

**THE DRIVERS OF THE INTERNATIONAL MOBILITY OF MANAGERS AND
EXECUTIVES: EVIDENCE FROM OECD COUNTRIES**

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Abstract

This paper investigates the drivers of managers' and executives' migration to OECD countries. It builds a model based on four attractiveness factors of the country of destination. Namely, economic conditions, cultural affinity, institutions and quality of life. The paper finds that economic incentives do not motivate managers' nor executives' mobility. Instead, it is the quality of life, some cultural aspects and the institutional quality of the country of destination that drives mobility. These findings have implications for international firms' recruitment strategies and for countries aiming to attract highly skilled talent.

INTRODUCTION

It is generally agreed that the migration of highly skilled talent leads to positive spill-over effects in the destination country (Peri, 2016). It is also agreed that managers and executives have a positive impact on organizational performance (see e.g., Day & Lord, 1988; Thomas, 1988). More specifically, CEOs' international experience (e.g., time spent abroad) has a significant effect on firms' performance (Le & Kroll, 2017). Access to the global highly skilled talent pool, particularly to managers, is thus essential for the success of organizations. In this context, it becomes fundamental to understand what drives the international mobility of managers, and, therefore, the factors that give a "talent competitive advantage" to countries in terms of attracting highly skilled foreign personnel.

In this paper, we distinguish between "managers" and "executives." We do not base this distinction on skills or competencies, but on the job performed. "Managers" refer to individuals with tertiary education and higher that perform a non-manual activity. Within managers, we define the term "executives" as C-level executives, that is, managers with the highest level of seniority. While all executives are managers, not all managers are executives.

Arguably, income improvements play a key role in determining the overall migration flows (Grogger & Hanson, 2011). Specifically, talent moves to where skills can be developed and where the return on those skills is greatest (Dustmann, Fadlon & Weiss, 2011). In other words, countries that offer higher wages and career opportunities, attract talent (Biondo, Monteleone, Skonieczny & Torrisi (2012). Inkson, et al. (2004) suggest that underlining talent flows is a combination of factors not necessarily linked to economic issues. It is thus recognized that access to networks (e.g., ethnic) in the destination country plays a key role in attracting migrants (Liebig & Sousa-Poza, 2005; Pedersen, Pytlikova & Smith, 2008). Other driving factors are the political system, legal environment and the characteristics of the workforce (Tarique & Schuler, 2010). In addition, immigration policies (Bonjour, 2011; Czaika & De Haas, 2013) have a significant impact on flows. Language (e.g., linguistic proximity), also drives the overall migration patterns (Adserà & Pytliková, 2015). All these previous studies consider worker migration in general, without distinguishing them by skills or seniority. In the case of highly skilled talent, national identity (or how people define themselves following the characteristics they believe

define their community) is an additionally significant factor for flows (De Cieri, Sheehan, Costa, Fenwick & Cooper, 2009).

The focus of the literature varies. Sections of the literature concentrate on the analysis of global migration flows in general (see e.g., Docquier, Marfouk, Salomone & Sekkat, 2012; Kerr, Kerr, Özden & Parsons, 2016; Mayda, 2010). This part of the literature looks at the macroeconomic factor that affect these flows (e.g., differences in income per capita) and demographic imbalances (e.g., young individuals migrating to countries with high levels of elderly population) between country of origin and destination. Other sections of the literature are country-specific and analyse the drivers of highly skilled talent flows from those countries (see e.g., Biondo, et al., 2012; Inkson, et al., 2004; Jackson, et al., 2005) but fall short of assessing the factors behind managers' migration. We intend to bridge these two strands of the literature by specifically assessing the drivers of the mobility of international executives across countries. Our study covers the stock of migrants (working age 15 to 65) originating in 190 countries in the period 2010–2011 and migrating to 32 OECD countries.

