***	0.583***	0.452***	0.473***	0.384***	0.362***
	(0.011)	(0.009)	(0.026)	(0.012)	(0.026)	(0.009)	(0.032)	(0.013)	(0.033)	(0.012)	(0.027)	(0.010)
Cost of	-0.018**	-0.015**	0.034**	0.020**	-0.023	-	0.036**	-0.004	-0.005	-0.021**	-0.024	-
capital (log)	(0.009)	(0.007)	(0.019)	(0.010)	(0.019)	0.021***	(0.020)	(0.010)	(0.022)	(0.010)	(0.019)	0.030***
						(0.007)						(0.008)
Capital	0.003***	0.003***	0.006	0.002***	0.003***	0.002***	0.002***	0.002***	0.002***	0.002***	0.001	0.003***
intensity	(0.0005)	(0.0004)	(0.075)	(0.0004)	(0.001)	(0.0004)	(0.0005)	(0.0005)	(0.001)	(0.001)	(0.001)	(0.0003)
Skill	0.861***	0.599***	-	-	3.515***	3.055***	-	-	-	-	-	-
intensity	(0.081)	(0.063)	1.034***	0.909***	(0.182)	(0.085)	0.548***	0.739***	0.848***	1.313***	1.783***	2.089***

			(0.185)	(0.086)			(0.189)	(0.104)	(0.214)	(0.105)	(0.144)	(0.069)
Constant	-	-	-0.206	-0.621	-	-	-0.508	-0.803	-0.635	-0.426	-0.777	-0.248
	2.242***	2.045***	(0.782)	(0.924)	4.425***	4.099***	(0.781)	(0.821)	(0.739)	(0.805)	(0.780)	(0.692)
	(0.813)	(0.626)			(0.735)	(0.615)						
Observations	2,831	2,828	3,541	3,536	2,552	2,549	2,000	1,996	1,881	1,874	3,143	3,139

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). *** and ** denote significance at the 1% and 5% level, respectively.

Source: Own calculations based on NIS.

C. Job Effects of Multinationals' Skill and Capital Intensity

We first estimate variants of Equation (6) which allows MNEs' labour demand to be heterogeneous according to their skill and capital intensity. To look at this we estimate the model including the interactions between skill intensity, capital intensity and MNEs dummy. The results are shown in Table 4. In all cases, there is no evidence of second order autocorrelation and the validity of the instruments cannot be rejected by the Hansen test of overidentifying restrictions. For all types of jobs and occupations, we find a positive and significant coefficient on the lagged dependent variable and on sales as well as a negative coefficient on wages.

The analysis first considers how the employment effects of MNEs may vary along their skill and capital intensity of production. The coefficient on skill intensity is as expected, strongly significant and positive for non-production but negative for production jobs. Also note that the skill intensity has a significantly negative effect on total employment and a positive and significant effect on technicians & lower managers. With respect to the capital intensity of production, the results indicate that the capital-labour ratio by itself has a significantly negative effect on total, non-production and production workers. The coefficient on the interaction term between MNEs dummy and skill intensity is negative and statistically significant in the case of production employees. This suggests that more skill-intensive MNEs are less beneficial for production workers which is consistent with the hypothesis of skill intensity and unskilled workers being substitutes. In contrast, the coefficient on the interaction of MNEs dummy with capital intensity is positive and statistically significant. This indicates that more capital-intensive MNEs are more beneficial for Cameroonian abundant unskilled workers. This is consistent with the predictions of the vertical FDI models where MNEs relocate activities abroad according to the comparative advantage of host countries – skill-intensive activities in skill-abundant countries and vice-versa (Venables, 1999). In summary, the skill intensity of MNEs substitutes production workers, while their capital intensity rather complements both non-production and production employment.

Next, we investigate the heterogeneity of the skill and capital intensity employment effects by the foreign entry mode. The coefficient on skill intensity is negative and significantly different from zero for total and production employment as well as senior technicians, but positive and statistically significant for non-production and workers in technical & lower managerial occupation. The coefficient on capital intensity is negative and statistically significant only in the cases of total, non-production and production employment. Turning to the interactive terms, and for production employment, the coefficient on the interaction term between GRFs dummy and skill intensity is negatively signed and statistically significant. This result suggests that it is mainly the skill-intensive GRFs that make little use of unskilled jobs. In contrast, in the cases of non-production and production jobs, the significantly positive coefficient on the interaction of JVs dummy with capital intensity indicate that capital-intensive JVs have a more beneficial effect for both skilled and unskilled workers. For senior managers and senior technicians, the interaction term between the JVs dummy and the skill intensity of production (capital-labour ratio) is positive (negative) and significant. This indicates that skill-intensive JVs enhance the use of workers in senior managerial and technical occupations, while capital-intensive JVs are less beneficial. Overall, skill-intensive GRFs (JVs) have negative (positive) effects on production jobs (senior managers and senior technicians) while capital-intensive JVs benefit both skilled and unskilled jobs and decrease employment in senior managerial and technical occupations.

Table 4. Labour demand effects of multinationals' skill and capital intensity

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
i. MNEs vs. domestic firms						
$Labour_{t-1}$	0.357***	0.107**	0.172***	0.346***	0.403***	0.115**
	(0.059)	(0.054)	(0.035)	(0.106)	(0.201)	(0.062)
Wage	-0.187***	0.195***	-0.362***	-0.789***	-0.510***	-1.140***
	(0.053)	(0.079)	(0.089)	(0.171)	(0.270)	(0.264)
Sales	0.171***	0.264***	0.195***	0.052	0.407***	0.144
	(0.048)	(0.052)	(0.045)	(0.073)	(0.192)	(0.096)
Cost of capital	0.042	0.091***	0.090***	-0.011	0.121	0.028
	(0.027)	(0.026)	(0.023)	(0.048)	(0.097)	(0.042)
Skill intensity	-0.820***	3.768***	-2.030***	0.779	1.886	1.210**
	(0.241)	(0.469)	(0.451)	(0.634)	(1.682)	(0.597)
Capital intensity	-0.002**	-0.002***	-0.002**	0.002	-0.008	-0.006
	(0.001)	(0.001)	(0.001)	(0.007)	(0.009)	(0.005)
Skill intensity×mne	-0.273	-0.488	-0.745**	-0.307	-1.705	-0.772
	(0.279)	(0.436)	(0.400)	(0.695)	(1.795)	(0.528)
Capital intensity×mne	0.001	0.001	0.002*	-0.002	0.007	0.006
	(0.001)	(0.001)	(0.001)	(0.007)	(0.009)	(0.004)
Constant	2.166***	-1.099*	1.798***	3.674***	-3.818	0.192
	(0.696)	(0.670)	(0.656)	(1.321)	(3.651)	(1.651)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.055	0.000
AR2 (p-value)	0.833	0.738	0.819	0.976	0.445	0.079
Hansen (p-value)	1.000	1.000	1.000	1.000	0.325	1.000
Observations	3,001	2,477	2,605	1,284	1,283	1,348
ii. GRFs vs. JVs						
$Labour_{t-1}$	0.353***	0.189***	0.178***	0.321***	0.140	0.110**
	(0.052)	(0.056)	(0.035)	(0.145)	(0.090)	(0.057)
Wage	-0.177***	0.261***	-0.378***	-0.869***	-0.788***	-1.070***
	(0.051)	(0.084)	(0.095)	(0.241)	(0.459)	(0.233)
Sales	0.164***	0.215***	0.167***	0.014***	0.092***	0.127
	(0.044)	(0.046)	(0.042)	(0.003)	(0.002)	(0.080)
Cost of capital	0.060***	0.123***	0.091***	-0.003	-0.075	0.021
	(0.025)	(0.026)	(0.022)	(0.064)	(0.124)	(0.038)
Skill intensity	-0.823***	3.438***	-2.016***	-1.283	-2.936*	1.095**
	(0.243)	(0.499)	(0.451)	(0.878)	(1.779)	(0.570)
Capital intensity	-0.002**	-0.003***	-0.002**	0.007	0.015	-0.006
	(0.001)	(0.001)	(0.001)	(0.005)	(0.011)	(0.004)
Skill intensity×grf	-0.252	-0.524	-0.915**	0.594	1.275	-0.875
	(0.318)	(0.531)	(0.485)	(0.536)	(1.141)	(0.546)
Skill intensity×jv	-0.330	-0.447	-0.520	2.528**	5.426*	-0.298
	(0.364)	(0.539)	(0.469)	(1.480)	(3.254)	(0.622)
Capital intensity×grf	-0.002	-0.003	-0.003	0.001	-0.001	0.005
	(0.004)	(0.004)	(0.005)	(0.007)	(0.014)	(0.005)
Capital intensity×jv	0.001	0.002**	0.002**	-0.009**	-0.019**	0.005
	(0.001)	(0.001)	(0.001)	(0.005)	(0.011)	(0.004)
Constant	2.248***	-0.323	1.896***	5.048***	6.040	0.554
	(0.654)	(0.691)	(0.609)	(2.192)	(3.794)	(1.425)

AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
AR2 (p-value)	0.794	0.832	0.809	0.662	0.078	0.198
Hansen (p-value)	1.000	1.000	1.000	0.346	0.320	1.000
Observations	3,001	2,477	2,605	1,284	1,283	1,348

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). Cross-elasticities for different skill groups and occupations are not reported but are available upon request. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.
Source: Own calculations based on NIS.

Heterogeneity Across Industries

The multinational and domestic enterprises are distributed differently over sectors. Hence, dividing the sample by sectors might capture some of these disparities. For this purpose, we re-run our estimations separately for the manufacturing and services industries. Results are reported in Table 5.

For both manufacturing and services sectors, the coefficient on the interaction term between lagged employment and MNEs dummy is positive in most specifications and statistically significant only for non-production workers in the manufacturing and senior technicians in the services. This indicates that employment is more persistent in foreign-owned manufacturing and services firms than in local firms. Likewise, the interaction term between wage and MNEs dummy is positive in all cases but statistically significant only for services senior managers and technicians & lower managers. This indicates a less-elastic employment in manufacturing and services MNEs than in domestic firms.

The results comparing GRFs and JVs in both manufacturing and services industries are also shown in Table 5. In the manufacturing industry, although insignificant in most specifications, there is a high persistence in GRFs total, non-production, and production employment relative to JVs, while the reverse is true for job tasks. In the services sector, the interaction variable between lagged employment and foreign ownership indicates low persistence of all employment and occupations in GRFs than in JVs. In terms of the elasticity of employment, the interaction variable between foreign ownership and wages indicates that GRFs seem to be on average less wage elastic (in absolute terms) than JVs. However, this does not hold for the different occupations in the services sector, where JVs have lower wage elasticity of labour demand in absolute terms.