To do this, we build on current models to further probe the migration of highly skilled talent to focus on managers' mobility. Our objective is to capture the impact of the factors generally assumed to drive migration—economic, cultural and institutional—on managers' mobility. We build a model around four factors: economic conditions, cultural affinity, institutions and quality of life. We assume that these factors compose a broader basis which drives migration. To empirically estimate the proposed model, we use fixed effect (FE) regressions to capture the impact of these factors on the stock of migrants available in OECD countries during the period under study. It is important to note that the model does not consider push factors (i.e., factors that lead individuals to emigrate from a country) because our analysis is particularly interested in the factors that make the receiving countries in our sample attractive, especially for managers and executives (i.e., pull factors).

We go on to carry several specifications of the model, comparing the impact of the different attractiveness factors on the migration of the following groups: lower skilled, highly skilled, managers and executives. We find that quality of life has a more significant role in driving the mobility of C-level executives than economic measures do. For example, if Spain's quality of life improves to a level

comparable to that of Switzerland, it would increase the number of foreign C-level executives by 50%. In addition, ethnic relations may not be significant for managers, but they are for the overall highly skilled migrant sample, a finding which differs from that generally proposed in the literature. As several past studies have found, we find that women tend to migrate less than men. Our results also show that female managers and executives are less likely to migrate than lower skilled females.

These results have implications for the recruitment/relocation strategies of global companies. International enterprises attempting to maximize their access to the talent pool of international managers, for instance, can develop packages that capitalize on the particularities of the quality of life of the potential destination country. Such packages can contribute to streamlining the process and focusing on candidates' needs to increase the likelihood of relocation. Our results, in addition, have policy implications in terms of the "branding" of countries whose aim is to attract managers and other highly skilled talent.

The first section looks at the stock of migrants among the economies in our sample, highlighting the different trends experienced by OECD countries. The second section provides the background to our study and develops a set of hypotheses. The third section discusses the data and variables employed in the construction of our model. Following this discussion, the fourth section describes the empirical model. Section five estimates the proposed model and discusses results. Section six concludes.

OVERVIEW OF MIGRANT STOCKS

In this paper, lower skilled migrants refer to those individuals who undertake manual jobs or perform tasks such operating machinery. Lower skilled migrants have obtained basic or secondary education (see skill level 1 and 2 in ILO, 2012). Highly skilled migrants are those who have completed higher education for a period of three years after secondary school or have obtained a first degree. They undertake complex jobs (e.g., technical tasks) which require theoretical knowledge with specialization in a particular field (see skill level 3 and 4 in ILO, 2012). Managers refer to individuals with a tertiary level of education or higher who fall into the ISCO-08 occupational category 1 which includes chief

executives and senior officials, and managers working in all sectors. Managers' tasks include to plan and direct the overall activities of organizations through the formulation of and evaluation of policies and procedures. Executives refer to managing directors and chief executives who lead their organizations with the support of managers. In addition to performing strategic functions such as policy development, executives' tasks include "presiding over or participating in the proceedings of ... boards of directors and committees" and selecting senior staff (ILO, 2012: 88). To be clear, the highly skilled sample includes the managers' sample which in turn incorporates that of executives.

In this section, we review the stock of highly skilled migrants, managers and executives in 32 OECD countries in 2010–2011. Figure 1 exhibits the number of migrants in the total working population in the OECD countries. It shows that, in our sample, Luxembourg has the highest percentage of migrants (about 28%), followed by Switzerland (approximately 22%), New Zealand (about 19.5%), Israel and Australia (both at around 18%). Figure 2 presents the overall stock of highly skilled migrants. It shows that the USA has a disproportionate level of attractiveness for highly skilled talent with over 7 million foreign migrant workers in the country. While Great Britain, Canada and Germany have roughly the same stock (under 2 million), Australia and France have about 1 million highly skilled migrants.