Table 5. Labour demand regressions – sample split

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
i. Manufacturing sector: MNEs vs. domestic firms						
$Labour_{t-1}$	0.518***	0.145	0.186*	0.507***	0.297***	0.225***
	(0.108)	(0.102)	(0.113)	(0.103)	(0.078)	(0.073)
$Labour_{t-1}$×mne	0.158	0.395**	0.172	0.046	0.030	0.093
	(0.187)	(0.177)	(0.138)	(0.155)	(0.143)	(0.127)
Wage	-0.094	-0.193	-0.557***	-0.431***	-0.678***	-0.954***
	(0.079)	(0.141)	(0.139)	(0.109)	(0.141)	(0.138)
Wage×mne	0.188	0.073	0.156	0.156	0.243	0.094
	(0.177)	(0.181)	(0.193)	(0.127)	(0.169)	(0.102)
Sales	0.194***	0.142**	0.077	0.151***	0.205***	0.158***
	(0.066)	(0.067)	(0.072)	(0.044)	(0.073)	(0.051)
Sales×mne	-0.141	-0.113	-0.006	-0.025	-0.014	0.025
	(0.117)	(0.122)	(0.106)	(0.083)	(0.107)	(0.089)
Cost of capital	0.019	0.108***	0.075**	-0.014	-0.011	0.015
	(0.030)	(0.033)	(0.036)	(0.032)	(0.035)	(0.034)
Constant	0.559	2.637***	0.500	1.936**	0.368	0.638

	(0.491)	(1.148)	(0.650)	(1.002)	(0.811)	(0.673)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
AR2 (p-value)	0.121	0.714	0.930	0.539	0.373	0.512
Hansen (p-value)	1.000	1.000	1.000	1.000	1.000	1.000
Observations	3,279	1,998	2,112	1,072	1,075	1,127

Table 5 (continued)

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
ii. Services sector: MNEs vs. domestic firms						
$Labour_{t-1}$	0.285***	0.465***	0.333***	0.548***	0.366***	0.442***
	(0.123)	(0.135)	(0.125)	(0.360)	(0.136)	(0.154)
$Labour_{t-1}$×mne	0.151	-0.003	0.227	0.325	0.511***	0.184
	(0.184)	(0.175)	(0.162)	(0.373)	(0.170)	(0.179)
Wage	-0.234***	-0.017	-0.598***	-0.547***	-0.700***	-0.583***
	(0.090)	(0.098)	(0.108)	(0.165)	(0.116)	(0.193)
Wage×mne	0.223	0.160	0.236	0.245**	0.011	0.729***
	(0.253)	(0.124)	(0.181)	(0.134)	(0.116)	(0.234)
Sales	0.173**	0.142	0.088	0.095	0.098	0.086
	(0.085)	(0.104)	(0.114)	(0.088)	(0.067)	(0.105)
Sales×mne	-0.001	0.011	-0.018	-0.064	0.063	-0.177
	(0.156)	(0.0153)	(0.146)	(0.104)	(0.077)	(0.119)
Cost of capital	0.112**	0.103	0.091	0.020	0.031	0.103
	(0.054)	(0.064)	(0.057)	(0.063)	(0.026)	(0.066)
Constant	0.444	-1.806***	-0.289	1.521***	0.702**	0.753
	(0.491)	(0.506)	(0.478)	(0.511)	(0.312)	(0.814)
AR1 (p-value)	0.000	0.000	0.000	0.001	0.019	0.003
AR2 (p-value)	0.972	0.641	0.183	0.202	0.303	0.197
Hansen (p-value)	0.505	0.108	0.222	1.000	1.000	0.999
Observations	694	479	493	212	208	221
iii. Manufacturing sector: GRFs vs. JVs entries						
$Labour_{t-1}$	0.523***	0.259***	0.313***	0.510***	0.332***	0.290***
	(0.095)	(0.084)	(0.079)	(0.090)	(0.089)	(0.072)
$Labour_{t-1}$×grf	-0.100	0.160	-0.033	0.056	0.089	0.237**
	(0.172)	(0.169)	(0.131)	(0.163)	(0.159)	(0.123)
$Labour_{t-1}$×jv	0.106	0.319*	0.186	-0.163	-0.332**	-0.138
	(0.285)	(0.199)	(0.180)	(0.156)	(0.174)	(0.139)
Wage	-0.127**	-0.163	-0.508***	-0.491***	-0.698***	-0.788***
	(0.063)	(0.119)	(0.119)	(0.088)	(0.127)	(0.098)
Wage×grf	0.352**	0.116	0.242	0.040	0.177	0.173**
	(0.174)	(0.152)	(0.152)	(0.110)	(0.0128)	(0.094)
Wage×jv	-0.019	-0.092	0.043	0.022	-0.060	-0.038
	(0.217)	(0.202)	(0.188)	(0.135)	(0.170)	(0.106)
Sales	0.204***	0.173***	0.183***	0.145***	0.179***	0.171***
	(0.057)	(0.050)	(0.045)	(0.035)	(0.049)	(0.045)
Sales×grf	-0.068	-0.090	-0.031	0.0002	-0.044	-0.099
	(0.111)	(0.116)	(0.096)	(0.084)	(0.099)	(0.084)
Sales×jv	-0.0005	-0.018	-0.041	0.142**	0.239***	0.177**
	(0.195)	(0.156)	(0.135)	(0.075)	(0.099)	(0.086)
Cost of capital	0.015	0.091***	0.037	0.002	0.020	0.035

	(0.026)	(0.029)	(0.027)	(0.029)	(0.032)	(0.032)
Constant	0.412	1.823**	-0.322	2.181***	0.447	0.596
	(0.450)	(0.929)	(0.467)	(0.972)	(0.627)	(0.547)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
AR2 (p-value)	0.328	0.864	0.957	0.549	0.126	0.300
Hansen (p-value)	1.000	1.000	1.000	1.000	1.000	1.000
Observations	3,279	1,999	2,112	1,072	1,075	1,127

Table 5 (continued)

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
iv. Services sector: GRFs vs. JVs entries						
$Labour_{t-1}$	0.294**	0.529***	0.456***	0.311	0.385***	0.515***
	(0.139)	(0.152)	(0.123)	(0.251)	(0.106)	(0.161)
$Labour_{t-1}$×grf	-0.111	-0.033	-0.009	-0.042**	-0.198	-0.144
	(0.200)	(0.318)	(0.228)	(0.023)	(0.411)	(0.238)
$Labour_{t-1}$×jv	0.351	0.084	0.242	0.686***	0.537***	0.123
	(0.343)	(0.227)	(0.237)	(0.262)	(0.135)	(0.249)
Wage	-0.263***	-0.080	-0.671***	-0.409***	-0.590***	-0.383***
	(0.083)	(0.101)	(0.089)	(0.116)	(0.113)	(0.175)
Wage×grf	0.454	0.715***	0.379	0.061	-0.146	0.529**
	(0.430)	(0.260)	(0.271)	(0.108)	(0.277)	(0.300)
Wage×jv	0.103	-0.040	0.034	0.142**	0.129**	0.385**
	(0.206)	(0.132)	(0.161)	(0.071)	(0.076)	(0.209)
Sales	0.207***	0.119	0.117	0.170***	0.097	0.098
	(0.069)	(0.091)	(0.084)	(0.064)	(0.061)	(0.092)
Sales×grf	-0.102	-0.218	-0.257	-0.020	0.088	-0.328**
	(0.211)	(0.209)	(0.240)	(0.081)	(0.190)	(0.185)
Sales×jv	0.018	0.164	0.093	-0.022	0.011	0.090
	(0.183)	(0.169)	(0.127)	(0.059)	(0.072)	(0.114)
Cost of capital	0.095**	0.062	0.074	-0.014	0.075***	0.080
	(0.047)	(0.058)	(0.053)	(0.038)	(0.031)	(0.053)
Constant	0.335	-1.635***	-0.978***	1.093***	0.799**	0.659
	(0.566)	(0.480)	(0.309)	(0.474)	(0.353)	(0.689)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.004	0.036
AR2 (p-value)	0.773	0.240	0.019	0.309	0.137	0.106
Hansen (p-value)	1.000	1.000	1.000	1.000	1.000	1.000
Observations	694	479	493	212	208	221

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). Cross-elasticities for different skill groups and occupations are not reported but are available upon request. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.
Source: Own calculations based on NIS.

The quantitative importance of the previous estimates is provided in Table 6. In terms of the persistence and elasticity of employment, our baseline results are not affected: in both manufacturing and services industries, the speeds of employment adjustment are considerably smaller in magnitude in MNEs than in national firms; the slowest adjustment processes in terms of half-lives are found in MNEs and not in local firms; and in most specifications, both short- and long-run labour-demand elasticities are considerably smaller in absolute value in multinationals than in national firms.

The results for the GRFs versus JVs are also in line with the ones reported in Table 2. Relative to domestic firms, jobs are more secure in GRFs and JVs. But the two multinationals offer differ stories: the speeds of employment adjustment are higher in GRFs than in JVs, and this does not hold for half-

lives of adjustment; and both short- and long-run wage elasticities are smaller in absolute value in JVs than in GRFs. In sum, our results hold when we allow for heterogeneity across sectors.

Table 6. Speed and half-lives of adjustment, and short- and long-run elasticities by ownership – sample split

	MNEs vs. domestic firms			GRFs vs. JVs		
	MNEs	Domestic firms	% difference	GRFs	JVs	% difference
A. Manufacturing sector						
i. Speed of adjustment						
Total labour	0.324***	0.482***	-48.77	0.576***	0.370	-35.76
	(0.142)	(0.108)		(0.140)	(0.248)	
Non-production	0.459***	0.855***	+86.27	0.580***	0.422***	-27.24
	(0.147)	(0.102)		(0.159)	(0.186)	
Production	0.642***	0.814***	+26.79	0.720***	0.501***	-30.42
	(0.150)	(0.113)		(0.119)	(0.166)	
Senior manager	0.448***	0.493***	+10.04	0.433***	0.653***	+50.81
	(0.131)	(0.103)		(0.137)	(0.144)	
Senior technician	0.673***	0.703***	+4.46	0.578***	1.000***	+73.01
	(0.134)	(0.078)		(0.152)	(0.154)	
Technician & lower manger	0.683***	0.775***	+13.47	0.474***	0.848***	+78.90
	(0.114)	(0.073)		(0.128)	(0.125)	
ii. Half-life of adjustment[a]						
Total labour	1.770 (21.2 months)	1.055 (12.7 months)	-40.40	0.807 (9.7 months)	1.499 (18 months)	+85.69
Non-production	1.127 (13.5 months)	0.359 (4.3 months)	-68.15	0.799 (9.6 months)	1.266 (15.2 months)	+58.45
Production	0.675 (8.1 months)	0.412 (4.9 months)	-38.96	0.544 (6.5 months)	0.998 (12 months)	+83.46
Senior manager	1.167 (14 months)	1.019 (12.2 months)	-12.68	1.220 (14.6 months)	0.655 (7.9 months)	-46.31
Senior technician	0.620 (7.4 months)	0.572 (6.9 months)	-7.74	0.802 (9.6 months)	0.082 (1 month)	-89.78
Technician & lower manger	0.604 (7.2 months)	0.464 (5.6 months)	-23.18	1.080 (13 months)	0.368 (4.4 months)	-65.93
iii. Short-run wage elasticity[b]						
Total labour	0.094	-0.094	-200.00	0.225	-0.146	-164.89
	(0.155)	(0.079)		(0.155)	(0.211)	
Non-production	-0.120	-0.193	+60.83	-0.047	-0.255	+442.55
	(0.179)	(0.141)		(0.146)	(0.188)	
Production	-0.402**	-0.557***	+38.56	-0.267***	-0.465***	+74.16
	(0.183)	(0.139)		(0.109)	(0.157)	