[Figure 1 goes about here]

[Figure 2 goes about here]

Figure 3 disaggregates the highly skilled sample to present only managers and executives. It is important to note that, while the USA is included in the highly skilled sample, it is absent from the managers' and executives' samples because of the lack of harmonization in occupational status definitions. In the managers' stock, Canada and Great Britain surpass other OECD countries with roughly 275,000 managers. Figure 4 goes further by presenting the executive component of the sample. This breakdown yields a similar picture to the highly skilled stock, with Germany as the top destination with about 71,000 executives, Canada 41,700, Switzerland 9500, Portugal 8700 and Belgium 5600.

[Figure 3 goes about here]

[Figure 4 goes about here]

Figure 5 introduces the share of managers in the highly skilled stock available in the OECD countries. Mexico, Ireland, Belgium Estonia and Canada show the greatest shares. In terms of executives' stock (Figure 6), Poland, Czech Republic, Portugal, Germany and Denmark display the largest share. Table 1 presents the summary statistics of the managers' and executives' samples.

[Figure 5 goes about here]

[Figure 6 goes about here]

[Table 1 goes about here]

Table 2 shows the stock of migrants by origin (i.e., OECD and non-OECD countries) and it also disaggregates the sample by gender. Comparing the origin of the highly skilled stock reveals that there is more highly skilled talent migrating from non-OECD countries to OECD countries, than there is between OECD economies. While in terms of managers, non-OECD countries remain as the main source of this stock, with regard to executives, it is the OECD countries that provide the greatest number. Overall, there are more male highly skilled managers and executive migrants than female in our sample. However, the differences between the various breakdowns of the sample show a staggering picture. The female stock of highly skilled migrants is 89% of the male stock. In terms of managers, that percentage is 57% and the female stock of executives is 35% of their male counterparts.

[Table 2 goes about here]

BACKGROUND AND HYPOTHESES

The migration literature is vast. Country-specific studies of highly skilled talent flows abound, as do studies of overall migration at the global level. There are also several models that aim to explain both highly skilled talent flows and the overall global migration. To the best of our knowledge, the current literature neglects to segment migrants according to their labor market status and their occupation in the destination countries. It is thus our objective to fill this gap by identifying the drivers of international mobility of managers in general and executives in particular.

The classic view of migration emphasizes the impact of income in determining bilateral migration flows (see e.g., Todaro, 1969). According to Ortega and Peri (2013), global migration flows are highly linked to the income per capita levels in the destination countries. They observe that immigration depends on the income per capita gap between country of origin and destination. In other words, the migration flows to a destination country are a function of an increasing GDP per capita in that country and simultaneously, a function of a decreasing GDP per capita in the country of origin (Mayda, 2010). Higher earnings influence the decision to migrate (Bertoli, Moraga & Ortega, 2013). Grogger and Hanson (2011) argue that income maximization is a determinant of highly skilled migration because educated migrants tend to move to countries where they can obtain greater returns on their skills. Similarly, Dustmann, et al. (2011) argue that migration responds to opportunities for greater skill development and returns on skills. In short, countries that offer attractive structural conditions (e.g., higher wages), attract talent (Biondo, et al., 2012). There are other factors related to economic matters that may play a role in the decision to migrate. Favorable tax regimes also affect talent migration patterns: highly skilled migrants move to low-tax countries (Liebig & Sousa-Poza, 2005).

Hypothesis 1. Economic factors have a positive and significant impact on our dependent variable. The higher the GDP per capita, the higher the stock of migrants. This relation should hold even when controlling for other drivers of migration.

There is another stream of literature that highlights the close relationship between the levels of migration and foreign direct investment (FDI). According to Javorcik, Özden, Spatareanu and Neagu (2011), in the case of the USA, existent ethnic or migrant networks function as sources of information about market conditions and business opportunities in the migrants' country of origin. They find that the level of USA's FDI abroad is positively related to the stock of migrants in the USA from the countries targeted by FDI. Such a relation is stronger for the share of highly educated migrants. Similarly, Kugler and Rapoport (2007), find a significant link between highly skilled migrants in the USA and FDI flows from the USA to the migrants' origin countries. In the case of Germany, Buch, Kleinert and Toubal (2006) identify a "same-country" agglomeration effect, wherein levels of FDI are higher in states in which the level of migrant stocks from the same country of origin are higher. Tong (2005) finds that

Chinese ethnic networks facilitate cross-border investment. They are thus significantly related to the reciprocal levels of FDI in country pairs (i.e., between China and each destination country). Javorcik, et al. (2011), however, point out the difficulties in conceptualizing the relationship between FDI and migration because they can impact each other. With this in mind, we focus on the impact of FDI on migration stocks. Higher levels of FDI imply the entry of a larger number of multinational corporations into countries of origin which may lead to better employment opportunities and higher salaries, therefore reducing incentives to migrate, particularly for lower skilled individuals (Javorcik, et al., 2011). Nonetheless, multinationals can also increase migration, particularly for highly skilled employees who could relocate to company headquarters or other overseas branches (Javorcik, et al., 2011). In other words, for highly skilled staff, FDI increases the attractiveness of structural conditions such as wages and career opportunities in destination countries.

Hypothesis 2. We expect a significant link between FDI and migrant stocks. The nature of this relation, however, is dependent on the level of skills. The higher the FDI levels (from the destination country) in the country of origin, the higher the stock of highly skilled migrants in the country of destination. Conversely, the higher the FDI, the lower the stock of lower skilled migrants.

Inkson, et al. (2004) indicate that there are economic incentives (e.g., better salary) driving migration flows. They, however, highlight the role of learning opportunities, new challenges and experiencing a different “ethnic mix” in deciding whether or not to migrate. Cerdin, Diné and Brewster (2014) argue that behind the decision of highly skilled talent to migrate, there is a desire not only to acquire professional experience but “cultural skills” as well. This suggests that underlining migration is a combination of factors not necessarily linked to economic matters. Carling and Collings (2018) emphasize the role of “aspiration” and desire. Jackson, et al. (2005), explore the motivational components of highly skilled talent migration. In addition to economic and career issues, they indicate that the lifestyle in the destination country, existing family links and cultural factors drive migration. At the firm level, Tarique and Schuler (2010: 126) point out that beyond economic conditions there are

other factors affecting talent flows which include the political system (e.g., voters' preferences about migration), legal environment (e.g., immigration policies) and culture-related variables.

Cultural similarities also influence migration patterns (see e.g., Fawcett, 1989). Such similarities include a common national or spoken language, or a degree of proximity between the language of the country of origin and destination. The existence of a common language therefore increases the likelihood that an individual would choose a specific country of destination. For example, linguistic commonalities facilitate the transferability of skills (Adserà & Pytliková, 2015). According to Adserà and Pytliková (2015), migration increases in the presence of language proximity; acquisition of widely spoken languages may take place in the country of origin through second-language classes in schools, which in turn affects an individual's preference of country of destination.

Language communities in the destination country could function as the basis for networks. Existing networks in the destination countries can drive migration flows. Ethnic networks, for example, reduce the costs associated with migrating (Carrington, Detragiache & Vishwanath, 1996). For Liebig and Sousa-Poza (2005), the impact of such networks on migration may differ according to the level of skills of migrants and it is expected to be less important for highly skilled migrants. For instance, highly skilled migrants are more likely to adapt to different environments by learning a new language faster and more easily (Liebig & Sousa-Poza, 2005). Thus, highly skilled migrants do not necessarily rely on networks to adapt to new environments.

Other commonalities may be a shared history (e.g., past colonial links) and shared borders. Past colonial ties increase migration flows because they may mean common institutions and significant political relations between countries, which in turn reduce the costs associated with migration (Mayda, 2010). Also, according to Mayda (2010), the distance between countries of origin and destination increases the costs of migration. A shared border therefore leads to higher migration patterns.