Senior	-0.274**	-0.431***	+57.30	-0.451***	-0.469***	+3.99
manager	(0.144)	(0.109)		(0.124)	(0.146)	
Senior	-0.434***	-0.678***	+56.22	-0.521***	-0.757***	+45.30
technician	(0.186)	(0.141)		(0.137)	(0.161)	
Technician &	-0.860***	-0.954***	+10.93	-0.615***	-0.826***	+34.31
lower manger	(0.129)	(0.138)		(0.129)	(0.128)	
iv. Long-run wage elasticity[c]						
Total labour	0.290	-0.195	-167.24	0.390	-0.394	-201.03
	(0.556)	(0.185)		(0.281)	(0.413)	
Non-	-0.262	-0.226	-13.74	-0.081	-0.605	+646.91
production	(0.382)	(0.168)		(0.258)	(0.474)	
Production	-0.626***	-0.685***	+9.42	-0.370***	-0.929***	+151.08
	(0.240)	(0.134)		(0.150)	(0.283)	
Senior	-0.613**	-0.873***	+42.41	-1.042***	-0.718***	-31.09
manager	(0.322)	(0.257)		(0.407)	(0.251)	
Senior	-0.645***	-0.965***	+49.61	-0.900***	-0.757***	-15.89
technician	(0.243)	(0.234)		(0.254)	(0.175)	
Technician &	-1.259***	-1.230***	-2.30	-1.299***	-0.973***	-25.10
lower manger	(0.214)	(0.180)		(0.264)	(0.187)	

Table 6 (continued)

	MNEs vs. domestic firms			GRFs vs. JVs		
	MNEs	Domestic firms	% difference	GRFs	JVs	% difference
B. Services sector						
i. Speed of adjustment						
Total labour	0.563***	0.715***	+27.00	0.817***	0.356	-56.43
	(0.176)	(0.123)		(0.236)	(0.283)	
Non-production	0.538***	0.535***	-0.56	0.504**	0.387***	-23.21
	(0.170)	(0.135)		(0.274)	(0.170)	
Production	0.441***	0.667***	+51.25	0.552***	0.302	-45.29
	(0.119)	(0.125)		(0.225)	(0.221)	
Senior manager	0.126**	0.452	+258.73	1.105***	0.003	-99.73
	(0.063)	(0.360)		(0.114)	(0.040)	
Senior technician	0.122**	0.634***	+419.67	0.813***	0.078*	-90.41
	(0.062)	(0.136)		(0.357)	(0.049)	
Technician & lower manger	0.373***	0.558***	+49.60	0.629***	0.362**	-42.45
	(0.115)	(0.154)		(0.161)	(0.170)	
ii. Half-life of adjustment[a]						
Total labour	0.836	0.553	-33.85	0.408	1.577	+16.90
	(10 months)	(6.6 months)		(4.9 months)	(18.9 months)	
Non-production	0.897	0.904	+0.78	0.990	1.416	+43.06
	(10.8 months)	(10.8 months)		(11.9 months)	(17 months)	
Production	1.194	0.630	-47.24	0.863	1.929	+123.52
	(14.3 months)	(7.6 months)		(10.4 months)	(23.1 months)	
Senior manager	5.140	1.154	-77.55	0.308	1.226	+298.05
	(61.7 months)	(13.8 months)		(3.7 months)	(14.7 months)	
Senior technician	5.306	0.690	-87.00	0.414	8.540	+1962.80
	(63.7 months)	(8.3 months)		(5 months)	(102.5 months)	
Technician & lower manger	0.849	1.482	+74.56	0.699	1.543	+120.74
	(10.2 months)	(17.8 months)		(8.4 months)	(18.5 months)	
iii. Short-run wage elasticity[b]						
Total labour	-0.011	-0.234***	+2027.27	0.192	-0.160	-183.33
	(0.256)	(0.090)		(0.444)	(0.223)	
Non-production	0.143	-0.017	-111.89	0.635***	-0.120	-118.90
	(0.138)	(0.098)		(0.246)	(0.150)	
Production	-0.363***	-0.598***	+64.74	-0.232	-0.637***	+118.16
	(0.144)	(0.108)		(0.244)	(0.151)	
Senior manager	-0.302***	-0.547***	+81.13	-0.348**	-0.267***	-23.28
	(0.131)	(0.165)		(0.156)	(0.108)	

Senior	-0.689***	-0.700***	+1.60	-0.736***	-0.461***	-37.36
technician	(0.162)	(0.116)		(0.253)	(0.114)	
Technician &	0.146	-0.583***	-499.32	0.146	0.003	-97.95
lower manger	(0.177)	(0.193)		(0.277)	(0.231)	
iv. Long-run wage elasticity[c]						
Total labour	-0.020	-0.328***	+1540.00	0.234	-0.450	-292.31
	(0.453)	(0.123)		(0.594)	(0.782)	
Non-	0.267	-0.031	-111.61	1.261	-0.309	-124.50
production	(0.298)	(0.182)		(1.039)	(0.371)	
Production	-0.823***	-0.897***	+8.99	-0.529**	-2.109	+298.68
	(0.234)	(0.176)		(0.260)	(1.607)	
Senior	-2.391*	-1.211	-49.35	-0.315**	-87.541	+27690.7
manager	(1.445)	(1.030)		(0.142)	(1145.558)	9
Senior	-5.628	-1.104***	-80.38	-0.905	-5.912	+553.26
technician	(3.805)	(0.149)		(0.678)	(4.403)	
Technician &	0.391	-1.045***	-367.26	0.232	0.007	-96.98
lower manger	(0.435)	(0.194)		(0.478)	(0.637)	

Notes: [a] The half-life adjustment is calculated as $\ln(0.5)/\ln(\rho)$, where ρ is the coefficient of the lagged dependent variable.

[b] The short-run wage elasticities for multinationals (MNEs, GRFs and JVs) are obtained through a linear combination between the estimates of wages and the cross-effect of foreign ownership type with wages using the Stata command 'lincom'. [c] The long-run elasticities and the associated standard errors are estimated using the Stata command 'nlcom'. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

Source: Own calculations based on NIS.

Next, we check whether differences across sectors drive our results on multinational wage premium. For that, we re-estimate Equations (4) and (5) separately for manufacturing and services sectors. Results are given in Table 7. Concerning the earnings differentials between domestic and multinational enterprises, the observed average earnings gaps in both manufacturing and services industries are in favour of the latter. With respect to the opposition between GRFs and JVs, we find that manufacturing GRFs pay higher average wages than manufacturing JVs only to non-production workers, senior technicians, and to technicians and lower managers. In contrast, GRFs services firms tend to pay higher wages than JVs services firms to all types of employees and occupations. Of note, the only foreign ownership dummy variable which is negative and insignificant is the one associated with services JVs for technicians and lower managers. This indicates lower average wages for those workers in JVs services firms than in domestic services firms. Overall, our results across sectors confirm that multinational enterprises tend to pay, on average, higher wages than domestic enterprises and the existence of some differences between GRFs and JVs.

Table 7. Wage premium across employment and foreign ownership types – sample split

Variable	All	Non-production	Production	Senior manager	Senior technician	Technician & lower manager
	(1)	(2)	(3)	(4)	(5)	(6)
i. Manufacturing sector: MNEs vs. domestic firms						
MNEs dummy	0.267***	0.493***	0.325***	0.149***	0.457***	0.515***
	(0.044)	(0.068)	(0.045)	(0.063)	(0.064)	(0.053)
Sales (log)	0.363***	0.583***	0.369***	0.584***	0.473***	0.345***
	(0.009)	(0.013)	(0.009)	(0.012)	(0.012)	(0.011)
Cost of capital (log)	-0.014**	0.011	-0.020***	-0.002	-0.021**	-0.027***
	(0.007)	(0.010)	(0.007)	(0.010)	(0.010)	(0.008)
Skill intensity	0.600***	-0.920***	3.061***	-0.739***	-1.315***	-2.144***
	(0.063)	(0.096)	(0.085)	(0.104)	(0.105)	(0.076)
Capital intensity	0.003***	0.001***	0.002***	0.002***	0.002***	0.002***
	(0.0004)	(0.001)	(0.0004)	(0.0005)	(0.001)	(0.0005)
Constant	-2.091***	-0.567	-4.130***	-0.815	-0.423	-0.534
	(0.628)	(0.959)	(0.616)	(0.821)	(0.803)	(0.708)
Observations	2,826	2,826	2,548	1,989	1,877	2,525
ii. Services sector: MNEs vs. domestic firms						
MNEs dummy	0.252**	0.564***	0.427***	0.336**	0.336**	0.240
	(0.125)	(0.164)	(0.116)	(0.174)	(0.174)	(0.158)
Sales (log)	0.483***	0.565***	0.435***	0.580***	0.580***	0.525***
	(0.026)	(0.034)	(0.024)	(0.035)	(0.035)	(0.034)
Cost of capital (log)	-0.075***	0.046**	-0.085***	-0.027	-0.027	-0.089***
	(0.020)	(0.027)	(0.019)	(0.028)	(0.028)	(0.026)
Skill intensity	0.331**	-0.951***	3.220***	-0.357	-0.357	-1.928***
	(0.156)	(0.205)	(0.181)	(0.240)	(0.240)	(0.195)
Capital intensity	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***
	(0.0005)	(0.001)	(0.0004)	(0.001)	(0.001)	(0.001)
Constant	-1.572	-0.217	-3.854***	-0.475	-0.475	-0.677
	(1.201)	(1.573)	(1.021)	(1.348)	(1.348)	(1.390)
Observations	706	706	616	480	480	615

Table 7 (continued)

Variable	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
iii. Manufacturing sector: GRfs vs. JVs						
GRFs dummy	0.217***	0.527***	0.300***	0.117*	0.461***	0.549***
	(0.052)	(0.080)	(0.054)	(0.073)	(0.080)	(0.064)
JVs dummy	0.339***	0.453***	0.356***	0.190***	0.453***	0.487***
	(0.058)	(0.089)	(0.058)	(0.080)	(0.078)	(0.068)
Sales (log)	0.360***	0.584***	0.368***	0.583***	0.473***	0.345***
	(0.009)	(0.013)	(0.009)	(0.013)	(0.012)	(0.011)
Cost of capital (log)	-0.015***	0.012	-0.021***	-0.004	-0.021**	-0.027***
	(0.007)	(0.010)	(0.007)	(0.010)	(0.010)	(0.008)
Skill intensity	0.599***	-0.920***	3.055***	-0.739***	-1.313***	-2.142***
	(0.063)	(0.096)	(0.085)	(0.104)	(0.105)	(0.076)
Capital intensity	0.003***	0.001***	0.002***	0.002***	0.002***	0.002***
	(0.0004)	(0.001)	(0.0004)	(0.0005)	(0.001)	(0.0005)
Constant	-2.045***	-0.585	-4.099***	-0.803	-0.426	-0.561
	(0.626)	(0.959)	(0.615)	(0.821)	(0.805)	(0.708)
Observations	2,828	2,828	2,549	1,996	1,874	2,525
iv. Services sector: GRfs vs. JVs						
GRFs dummy	0.398***	0.749***	0.459***	0.392**		0.588***
	(0.158)	(0.208)	(0.145)	(0.225)		(0.193)
JVs dummy	0.124	0.387**	0.316**	0.315		-0.103
	(0.152)	(0.201)	(0.148)	(0.207)		(0.193)
Sales (log)	0.485***	0.571***	0.445**	0.578***		0.549***
	(0.026)	(0.034)	(0.024)	(0.035)		(0.034)
Cost of capital (log)	-0.072***	0.050**	-0.082***	-0.025		-0.083***
	(0.020)	(0.027)	(0.019)	(0.029)		(0.026)
Skill intensity	0.360***	-0.938***	3.240***	-0.357		-1.852***
	(0.0155)	(0.204)	(0.183)	(0.241)		(0.192)
Capital intensity	-0.002***	-0.002***	-0.002***	-0.002***		-0.001***
	(0.0005)	(0.001)	(0.0004)	(0.001)		(0.001)
Constant	-1.481	-0.255	-3.917***	-0.449		-1.273
	(1.192)	(1.567)	(1.033)	(1.358)		(1.373)
Observations	706	707	617	480		613

Notes: Robust regression standard errors in parentheses. Year by sector and year by region dummies were included (not reported). *** and ** denote significance at the 1% and 5% level, respectively.
Source: Own calculations based on NIS.

We finally allow distinct employment effects of foreign firms along two dimensions e.g. skill and capital intensities. We re-run Equations (6) and (7) for firms in manufacturing and services sectors. Results are reported in Table 8 and are very similar for manufacturing and services sectors. The only difference is linked to the interaction term between MNEs dummy and skill intensity which is significant for manufacturing senior managers. This coefficient is positive, indicating senior manager enhancing effect of skill-intensive manufacturing MNEs. In summary, the skill and capital intensity of foreign-owned firms are relevant i.e. their employment effects vary across these attributes.

Table 8. Labour demand effects of multinationals' skill and capital intensity – sample split

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
A. Manufacturing sector						
i. MNEs vs. domestic firms						
$Labour_{t-1}$	0.194**	0.087***	0.178***	0.450***	0.366***	0.116**
	(0.091)	(0.039)	(0.052)	(0.107)	(0.138)	(0.068)
Wage	-0.095	0.477***	-0.407***	-0.794***	-0.518***	-1.036***
	(0.082)	(0.104)	(0.190)	(0.137)	(0.227)	(0.257)
Sales	0.148*	0.231***	0.158***	0.044	0.288*	0.089
	(0.091)	(0.061)	(0.056)	(0.093)	(0.172)	(0.101)
Cost of capital	0.098***	0.111***	0.101***	0.025	0.080	0.012
	(0.025)	(0.025)	(0.023)	(0.051)	(0.071)	(0.044)
Skill intensity	-1.141***	5.183***	-2.027**	-0.558	1.212	1.239**
	(0.445)	(0.729)	(0.984)	(0.541)	(1.250)	(0.680)
Capital intensity	-0.003**	-0.002***	-0.003**	0.003	-0.004	-0.005
	(0.001)	(0.001)	(0.002)	(0.003)	(0.006)	(0.005)
Skill intensity×mne	-0.058	-0.110	-0.372	0.792**	-1.125	-0.400
	(0.350)	(0.451)	(0.494)	(0.453)	(1.222)	(0.545)
Capital intensity×mne	0.002	0.001	0.002	0.002	0.008**	0.003
	(0.001)	(0.001)	(0.003)	(0.003)	(0.004)	(0.005)
Constant	2.970***	-2.524***	1.635	3.752***	-1.664	1.370
	(1.276)	(1.086)	(1.342)	(1.651)	(2.485)	(1.568)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
AR2 (p-value)	0.945	0.659	0.503	0.739	0.299	0.491
Hansen (p-value)	1.000	1.000	1.000	1.000	1.000	1.000
Observations	2,414	1,998	2,112	1,072	1,075	1,127
ii. GRFs vs. JVs						
$Labour_{t-1}$	0.186***	0.045	0.180***	0.419***	0.200**	0.116**
	(0.080)	(0.043)	(0.052)	(0.096)	(0.096)	(0.062)
Wage	-0.085	0.347***	-0.354**	-0.758***	-0.668***	-1.040***
	(0.076)	(0.103)	(0.186)	(0.114)	(0.156)	(0.243)
Sales	0.133*	0.154***	0.147***	0.069	0.123	0.087
	(0.079)	(0.058)	(0.056)	(0.066)	(0.097)	(0.085)
Cost of capital	0.097***	0.112***	0.098***	0.019	0.037	0.011
	(0.025)	(0.025)	(0.023)	(0.047)	(0.046)	(0.042)
Skill intensity	-1.211***	3.142***	-2.328***	0.425	1.205**	1.050**
	(0.412)	(0.536)	(0.958)	(0.585)	(0.597)	(0.602)
Capital intensity	-0.003	-0.003**	-0.003**	0.002	-0.001	-0.006
	(0.001)	(0.001)	(0.001)	(0.005)	(0.007)	(0.005)
Skill intensity×grf	-0.188	0.923***	-0.558	-0.431	-0.593	-0.672
	(0.364)	(0.378)	(0.576)	(0.521)	(0.573)	(0.507)
Skill intensity×jv	0.366	-0.078	0.312	1.126	-0.093	0.165
	(0.535)	(0.551)	(0.618)	(0.748)	(0.719)	(0.700)
Capital intensity×grf	-0.002	-0.003	-0.003	0.002	0.002	0.005
	(0.004)	(0.004)	(0.005)	(0.006)	(0.007)	(0.005)
Capital intensity×jv	0.002*	0.002	0.005	-0.004	-0.004	0.002
	(0.001)	(0.002)	(0.003)	(0.006)	(0.007)	(0.006)
Constant	3.142***	-0.455	1.972	3.128**	0.769	1.454

	(1.161)	(1.080)	(1.334)	(1.501)	(1.299)	(1.381)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
AR2 (p-value)	0.973	0.707	0.464	0.534	0.128	0.851
Hansen (p-value)	1.000	1.000	1.000	1.000	1.000	1.000
Observations	2,414	1,998	2,112	1,072	1,075	1,127

Table 8 (continued)

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
B. Services sector						
i. MNEs vs. domestic firms						
$Labour_{t-1}$	0.412***	0.059	0.188**	0.479**	0.615**	0.123
	(0.121)	(0.110)	(0.090)	(0.228)	(0.281)	(0.177)
Wage	-0.365***	0.230	-0.430**	-0.546***	-1.333***	-0.795***
	(0.112)	(0.226)	(0.230)	(0.213)	(0.436)	(0.347)
Sales	0.417***	0.399***	0.268***	0.169**	0.201	0.269***
	(0.095)	(0.136)	(0.112)	(0.089)	(0.234)	(0.113)
Cost of capital	0.094**	0.026	0.068	0.046	0.150	0.051
	(0.046)	(0.059)	(0.052)	(0.070)	(0.116)	(0.076)
Skill intensity	-0.106	3.215**	-4.332**	-0.124	0.975	0.616
	(0.653)	(1.443)	(2.456)	(1.735)	(0.959)	(1.439)
Capital intensity	0.025	0.057	0.013	-0.007	-0.072	0.033
	(0.026)	(0.061)	(0.043)	(0.064)	(0.063)	(0.062)
Skill intensity×mne	-0.286	-1.685	0.016	0.114	-0.562	-0.053
	(0.674)	(1.264)	(1.860)	(1.539)	(0.902)	(1.614)
Capital intensity×mne	-0.027	-0.058	-0.014	0.006	0.071	-0.034
	(0.026)	(0.062)	(0.043)	(0.064)	(0.064)	(0.062)
Constant	-1.126**	-3.028***	0.155	1.592	-0.640	-1.301
	(0.583)	(1.176)	(0.984)	(1.229)	(1.403)	(1.441)
AR1 (p-value)	0.000	0.000	0.000	0.001	0.000	0.005
AR2 (p-value)	0.168	0.201	0.142	0.994	0.109	0.170
Hansen (p-value)	0.997	1.000	1.000	1.000	1.000	1.000
Observations	587	479	493	212	208	221
ii. GRFs vs. JVs						
$Labour_{t-1}$	0.363***	0.182	0.219***	0.710***	0.610**	0.058
	(0.129)	(0.145)	(0.087)	(0.104)	(0.284)	(0.202)
Wage	-0.350***	0.137	-0.550***	-0.521***	-1.316***	-0.709***
	(0.081)	(0.233)	(0.178)	(0.124)	(0.444)	(0.293)
Sales	0.405***	0.428***	0.264***	0.133**	0.208	0.278***
	(0.078)	(0.118)	(0.098)	(0.077)	(0.241)	(0.128)
Cost of capital	0.093**	0.116*	0.085**	0.047	0.151	0.002
	(0.054)	(0.071)	(0.043)	(0.052)	(0.129)	(0.080)
Skill intensity	-0.209	3.639***	-2.093**	0.524	0.935	0.947
	(0.224)	(1.232)	(1.042)	(0.698)	(0.967)	(1.635)
Capital intensity	-0.004	-0.008	-0.009	0.027	-0.075	0.064
	(0.020)	(0.043)	(0.033)	(0.022)	(0.072)	(0.066)
Skill intensity×grf	-0.141	-0.465	-0.746	-0.891	-0.347	-2.191
	(0.521)	(0.773)	(1.593)	(1.092)	(1.357)	(3.055)
Skill intensity×jv	0.010	0.158	-1.371	0.333	-0.813	-0.165
	(0.454)	(0.949)	(1.196)	(1.035)	(1.362)	(1.463)
Capital intensity×grf	-0.040*	-0.030	-0.004	-0.113**	0.052	-0.166
	(0.025)	(0.056)	(0.037)	(0.058)	(0.110)	(0.121)
Capital intensity×jv	0.002	0.005	0.008	-0.028	0.075	-0.064
	(0.020)	(0.043)	(0.033)	(0.022)	(0.072)	(0.066)
Constant	-0.876	-3.566***	-0.682	0.484	-0.630	-0.975

	(0.579)	(1.117)	(0.670)	(0.564)	(1.435)	(1.480)
AR1 (p-value)	0.000	0.002	0.001	0.002	0.053	0.007
AR2 (p-value)	0.208	0.581	0.104	0.829	0.119	0.121
Hansen (p-value)	1.000	1.000	1.000	1.000	1.000	1.000
Observations	587	479	493	212	208	221

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). Cross-elasticities for different skill groups and occupations are not reported but are available upon request. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.
Source: Own calculations based on NIS.