Hypothesis 3a. There exists a positive and significant relation between ethnic networks and the stock of migrants. We thus expect all measures of common language and linguistic proximity to have a positive and significant impact on our dependent variable. In the presence of a

significant and positive relation between all language-related variables, the more important the role of ethnic networks is in driving migration and the greater the number of migrants.

Hypothesis 3b. There exists a positive and significant relation between colonial ties and our dependent variable. In the presence of past colonial ties, the greater the stock of managers.

Hypothesis 3c. There exists a positive and significant relation between shared borders and our dependent variable. In the presence of a shared border between the country of origin and destination, the greater the stock of managers.

Migration flows are asymmetric and result in clusters around locations leading to the geographic “agglomeration” of highly skilled talent (Kerr, et al., 2016). Kerr (2013) argues that highly skilled immigrants contribute to the levels of entrepreneurship and innovation of the country of destination (see also Miranda-Martel, Mihi-Ramirez & Arteaga-Ortiz, 2017). Bosma and Sternberg (2014) contend that migrants can identify and take advantage of specific business opportunities, increasing the overall entrepreneurship rate in the destination country. In this process, the existence of ethnic and social networks as well as institutions that facilitate entrepreneurship function as determinants (Baycan-Levent & Nijkamp, 2009; Sepulveda, Syrett & Lyon, 2011). For Cowling and Lee (2017), at the city level, talent concentration is partly the result of a dynamic academic environment and high levels of entrepreneurial activity. It seems thus that there is a virtuous cycle between highly skilled migration and entrepreneurship: the greater the agglomeration of highly skilled talent, the greater the entrepreneurship levels, which results in greater agglomeration of skilled migrants, and so on and so forth. In this context, institutions that facilitate entrepreneurial activities may play a fundamental role in attracting highly skilled talent to a country.

Hypothesis 4. Institutional efficiency has a positive and significant effect on our dependent variable. The fewer the number of days spent to start a business, for example, the greater the stock of managers.

In a related institutional dimension, in terms of the political and legal context in the country of destination, voters’ and politicians’ preferences about immigrants may affect migration through policy outcomes (Facchini & Willmann, 2005). Immigration policies thus may significantly affect the migrant

stocks (Mayda, 2010; Pedersen, et al., 2008). Bearing in mind that our objective is to identify the drivers of managers' and executives' migration to OECD countries, to account for the impact of immigration policy, we consider the membership of countries of destination in the European Union (EU). The 32 OECD destination countries in our sample include 21 EU members. We thus expect high levels of migration within the EU because of the free movement of labor across its members.

Hypothesis 5. Open immigration policies (i.e., freedom of movement) have a positive and significant effect on migrant stocks. We expect that impact to occur across every desegregation of the migrant stock.

Other studies emphasize the quality of life in the country of destination as a key determinant of migration decisions. De Cieri, et al. (2009), argue that migration flows are driven by quality of life. For Florida (2005) the “*creative class*” (e.g., scientist, academics and artists) migrates where the available lifestyles contribute to higher quality of life. Similarly, Krupka (2009) suggests that the availability of amenities or local characteristics positively impacts migration flows by increasing the quality of life. Graves (1979), also highlights the role of the quality of life in migration decisions through the importance of the availability of leisure activities (e.g., outdoor recreation).

Hypothesis 6. Quality of life in the country of destination has a positive and significant impact on the stock of migrants available in those countries. The higher the quality of life, the larger the stock of migrants.

Migration flows cannot be merely understood through economic and political lenses but also in sociocultural terms, including kinship and gender (Mahler & Pessar, 2006). Despite strong evidence of increasing female migration (see Dumont, Martin & Spielvogel, 2007), according to Mahler and Pessar (2006), gender as a factor affecting migration has been undervalued. The dynamics of migration flows differ significantly between female and male migrants (Richter & Taylor, 2008). In this sense, gender may interact with several other factors in driving migration flows. Gender, for example, interacts with migrant networks in the destination country in informing migration choices (Docquier, Lowell & Marfouk, 2009).