Robustness Checks

We have run two robustness tests. First, so far all the specifications include binary variables to indicate the foreign ownership status. We replicate the above specifications using rather the intensity of foreign ownership, measured as the logarithmic of one plus the percentage of foreign ownership of the firm's capital.[13] The results are shown in Table A6 (employment security), Table A7 (foreign wage premium) and Table A8 (employment effects of multinationals' skill and capital intensity). With respect to the persistence of employment, the differences between MNEs and domestic firms are not affected: all types of employment and occupation are more persistent in MNEs than in national firms. Again, we find indications that it is better to work for a multinational than a local firm in terms of the level of wages. The MNEs' labour demand is again contingent on their skill and capital intensity of production. Our results concerning differences between GRFs and JVs are not affected: they are associated with (i) secure jobs and job tasks but through different mechanisms, (ii) higher-paid jobs for all types of employment and job task, and (iii) their employment effects also vary with their extent of skill and capital intensity.

Our second robustness check considers the unbalanced nature of the panel data which contains exit. In this case, our results may be biased if the likelihood of exit were correlated with employment. For example, exiting firms may adjust their employment differently prior to exit. Therefore, we re-run the different regressions on the survivor sample only. The results are presented in Table A9 for the security of employment, Table A10 for the foreign wage premia and Table A11 for the employment effects of foreign firms' skill and capital intensity. These results are similar to our previous results on the persistence and wage elasticities of labour demand, multinationals' wage premia, and the employment effects of skill and capital intensities of different types of multinationals. Hence, our results are not driven by a higher likelihood of firm closures among multinationals.

6. CONCLUSION AND POLICY IMPLICATIONS

Do multinational enterprises (MNEs) create qualified jobs (i.e. secure jobs, higher-salaried jobs, and less skilled intensive jobs) than the host domestic enterprises? We address this question by using a firm-level dataset on Cameroonian firms over the period 2005-2017. We distinguish between different skill groups (non-production and production jobs) and types of occupation (senior managerial, senior technical, and technical & lower managerial occupations). In contrast to past studies, we argue that the quality of jobs offered by MNEs may differ depending on their mode of entry e.g. greenfields (GRFs) versus joint ventures (JVs) investments. That is, we separate out the impact of GRFs and JVs on the job quality.

Our first main results are based on estimates of firm-level dynamic labour demand functions for each type of workers and occupations and can be summarized as follows: MNEs exhibit more job security than their indigenous counterparts because of lower speeds and greater half-lives of employment adjustment as well as lower labour-demand elasticities. Employment in GRFs and JVs is also more secure than in domestic firms, but through different mechanisms i.e. employment adjustment processes in the former and the elasticity of labour demand in the latter. In this sense, our

[13] The dataset includes some firms for which the foreign ownership is zero for a number of years (i.e. no foreign ownership). In this case, the logarithmic transformation induces a loss of information. We address this problem by applying the log of one plus the percentage of foreign ownership in the firm's asset.

results do not lend support to the hypothesis that workers in multinationals face greater job insecurity than those in host domestic-owned firms. These results are similar for both manufacturing and services industries.

Our second main results are based on the investigation of whether MNEs pay higher wages than national firms. We also consider a comparison of GRFs with JVs. The results the estimation of Mincerian models confirm that MNEs are associated with higher wages for all skill groups and occupations than local firms. GRFs and JVs also tend to create jobs which offer higher wages than domestic firms, but their generous wages policies differ across skill groups and job tasks. Also, the multinationals' wage premium is very similar across the different types of firms with few exception for some foreign firms in the services sector.

In the last part of the analysis, we look into the employment effects of multinationals along two attributes comprising skill and capital intensity. We find that the employment effects of multinationals differ by their entry mode and their skill and capital intensity: first, skill-intensive (capital-intensive) MNEs substitute (complement) production workers (both non-production and production employment); and second, capital-intensive JVs enhance both skilled and unskilled jobs and make little use of jobs in senior managerial and technical occupations.

In terms of policy, our results show that the concern that multinationals make the lives of workers more insecure may not be well placed, at least in the Cameroonian context. In fact, the different types of multinational firms tend to create jobs which offer a higher security and higher wages than domestic firms. Likewise, the skill and capital intensity of production in multinationals benefit employment in most cases. It is therefore worth attracting the different types of multinational enterprises.

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APPENDIX

Table A1. Distribution by industry and ownership, initial and final sample

Sector	Initial sample		Final sample	
	Frequency	Percent	Frequency	Percent
i. By sector				
6. Extractive industries	72	1.221	57	1.218
7. Grain milling & starch	24	0.406	20	0.427
8. Food processing	42	0.712	34	0.726
9. Bakery & pastry	86	1.458	69	1.473
10. Other food products	210	3.561	170	3.633
11. Beverage & tobacco	455	7.714	378	8.077
12. Textile & weaving	663	11.241	546	11.667
13. Footwear & leather products	148	2.509	126	2.692
14. Wood & furniture	109	1.848	87	1.859
15. Paper & printing	77	1.306	62	1.325
16. Chemicals	156	2.645	123	2.628
17. Rubber & plastic products	177	3.001	132	2.821
18. Non-metallic minerals	849	14.395	691	14.765
19. Basic metals	515	8.732	405	8.654
20. Machinery, electrical machinery & apparatus	252	4.273	178	3.803
21. Transport equipment	407	6.901	312	6.667
22. Miscellaneous	175	2.967	140	2.991
23. Electricity, gas & water	388	6.579	306	6.538
24. Construction & public works	422	7.155	312	6.667
25. Wholesale & retail trade	132	2.238	93	1.387
26. Restaurant & hotels	35	0.593	29	0.620
27. Transport, warehouse & communication	104	1.763	82	1.752
28. Banking & insurance	40	0.678	33	0.705
29. Business & real estate services	90	1.526	74	1.581
30. Services to communities & social services	270	4.578	221	4.722
Total	5,898	100	4,680	100

ii. By ownership type

Case name	MNEs vs. domestic		GRFs vs. domestic firms		JVs vs. domestic firms	
	MNEs	Domestic	GRFs	Domestic	JVs	Domestic
Initial frequency	1,570	4,328	847	5,051	726	5,172
Initial percent	26.62	73.38	14.36	85.64	12.31	87.69
Final frequency	1,284	3,396	693	3,987	593	4,087
Final percent	27.44	72.56	14.81	85.19	12.67	87.33

Source: Authors' calculations based on NIS.

Table A2. Descriptive statistics

Variable	Whole sample		MNEs vs. domestic firms				Mean difference
	Mean	SD	MNEs		Domestic		
			Mean	SD	Mean	SD	
i. Employment (in unit)							
Total labour	132	579	280	713	77	509	203***
Non-productionNon-production labour	55	236	113	375	27	112	86***
Production labour	99	472	191	521	63	447	128***
Senior manager	13	88	28	138	4	9	24***
Senior technician	17	82	35	129	8	34	28***
Technician & lower manager	39	126	71	176	23	88	49***
Employee & labourer	99	472	191	521	63	447	128***
ii. Wage (10^6 CFA)							
Total wage	4.169	38.919	9.741	69.971	2.062	14.873	7.679***
Non-productionNon-production wage	48.226	165.108	92.869	252.068	26.652	91.211	66.217***
Production wage	3.442	48.660	10.652	91.434	0.658	5.281	9.994
Senior manager wage	44.732	102.327	68.784	110.442	29.119	93.476	39.665***
Senior technician wage	17.778	68.199	33.237	110.349	9.535	21.181	23.702***
Technician & lower manager wage	5.816	47.527	12.493	81.180	2.519	9.439	9.975***
Employee & labourer wage	3.442	48.660	10.652	91.434	0.658	5.281	9.994
iii. Other firm-level variables							
Skill intensity	0.410	0.306	0.385	0.308	0.423	0.304	0.037***
Capital intensity	8.166	65.266	12.920	90.698	6.368	52.441	6.553***
Real output (10^6 CFA)	5,701.120	36,410.52	17,353.89	97639.76	1,295.303	5,231.049	16,058.59***
Cost of capital (10^6 CFA)	243.624	1799.155	709.473	3,313.793	67.490	445.172	641.984
Number observations	4,680		1,284		3,396		

Variable	GRFs vs. domestic firms				Mean difference	JVs vs. domestic firms				Mean difference
	GRFs		Domestic			JVs		Domestic		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
i. Employment (in unit)										
Total labour	111	200	136	622	-25	477	991	82	472	394***
Non-productionNon-production labour	37	82	59	256	-22**	193	519	29	107	164***
Production labour	87	158	101	507	-14	307	723	67	413	240***
Senior manager	6	15	15	98	-9**	51	194	4	11	47***
Senior technician	10	29	19	88	-8**	56	169	8	33	48***

Technician & lower manager	30	68	40	134	-10*	109	228	24	85	85***
Employee & labourer	87	158	101	507	-14	307	723	67	413	240***
ii. Wage (10^6 CFA)										
Total wage	6.940	65.580	3.687	32.091	3.253**	12.989	74.591	2.889	30.257	10.100***
Non-productionNon-production wage	62.804	235.71	45.295	146.75	17.510***	124.262	264.406	33.856	133.870	90.406***
Production wage	4.593	51.441	3.243	48.167	1.351	17.412	121.122	1.326	21.778	16.086***
Senior manager wage	42.619	90.639	45.265	105.085	-2.646	96.024	122.106	32.498	92.959	63.526***
Senior technician wage	27.941	113.354	15.876	55.680	12.064***	37.577	107.609	13.116	53.954	24.461***
Technician & lower manager wage	11.347	77.335	4.775	39.411	6.573***	13.514	84.469	4.208	35.041	9.306***
Employee & labourer wage	4.593	51.441	3.243	48.167	1.351	17.412	121.122	1.326	413	16.086***

Table A2 (continued)

Variable	GRFs vs. domestic firms				Mean difference	JVs vs. domestic firms				Mean difference
	GRFs		Domestic			JVs		Domestic		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
iii. Other firm-level variables										
Skill intensity	0.368	0.328	0.419	0.300	-0.051***	0.402	0.285	0.412	0.309	-0.010
Capital intensity	6.006	20.092	8.541	70.208	-2.535	20.970	131.284	6.307	48.512	14.662***
Real output (10^6 CFA)	3,434.172	9,279.417	6,095.149	39,245.6	-2,660.977**	3,350.270	96,567.440	1,657.468	6,161.248	31,912.8***
Cost of capital (10^6 CFA)	105.250	537.767	267.675	1,935.360	-162.425**	1,413.419	4,747.467	73.893	462.431	1,339.526***
Observations	693		3,987		/	593		4,087		/

Variable	MNEs vs. domestic firms			GRFs vs. domestic firms			JVs vs. domestic firms		
	MNEs	Local	Difference	GRFs	Local	Difference	JVs	Local	Difference
iv. Distribution of employment by ownership (%)									
Non-productionNon-production labour	38.39	42.35	-3.96***	36.84	41.89	-5.05***	39.91	41.26	-1.36
Production labour	70.18	76.64	-6.46***	74.99	74.79	0.20	64.97	76.95	-11.38***
Senior manager	7.42	9.29	-1.87***	8.29	8.60	-0.32	6.53	9.04	-2.51***
Senior technician	10.60	13.40	-2.89***	11.30	12.60	-1.30**	10.03	12.99	-2.96***
Technician & lower manager	27.36	31.76	-4.40	27.19	30.87	-3.68***	27.45	30.90	-3.45***

Notes: ***, ** and * denote significance at the 1%, 5% and 10%, respectively. The significance level refers to t tests against the null hypothesis that the mean difference between two groups (e.g. MNEs vs. domestic firms) is equal to zero.