Hypothesis 7. Female managers tend to migrate less than their male counterparts. Such a gap should hold across all our samples.

DATA AND VARIABLES

Dependent Variable

Data on migrations flows, stocks and immigrants' skills and socioeconomic status are difficult to retrieve. The OECD is the main source of homogenous, comparable bilateral data on this topic. The Database on Immigrants in OECD Countries (DIOC) collects and harmonizes national census data on the stock of migrants living in 32 OECD countries and coming from more than 190 countries of origin. It provides important information on the demographic characteristics (e.g., gender), duration of stay, educational attainment, level of skills and labor market status of migrants for the years 2000–2001, 2005–2006 and 2010–2011. However, for this paper, we restrict the empirical analysis to the 2010–2011 DIOC database because it is the only one that provides details on the occupation of immigrants which therefore allows us to identify managers and, within them, executives. Furthermore, the availability of the ISCO skill levels allows us to disaggregate the dataset into lower skilled and highly skilled migrants, which enables us to highlight the differences between these groups and our target sample. As in Ortega and Peri (2009), our dependent variable is thus the stock of migrants (in number of individuals, transformed in logarithmic terms) in working age 15–65 in 32 OECD countries during 2010–2011. We further disaggregate this variable into four groups: lower skilled workers and highly skilled workers, and within the latter, managers and executives.

Independent and Control Variables

We identify variables based on the following premises:

- Economic incentives are at the core of managers' international mobility.
- Culture matters in making migration decisions.

- Institutions matter, for example, those that facilitate entrepreneurship and innovation are fundamental in attracting talent.
- High quality of life in the destination country increases the likelihood of migrating to that country.
- Gender plays a significant role in migration decisions.

All the variables we use in this study are described in Table 3.

[Table 3 goes about here]

Economic conditions.

Previous studies emphasize the fundamental role of economic incentives in determining migration flows. We thus strive to capture the income effect driving migrations from country of origin to destination country. In our analysis, we consider GDP per capita (constant 2010 US\$) in both the destination country and country of origin. In addition, we account for the level of FDI in both destination country and country of origin. These indicators are from the World Development Indicators database of the World Bank.

Cultural affinity.

Following Mayda (2010), we attempt to capture the effect of common language, colonial links and geographical distance. We thus include country bilateral variables on several common language measures, colonial ties, language and geographical proximity, which are found in the CEPII Language and GeoDist datasets. According to Melitz and Toubal (2014: 351), “If [language proximity] proves significant while all three previous measures of a common language [i.e., common official, spoken and native languages] are present, this would reflect... perhaps ... the influence of ethnic rapport between groups when their native languages differ.” We thus employ all language variables in our model to measure the influence of cultural, ethnic and network effects on migration decisions.

Previously, we highlighted studies that found that past colonial links play an important role in terms of providing common institutions and significant political relations between countries, which reduce the costs of migration. Studies also indicated that the distance between countries of origin and destination

matters for the decision to migrate. Migration flows increase therefore in the presence of a shared border.

Institutions.

To account for the efficiency of institutions, how they may facilitate entrepreneurial activities and the attractiveness for business of origin and destination countries, we included in our model an indicator of the time required to start a business. This variable measures the number of calendar days needed to complete the procedures to legally operate a business and is part of the Doing Business database of the World Bank. It is interesting to note that within a country, the indicators in the Doing Business database are highly correlated, therefore we include the most representative among them. In addition, to capture the impact of migration policies on the stock of migrants, we include a dummy of the EU membership (as of 2010) of the countries in our sample. This allows us to control for the freedom of movement of workers holding EU passports among the 21 EU members in our sample of destination countries. In addition, intra-EU member migrants constitute 36% of the total global stock of working migrants recorded in our dataset.