Source: Own calculations based on NIS.

Table A3. Foreign ownership by industry and region

Code	Sector	MNEs	GRFs	JVs
i. By sector distribution				
6	Extractive industries	37	16	21
7	Grain milling & starch	7	3	4
8	Food processing	8	5	3
9	Bakery & pastry	41	10	31
10	Other food products	57	14	43
11	Beverage & tobacco	90	61	29
12	Textile & weaving	118	110	8
13	Footwear & leather products	39	31	8
14	Wood & furniture	34	21	13
15	Paper & printing	28	12	16

16	Chemicals	22	13	9
17	Rubber & plastic products	67	46	21
18	Non-metallic minerals	164	110	54
19	Basic metals	34	9	25
20	Machinery, electrical machinery & apparatus	75	28	47
21	Transport equipment	110	59	51
22	Miscellaneous	77	39	38
23	Electricity, gas & water	55	20	35
24	Construction & public works	66	26	40
25	Wholesale & retail trade	20	7	13
26	Restaurant & hotels	15	6	9
27	Transport, warehouse & communication	21	13	8
28	Banking & insurance	7	1	6
29	Business & real estate services	42	10	32
30	Services to communities & social services	50	23	27
	Total	1,284	693	591

Table A3 (continued)

Code	Region	MNEs	GRFs	JVs
ii. By region distribution				
1	Adamaoua	26	15	11
2	Centre	216	142	74
3	East	14	9	5
4	Far-north	3	3	/
5	Littoral	945	494	451
6	North	13	/	13
7	North-west	7	3	4
8	South	3	3	/
9	South-west	34	13	21
10	West	23	11	12
	Total	1,284	693	591

Source: Own calculations based on NIS.

Table A4.Comparison of labour demand estimates: foreign vs. domestic firms

Variable	All (1)			Non-production (2)			Production (3)		
	OLS	FE	One-step system GMM	OLS	FE	One-step system GMM	OLS	FE	One-step system GMM
$Labour_{t-1}$	0.556***	0.278***	0.512***	0.677***	0.262***	0.298*** (0.148)	0.432***	0.212***	0.277***
	(0.026)	(0.030)	(0.096)	(0.029)	(0.039)		(0.029)	(0.029)	(0.068)
$Labour_{t-1}$×mne	0.015	-0.026	0.173	0.072	0.061	0.175**	0.071	0.017	-0.012
	(0.051)	(0.052)	(0.160)	(0.046)	(0.050)	(0.090)	(0.047)	(0.047)	(0.071)
Wage	-0.187***	-0.223***	-0.055 (0.070)	-0.012 (0.023)	0.0002 (0.041)	-0.182 (0.117)	-0.514***	-0.622***	-0.512***
	(0.018)	(0.020)					(0.030)	(0.033)	(0.097)
Wage×mne	-0.030	-0.034	-0.022	0.040	-0.011	-0.004	0.006	-0.037	-0.104
	(0.044)	(0.050)	(0.169)	(0.031)	(0.044)	(0.133)	(0.043)	(0.041)	(0.088)
Sales	0.247***	0.281***	0.141***	0.116***	0.153***	0.102 (0.074)	0.229***	0.205***	0.167***
	(0.018)	(0.019)	(0.063)	(0.015)	(0.021)		(0.019)	(0.021)	(0.056)
Sales×mne	0.038	0.066*	-0.050	-0.009	0.036	-0.017	0.005	0.052	0.160***
	(0.038)	(0.041)	(0.121)	(0.033)	(0.038)	(0.120)	(0.036)	(0.036)	(0.055)
Cost of capital	0.028***	0.054***	0.020 (0.028)	0.030***	0.075***	0.095***	0.034***	0.048***	0.032 (0.028)
	(0.006)	(0.009)		(0.008)	(0.014)	(0.032)	(0.008)	(0.012)	
Constant	-0.759	0.963***	1.008** (0.531)	2.169***	2.168***	2.556** (1.208)	-0.570	-0.333	0.377
	(0.574)	(0.201)		(0.224)	(0.202)		(0.534)	(0.402)	(0.0621)
AR1 (p-value)			0.000			0.000			0.000
AR2 (p-value)			0.102			0.766			0.523

Hansen (p-value)			0.293			0.654			1.000
Observations	3,974	3,973	3,973	2,477	2,477	2,477	2,605	2,605	2,605

Variable	Senior manager (4)			Senior technician (5)			Technician & lower manager (6)		
	OLS	FE	One-step system GMM	OLS	FE	One-step system GMM	OLS	FE	One-step system GMM
$Labour_{t-1}$	0.643***	0.367***	0.523***	0.578***	0.325***	0.343***	0.436***	0.178***	0.273***
	(0.043)	(0.057)	(0.106)	(0.040)	(0.040)	(0.089)	(0.040)	(0.037)	(0.073)
$Labour_{t-1}$ ×mne	0.111**	-0.118**	0.137	0.088	-0.110**	0.286**	0.095*	-0.042	0.126
	(0.061)	(0.069)	(0.143)	(0.058)	(0.062)	(0.134)	(0.059)	(0.050)	(0.126)
Wage	-0.333***	-0.574***	-0.465***	-0.419***	-0.652***	-0.544***	-0.622***	-0.726***	-1.004***
	(0.036)	(0.044)	(0.110)	(0.038)	(0.055)	(0.137)	(0.045)	(0.068)	(0.151)
Wage×mne	0.033	0.064	0.283**	0.023	0.033	0.243	0.046	0.022	0.208**
	(0.039)	(0.047)	(0.136)	(0.045)	(0.050)	(0.157)	(0.057)	(0.046)	(0.101)
Sales	0.139***	0.137***	0.153***	0.137***	0.137***	0.265***	0.171***	0.140***	0.183***
	(0.018)	(0.023)	(0.048)	(0.021)	(0.024)	(0.095)	(0.022)	(0.024)	(0.063)
Sales×mne	-0.013	0.012	-0.111	0.011	0.036	-0.093	0.007	0.033	-0.075
	(0.031)	(0.033)	(0.084)	(0.035)	(0.033)	(0.115)	(0.040)	(0.034)	(0.095)
Cost of capital	0.024***	0.035***	0.008	0.025***	0.045***	-0.002	0.035***	0.039***	0.019
	(0.008)	(0.015)	(0.033)	(0.008)	(0.016)	(0.034)	(0.010)	(0.015)	(0.035)
Constant	-2.040***	1.853***	2.001***	0.190	0.809***	0.393	0.541	0.820***	-0.199
	(0.436)	(0.239)	(0.641)	(0.390)	(0.282)	(1.009)	(0.363)	(0.299)	(0.714)

Table A4 (continued)

Variable	Senior manager (4)			Senior technician (5)			Technician & lower manager (6)		
	OLS	FE	One-step system GMM	OLS	FE	One-step system GMM	OLS	FE	One-step system GMM
AR1 (p-value)			0.000			0.000			0.000
AR2 (p-value)			0.388			0.187			0.157
Hansen (p-value)			1.000			1.000			1.000
Observations	1,284	1,284	1,284	1,283	1,283	1,283	1,348	1,348	1,348

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). Cross-elasticities for different skill groups and occupations are not reported but are available upon request. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

Source: Own calculations based on NIS.

Table A5. Implied effects of ownership type on employment

Case name	MNEs vs. local firms (1)		GRFs vs. JVs (2)	
	MNEs	Domestic firms	GRF	JVs
Total labour	-69	-32	58	-326
Non-production	-40	-25	10	-114
Production	-160	-135	-33	-1395
Senior manager	-15	-27	-2	-72
Senior technician	-28	-29	-6	-124
Technician & lower manager	-94	-98	-34	-117

Source: Own calculations based on NIS.

Table A6. Labour demand regressions – intensity of foreign ownership

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
i. MNEs vs. domestic firms						
$Labour_{t-1}$	0.486***	0.169**	0.272***	0.404***	0.274**	0.123
	(0.112)	(0.083)	(0.068)	(0.180)	(0.148)	(0.101)
$Labour_{t-1}$×lnmne	0.019	0.032	-0.009	-0.018	-0.013	0.003
	(0.041)	(0.020)	(0.016)	(0.049)	(0.027)	(0.025)
Wage	-0.069	-0.092	-0.834***	-0.986***	-0.716***	-1.309***
	(0.070)	(0.103)	(0.144)	(0.225)	(0.117)	(0.338)
Wage×lnmne	-0.023	0.003	-0.003	0.026	0.019	0.018
	(0.037)	(0.016)	(0.016)	(0.029)	(0.024)	(0.019)
Sales	0.147***	0.035	0.235***	-0.039	0.119	0.142
	(0.065)	(0.072)	(0.058)	(0.111)	(0.107)	(0.119)
Sales×lnmne	-0.005	-0.008	0.019***	-0.002	0.007	-0.005
	(0.026)	(0.011)	(0.008)	(0.014)	(0.010)	(0.012)
Cost of capital	0.024	0.120***	0.076***	-0.019	0.017	0.005
	(0.028)	(0.032)	(0.023)	(0.014)	(0.046)	(0.041)
Constant	1.056***	2.996***	-0.969	5.484***	1.096	-0.091
	(0.476)	(1.270)	(0.962)	(1.973)	(1.968)	(0.084)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.005
AR2 (p-value)	0.165	0.498	0.921	0.699	0.111	0.094

Hansen (p-value)	1.000	1.000	1.000	1.000	1.000	1.000
Observations	3,973	2,477	2,605	1,284	1,283	1,348

Table A6 (continued)

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
ii. GRFs vs. JVs entries						
$Labour_{t-1}$	0.451***	0.172**	0.290***	0.492***	0.393***	0.077
	(0.099)	(0.077)	(0.068)	(0.131)	(0.084)	(0.086)
$Labour_{t-1} \times$ lngrf	0.016	0.040**	-0.037**	-0.040	-0.046**	0.010
	(0.037)	(0.024)	(0.019)	(0.037)	(0.024)	(0.031)
$Labour_{t-1} \times$ lnjv	-0.025	0.015	0.020	0.009	0.049	0.019
	(0.057)	(0.028)	(0.023)	(0.054)	(0.032)	(0.023)
Wage	-0.085	-0.090	-0.871***	-0.803***	-0.673***	-1.132***
	(0.059)	(0.101)	(0.139)	(0.149)	(0.216)	(0.304)
Wage×lngrf	0.056	0.013	-0.016	0.030	0.004	0.013
	(0.037)	(0.018)	(0.016)	(0.028)	(0.027)	(0.022)
Wage×lnjv	-0.096**	-0.014	0.011	0.027	0.020	0.021
	(0.046)	(0.018)	(0.023)	(0.025)	(0.030)	(0.021)
Sales	0.168***	0.032	0.247***	0.058	0.162***	0.082
	(0.049)	(0.067)	(0.059)	(0.071)	(0.053)	(0.103)
Sales×lngrf	-0.009	-0.021	0.030***	-0.002	0.017	-0.002
	(0.023)	(0.014)	(0.011)	(0.014)	(0.013)	(0.015)
Sales×lnjv	0.040	0.012	0.005	0.001	-0.005	-0.003
	(0.038)	(0.014)	(0.012)	(0.012)	(0.013)	(0.010)
Cost of capital	0.021	0.116***	0.070***	-0.035	0.016	-0.007
	(0.026)	(0.031)	(0.024)	(0.040)	(0.031)	(0.039)
Constant	0.957**	2.963***	-1.244	3.876***	0.877**	1.135
	(0.434)	(1.237)	(0.999)	(1.293)	(0.497)	(2.091)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
AR2 (p-value)	0.530	0.418	0.813	0.726	0.212	0.222
Hansen (p-value)	1.000	1.000	1.000	0.989	1.000	1.000
Observations	3,973	2,477	2,605	1,284	1,283	1,348

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). Cross-elasticities for different skill groups and occupations are not reported but are available upon request. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.
Source: Own calculations based on NIS.

Table A7. Wage premium across skill groups and occupations – intensity of foreign ownership

Variable	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
i. MNEs vs. domestic firms						
lnMNEs	0.064***	0.118***	0.077***	0.045***	0.104***	0.118***
	(0.009)	(0.014)	(0.010)	(0.013)	(0.014)	(0.011)
Sales (log)	0.371***	0.578***	0.379***	0.581***	0.487***	0.359***
	(0.008)	(0.012)	(0.008)	(0.012)	(0.012)	(0.010)
Interest rate (log)	-0.018***	0.020**	-0.027***	-0.004	-0.013	-0.030***
	(0.006)	(0.010)	(0.007)	(0.010)	(0.010)	(0.008)
Capital intensity	0.003***	0.002***	0.002***	0.002***	-0.0004	0.003***
	(0.0003)	(0.0004)	(0.0003)	(0.0003)	(0.0004)	(0.0003)
Skill intensity	0.558***	-0.915***	3.075***	-0.696***	-1.112***	-2.096***
	(0.057)	(0.086)	(0.077)	(0.093)	(0.097)	(0.069)
Constant	-1.924***	-0.631	-3.935***	-0.857	-0.650	-0.235

	(0.611)	(0.923)	(0.597)	(0.847)	(0.759)	(0.690)
Observations	3,535	3,535	3,172	2,476	2,330	3,140

Table A7 (continued)

Variable	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
ii. GRFs vs. JVs						
lnGRFs	0.055***	0.122***	0.071***	0.034***	0.104***	0.125***
	(0.011)	(0.016)	(0.011)	(0.015)	(0.016)	(0.013)
lnJVs	0.079***	0.113***	0.085***	0.062***	0.103***	0.108***
	(0.013)	(0.020)	(0.013)	(0.018)	(0.018)	(0.015)
Sales (log)	0.368***	0.579***	0.377***	0.580***	0.487***	0.362***
	(0.008)	(0.012)	(0.008)	(0.012)	(0.012)	(0.010)
Interest rate (log)	-0.019***	0.020**	-0.027***	-0.005	-0.013	-0.029***
	(0.006)	(0.010)	(0.007)	(0.010)	(0.010)	(0.008)
Capital intensity	0.003***	0.002***	0.002***	0.002***	-0.0004	0.003***
	(0.0003)	(0.0004)	(0.0003)	(0.0003)	(0.0004)	(0.0003)
Skill intensity	0.554***	-0.914***	3.068***	-0.695***	-1.112***	-2.090***
	(0.057)	(0.086)	(0.077)	(0.093)	(0.097)	(0.069)
Constant	-1.887***	-0.641	-3.906***	-0.834	-0.652	-0.271
	(0.610)	(0.924)	(0.597)	(0.846)	(0.760)	(0.691)
Observations	3,539	3,539	3,172	2,477	2,328	3,139

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). *** and ** denote significance at the 1% and 5% level, respectively.

Source: Own calculations based on NIS.

Table A8. Labour demand effects of multinationals' skill and capital intensity – foreign ownership intensity

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
i. MNEs vs. domestic firms						
$Labour_{t-1}$	0.141**	0.102***	0.168***	0.368***	0.379***	0.181***
	(0.076)	(0.043)	(0.039)	(0.133)	(0.151)	(0.042)
Wage	-0.088	0.448***	-0.289***	-0.833***	-0.595***	-1.105***
	(0.058)	(0.098)	(0.114)	(0.212)	(0.198)	(0.149)
Sales	0.121*	0.291***	0.165***	0.016	0.329***	0.190***
	(0.071)	(0.062)	(0.037)	(0.100)	(0.127)	(0.038)
Cost of capital	0.097***	0.093***	0.096***	-0.017	0.068	0.082***
	(0.024)	(0.023)	(0.020)	(0.059)	(0.061)	(0.036)
Skill intensity	-1.074***	5.170***	-2.569***	-1.137	1.066	0.982***
	(0.304)	(0.651)	(0.527)	(0.766)	(1.063)	(0.459)
Capital intensity	-0.002***	-0.001	-0.002**	0.005	-0.004	-0.001
	(0.001)	(0.001)	(0.001)	(0.004)	(0.006)	(0.005)
Skill intensity×lnmne	-0.015	0.177**	0.064	0.356**	-0.199	0.024
	(0.051)	(0.104)	(0.081)	(0.176)	(0.254)	(0.085)
Capital intensity×lnmne	0.0005**	-0.00002	0.0004	-0.002**	0.001	0.0002
	(0.0002)	(0.0003)	(0.0002)	(0.001)	(0.002)	(0.001)
Constant	3.672***	-2.584***	2.350***	4.458***	-2.452	-0.532
	(1.109)	(1.035)	(0.829)	(1.744)	(2.343)	(0.687)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.006	0.000
AR2 (p-value)	0.262	0.987	0.934	0.271	0.350	0.102
Hansen (p-value)	1.000	1.000	1.000	1.000	1.000	1.000

Observations	3,001	2,477	2,605	1,284	1,283	1,348

Table A8 (continued)

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
ii. GRFs vs. JVs						
$Labour_{t-1}$	0.154***	0.113***	0.182***	0.325***	0.062	0.109**
	(0.069)	(0.043)	(0.045)	(0.100)	(0.107)	(0.062)
Wage	-0.092*	0.425***	-0.287***	-0.785***	-0.698***	-1.343***
	(0.055)	(0.095)	(0.149)	(0.155)	(0.299)	(0.267)
Sales	0.125**	0.294***	0.149***	0.049	-0.068	0.172
	(0.066)	(0.062)	(0.048)	(0.069)	(0.112)	(0.115)
Cost of capital	0.092***	0.085***	0.093***	-0.009	-0.037	0.028
	(0.023)	(0.022)	(0.021)	(0.046)	(0.070)	(0.045)
Skill intensity	-1.084***	5.080***	-2.905***	0.582	-2.140	-0.456
	(0.294)	(0.631)	(0.742)	(0.502)	(1.533)	(0.858)
Capital intensity	-0.003***	-0.001	-0.003*	0.003	-0.006	0.001
	(0.001)	(0.001)	(0.002)	(0.006)	(0.021)	(0.005)
Skill intensity×lngrf	-0.053	0.080	0.002	-0.074	0.264	0.045
	(0.056)	(0.105)	(0.093)	(0.102)	(0.198)	(0.106)
Skill intensity×lnjv	0.068	-0.001	0.189	0.150	0.999***	0.264
	(0.080)	(0.001)	(0.132)	(0.144)	(0.401)	(0.352)
Capital intensity×lngrf	-0.001	0.343***	-0.001	0.004	0.003	0.002**
	(0.001)	(0.151)	(0.001)	(0.001)	(0.005)	(0.001)
Capital intensity×lnjv	0.0005**	-0.0001	0.001	-0.001	0.001	-0.001
	(0.0003)	(0.0003)	(0.0005)	(0.002)	(0.005)	(0.001)
Constant	3.553***	-2.683***	2.425***	3.801***	5.783***	-0.177
	(1.021)	(1.053)	(1.077)	(1.240)	(2.218)	(1.973)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.003	0.000
AR2 (p-value)	0.306	0.556	0.679	0.839	0.994	0.120
Hansen (p-value)	1.000	1.000	1.000	1.000	1.000	0.970
Observations	3,001	2,477	2,605	1,284	1,283	1,348

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). Cross-elasticities for different skill groups and occupations are not reported but are available upon request. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

Source: Own calculations based on NIS.