Quality of life.

To capture the impact of the quality of life in the destination countries, we employ a survey-based indicator provided by the IMD World Competitiveness Center's database. Specifically, the quality of life variable is an index with value 10 indicating a high level of quality of life in the country and 0 for poor quality of life. The indicator is an average of the responses collected through the IMD World Competitiveness Executive Opinion survey. This annual survey exclusively targets top- and middle-level managers across 63 countries worldwide on matters related to economic performance, government efficiency, and business and competitiveness issues. Every year over 6500 managers are surveyed, with an average of 100 respondents per country.

Gender.

Finally, the literature highlights the importance of gender in migration flows. Doquier, et al. (2012) indicate that skilled female migrants are less internationally migratory than their skilled male counterparts; and Richter and Taylor (2008), conclude that females are “significantly less likely” than males to migrate. Yet, Dumont, et al. (2007) find that the stocks of migrants, including the highly skilled stock, in the OECD countries are roughly gender balanced.

We then construct a model of managers’ and executives’ international mobility around four factors: economic, cultural, institutional and quality of life. Our objective is to identify the aspects that impact the level of attractiveness of the destination countries for our target sample. Figure 7 presents the model.

[Figure 7 goes about here]

EMPIRICAL MODEL

Following Pedersen, et al. (2008), and Ortega and Peri (2009), the theoretical model described in the previous section can be viewed as the utility maximization problem of a manager-migrant that compares different destination countries and, assessing many factors, chooses the one which offers the best opportunities and quality of life. The next section presents the coefficients estimated from the following empirical specification:

$$\begin{aligned} \log(M_{do}) = & \alpha_{do} + \beta_1(GDP_{diff_{do}}) + \beta_2(FDI_{diff_{do}}) + \beta_3(COL_{do}) + \beta_4(CSL_{do}) + \beta_5(CNL_{do}) + \beta_6(LP_{do}) \\ & + \beta_7(Colony_{do}) + \beta_8(Contig_{do}) + \beta_9(ST_{diff_{do}}) + \beta_{10}(EU_member_{do}) + \beta_{11}(QUAL_d) \end{aligned}$$

where d is the destination country and o the country of origin of the migrant. Our dependent variable M_{do} is the log of the number of migrants (i.e., stocks) who moved from country o to destination country d . Among the explanatory variables, $GDP_{diff_{do}}$ is the log-difference between GDP per capita in the destination country and income per capita at origin, $FDI_{diff_{do}}$ is the log-difference between FDI stock in the origin country and FDI stock at destination, COL_{do} is a dummy with value 1 when the country of origin and destination share a common official language, CSL_{do} and CNL_{do} are indices that measure the share of population in the country of origin and destination with a common spoken language and

common national language respectively,¹ LP_{do} measures the proximity of the languages between destination and origin according to the Ethnologue classification of language families, $Colony_{do}$ is a dummy variable with value 1 if colonial ties existed among destination and origin, $Contig_{do}$ has value 1 if the two countries share a border and 0 otherwise, $ST_{diff_{do}}$ is the difference in the number of days required to start a business in the destination country versus those necessary in the country of origin, EU_member_{do} is a dummy variable with value 1 when both countries of destination and origin are EU members, and, finally, $QUAL_d$ provides a measure of the quality of life in the destination country on a 0–10 scale, with 10 meaning an high quality of life and 0 the opposite.

Following Ortega and Peri (2009), our dependent variable is constituted by the log of the stock of migrants (not the flows) living in 32 OECD countries. The somewhat reduced sample of destination countries may be considered a limitation, but this is due to the nature of the DIOC database which only considers OECD economies as destination countries. With the exception of the cultural, linguistic and geographical variables, the remaining explanatory variables used in the model are lagged and averaged considering the previous five years (2004–2009). We do so to allow those variables to affect the stock of migrants in 2010 and 2011.