Table A9. Labour demand regressions – firm exit

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
i. MNEs vs. domestic firms						
$Labour_{t-1}$	0.431***	0.097	0.176***	0.490***	0.169	0.064
	(0.129)	(0.091)	(0.074)	(0.118)	(0.147)	(0.078)
$Labour_{t-1} \times$ mne	0.192	0.192**	0.009	0.084	0.133	0.091
	(0.177)	(0.095)	(0.077)	(0.145)	(0.146)	(0.111)
Wage	-0.097	-0.041	-0.678***	-0.400***	-0.627***	-1.281***
	(0.070)	(0.106)	(0.129)	(0.109)	(0.134)	(0.215)
Wage × mne	-0.139	-0.039	-0.091	0.238*	-0.020	0.046
	(0.210)	(0.090)	(0.104)	(0.143)	(0.129)	(0.114)
Sales	0.175***	-0.025	0.150***	0.177***	0.118	0.126
	(0.067)	(0.080)	(0.063)	(0.050)	(0.085)	(0.080)

Sales×mne	-0.021	0.134**	0.200***	-0.073	0.091	0.043
	(0.135)	(0.078)	(0.065)	(0.085)	(0.067)	(0.077)
Cost of capital	0.029	0.099***	0.062***	0.035	0.019	0.017
	(0.031)	(0.035)	(0.024)	(0.034)	(0.048)	(0.044)
Constant	1.071**	3.401***	0.388	0.996**	0.875	0.058
	(0.534)	(1.382)	(0.987)	(0.475)	(1.270)	(1.221)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
AR2 (p-value)	0.266	0.468	0.716	0.373	0.241	0.317
Hansen (p-value)	1.000	1.000	1.000	1.000	1.000	1.000
Observations	3,434	2,104	2,215	1,104	1,109	1,163

Table A9 (continued)

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
ii. GRFs vs. JVs entries						
$Labour_{t-1}$	0.399***	0.181**	0.204***	0.397***	0.285***	0.130**
	(0.118)	(0.084)	(0.077)	(0.101)	(0.106)	(0.074)
$Labour_{t-1} \times grf$	0.069	0.010	-0.065	-0.079	0.007	0.100
	(0.174)	(0.019)	(0.090)	(0.166)	(0.144)	(0.115)
$Labour_{t-1} \times jv$	0.061	0.004	0.077	0.281**	0.177	0.047
	(0.208)	(0.021)	(0.111)	(0.145)	(0.146)	(0.081)
Wage	-0.164***	-0.042	-0.733***	-0.488***	-0.636***	-1.141***
	(0.061)	(0.107)	(0.131)	(0.088)	(0.137)	(0.212)
Wage×grf	0.377**	0.007	-0.142	0.242**	0.010	0.042
	(0.202)	(0.099)	(0.090)	(0.122)	(0.115)	(0.093)
Wage×jv	-0.256	-0.099	-0.017	0.132	-0.036	0.010
	(0.239)	(0.095)	(0.123)	(0.146)	(0.139)	(0.106)
Sales	0.231***	0.008	0.176***	0.172***	0.195***	0.130**
	(0.058)	(0.072)	(0.065)	(0.044)	(0.057)	(0.062)
Sales×grf	-0.106	0.042	0.168***	-0.054	0.021	0.009
	(0.113)	(0.084)	(0.069)	(0.088)	(0.073)	(0.070)
Sales×jv	0.154	0.231***	0.180***	0.039	0.088	0.106
	(0.173)	(0.100)	(0.072)	(0.095)	(0.078)	(0.077)
Cost of capital	0.027	0.097***	0.054***	0.011	0.024	0.018
	(0.031)	(0.032)	(0.023)	(0.026)	(0.045)	(0.033)
Constant	0.836	2.892***	-0.022	1.337***	-0.501	-0.040
	(0.524)	(1.253)	(1.043)	(0.408)	(0.633)	(0.593)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
AR2 (p-value)	0.536	0.613	0.826	0.984	0.188	0.252
Hansen (p-value)	1.000	1.000	1.000	1.000	1.000	1.000
Observations	3,973	2,477	2,605	1,284	1,283	1,348

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). Cross-elasticities for different skill groups and occupations are not reported but are available upon request. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.
Source: Own calculations based on NIS.

Table A10. Wage premium across skill groups and occupations – firm exit

Variable	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
i. MNEs vs. domestic firms						
MNEs dummy	0.229***	0.483***	0.286***	0.160***	0.443***	0.461***
	(0.043)	(0.068)	(0.044)	(0.064)	(0.067)	(0.052)
Sales (log)	0.358***	0.572***	0.359***	0.569***	0.467***	0.348***
	(0.008)	(0.013)	(0.009)	(0.012)	(0.013)	(0.010)
Interest rate (log)	-0.022***	0.020**	-0.025***	0.005	0.002	-0.038***
	(0.007)	(0.011)	(0.007)	(0.010)	(0.011)	(0.008)
Capital intensity	0.007***	-0.002***	0.004***	0.002***	-0.001***	0.007***
	(0.0003)	(0.001)	(0.0003)	(0.0005)	(0.0005)	(0.0004)
Skill intensity	0.453***	-1.083***	2.983***	-0.781***	-1.140***	-2.231***

	(0.059)	(0.094)	(0.079)	(0.103)	(0.108)	(0.073)
Constant	-1.983***	-0.431	-4.089***	-0.662	-0.602	-0.478
	(0.620)	(0.982)	(0.603)	(0.838)	(0.833)	(0.704)
Observations	2,940	2,940	2,644	2,071	1,953	2,610

Table A10 (continued)

Variable	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
ii. GRFs vs. JVs						
GRFs dummy	0.190***	0.547***	0.254***	0.125*	0.497***	0.529***
	(0.052)	(0.082)	(0.054)	(0.076)	(0.084)	(0.064)
JVs dummy	0.283***	0.409***	0.328***	0.195***	0.394***	0.401***
	(0.056)	(0.088)	(0.057)	(0.080)	(0.082)	(0.066)
Sales (log)	0.356***	0.574***	0.357***	0.569***	0.469***	0.350***
	(0.008)	(0.013)	(0.009)	(0.013)	(0.013)	(0.011)
Interest rate (log)	-0.023***	0.022**	-0.025***	0.004	0.003	-0.037***
	(0.007)	(0.011)	(0.007)	(0.010)	(0.011)	(0.008)
Capital intensity	0.007***	-0.002***	0.004***	0.002***	-0.001***	0.007***
	(0.0003)	(0.001)	(0.0003)	(0.0005)	(0.0005)	(0.0004)
Skill intensity	0.451***	-1.071***	2.975***	-0.780***	-1.134***	-2.230***
	(0.059)	(0.094)	(0.079)	(0.103)	(0.108)	(0.073)
Constant	-1.940***	-0.490	-4.039***	-0.666	-0.636	-0.530
	(0.619)	(0.983)	(0.604)	(0.837)	(0.835)	(0.705)
Observations	2,941	2,941	2,640	2,074	1,948	2,611

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). *** and ** denote significance at the 1% and 5% level, respectively.

Source: Own calculations based on NIS.

Table A11. Labour demand effects of multinationals' skill and capital intensity – firm exit

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
i. MNEs vs. domestic firms						
$Labour_{t-1}$	0.232***	0.078**	0.255***	0.414***	0.275***	0.106**
	(0.082)	(0.044)	(0.068)	(0.113)	(0.117)	(0.052)
Wage	-0.201***	0.470***	-0.318***	-0.621***	-0.608***	-1.079***
	(0.057)	(0.112)	(0.098)	(0.171)	(0.159)	(0.184)
Sales	0.151***	0.292***	0.185***	0.143**	0.278***	0.128**
	(0.048)	(0.077)	(0.049)	(0.074)	(0.097)	(0.067)
Cost of capital	0.094***	0.090***	0.075***	0.005	0.064	0.041
	(0.035)	(0.024)	(0.029)	(0.052)	(0.053)	(0.044)
Skill intensity	-0.608*	5.705***	-1.286**	-0.330	2.380***	1.079*
	(0.367)	(0.833)	(0.598)	(0.518)	(0.874)	(0.651)
Capital intensity	0.003	-0.002***	-0.003	0.002	0.008	0.004
	(0.006)	(0.001)	(0.004)	(0.004)	(0.007)	(0.006)
Skill intensity×mne	-0.182	-0.636	-1.004**	0.742	-0.748	-0.471
	(0.510)	(0.481)	(0.580)	(0.560)	(0.656)	(0.517)
Capital intensity×mne	-0.008	0.0005	0.0002	-0.003	-0.009	-0.005
	(0.006)	(0.001)	(0.005)	(0.004)	(0.007)	(0.006)
Constant	2.737***	-2.659**	1.391**	1.363	-1.848	0.105
	(0.734)	(1.266)	(0.681)	(1.053)	(1.460)	(1.269)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.055	0.000
AR2 (p-value)	0.171	0.562	0.271	0.628	0.994	0.188
Hansen (p-value)	1.000	1.000	1.000	1.000	0.325	1.000

Observations	2,549	2,104	2,215	1,104	1,109	1,163

Table A11 (continued)

	All (1)	Non-production (2)	Production (3)	Senior manager (4)	Senior technician (5)	Technician & lower manager (6)
ii. GRFs vs. JVs						
$Labour_{t-1}$	0.171	0.092**	0.151***	0.340***	0.246***	0.107**
	(0.129)	(0.043)	(0.051)	(0.108)	(0.102)	(0.052)
Wage	-0.145**	0.467***	-0.313***	-0.681***	-0.636***	-1.039***
	(0.071)	(0.103)	(0.138)	(0.171)	(0.140)	(0.166)
Sales	0.119**	0.301***	0.155***	0.106	0.241***	0.137***
	(0.060)	(0.075)	(0.046)	(0.067)	(0.082)	(0.057)
Cost of capital	0.084**	0.085***	0.079***	0.017	0.051	0.035
	(0.045)	(0.024)	(0.023)	(0.045)	(0.047)	(0.042)
Skill intensity	-0.773***	5.702***	-2.352***	1.027	2.048***	1.186**
	(0.180)	(0.755)	(0.710)	(0.918)	(0.762)	(0.644)
Capital intensity	-0.0003	-0.002***	-0.002***	0.003	0.008	0.005
	(0.001)	(0.001)	(0.0003)	(0.006)	(0.006)	(0.005)
Skill intensity×grf	-0.405	-1.169**	-0.881*	-1.026	-0.635	-0.811
	(0.284)	(0.683)	(0.520)	(0.659)	(0.691)	(0.659)
Skill intensity×jv	-0.410	-0.003	-0.040	0.200	-0.524	0.085
	(0.428)	(0.003)	(0.490)	(0.658)	(0.623)	(0.591)
Capital intensity×grf	0.002	0.078	-0.004	0.0003	-0.009	-0.002
	(0.004)	(0.531)	(0.005)	(0.007)	(0.007)	(0.006)
Capital intensity×jv	-0.001**	0.0005	0.001***	-0.003	-0.009	-0.005
	(0.001)	(0.001)	(0.0005)	(0.006)	(0.006)	(0.005)
Constant	3.340***	-2.798***	2.347***	1.828	-1.222	-0.070
	(1.010)	(1.210)	(0.987)	(1.231)	(1.226)	(0.973)
AR1 (p-value)	0.000	0.000	0.000	0.000	0.000	0.000
AR2 (p-value)	0.158	0.855	0.970	0.510	0.728	0.353
Hansen (p-value)	1.000	1.000	1.000	0.346	0.320	1.000
Observations	2,549	2,104	2,215	1,104	1,109	1,163

Notes: Standard errors in parentheses. Year by sector and year by region dummies were included (not reported). Cross-elasticities for different skill groups and occupations are not reported but are available upon request. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.
Source: Own calculations based on NIS.

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