The method of estimation is ordinary least squares, controlled for both country of origin and destination fixed effects. Observations have been weighted by the population of the destination country in order to correct for heteroskedasticity of measurement errors (Sullivan, 2001).

DISCUSSION OF RESULTS

The results presented in Table 4 show the expected signs across all specifications of the model. For example, results show a positive and significant relationship between the quality of life variable and the stock of migrants: the higher the quality of life in the destination country, the higher the stock of migrants available across all our samples.

[Table 4 goes about here]

Hypothesis 1 anticipates a positive and significant relation between economic measures and the stock of migrants. Indeed, our baseline regression supports the proposition that economic factors drive migration patterns. GDP per capita is highly significant ($p < 0.01$) for two of the groups we consider (columns 1 and 2). GDP per capita is minimally more important for lower skilled migrants than it is for the highly skilled group and it is non-significant for managers. One percentage change in the GDP per capita difference between country of destination and country of origin is associated with an increase in the stock of lower skilled migrants by 0.14%, and highly skilled by 0.07%.

In our baseline regression, results for the impact of FDI partly differ from what we expected. FDI is non-significant for lower skilled individuals and managers but it is significant and positive ($p < 0.01$) for highly skilled. This means high FDI stock in the country of origin leads to higher migration among highly skilled staff. This may be the result of overseas relocation opportunities for highly skilled staff that higher FDI may bring. Once we control for culture-related variables (columns 4 to 6), the impact of GDP remains unchanged. GDP remains positive and significant ($p < 0.01$) for the lower skilled and highly skilled groups and remains non-significant for managers across all regressions. Conversely, the impact of FDI changes; it remains positive for highly skilled individuals but its significance drops ($p < 0.05$). Moreover, FDI becomes negative and significant for lower skilled workers at $p < 0.05$. This may imply that higher FDI penetration in countries of origin decreases the incentives to migrate for lower skilled workers, which may be the result of improved working opportunities and/or higher salaries. Simultaneously, higher FDI in the country of origin increases the chances for the highly skilled to migrate. Interestingly, FDI is non-significant for managers across all regressions. These findings refute our hypothesis 1. The importance of GDP per capita remains marginally more important for lower skilled migrants than for their highly skilled counterpart. Likewise, FDI results partially rebut our hypothesis 2 in that in some specifications it is non-significant for highly skilled staff and it remains so for managers across all regressions.

The common official, spoken and native language, and linguistic proximity variables are highly significant ($p < 0.01$) for the lower skilled and highly skilled groups. Our results, therefore, show that ethnic networks are highly significant for both lower and highly skilled migrants because all measures

of language are significant for both samples. While coefficients show that common official language is more important for the highly skilled sample, and common spoken and native languages matter more for lower skilled migrants, linguistic proximity is marginally more relevant for highly skilled migrants. These results differ somewhat from the proposition that Liebig and Sousa-Poza (2005: 8) advance, “Theoretically, it might be expected that ethnic ties matter less for highly skilled than for lower skilled workers, as the former tend to be less dependent on the services that ethnic networks may provide, such as information and goods of ethnic origin.” Interestingly, however, our results also show that for the managers’ sample, while common official and spoken languages and linguistic proximity are significant at $p < 0.01$, the common native language is non-significant. This does not meet the required presence of all measures of languages suggested by Melitz and Toubal (2014) and anticipated by our hypothesis 3a. Such findings may signal that for managers ethnic links and other ethnicity-related factors, such as the existence of networks in the destination countries, are less relevant and thus partially support Liebig and Sousa-Poza’s (2005) suggestion. These results are consistent across all regressions with two exceptions. First, the importance of common native language, which becomes more important for highly skilled than for lower skilled individuals. Second, linguistic proximity becomes minimally more relevant for the highly skilled sample than for managers, while remaining highly significant for both groups.

Hypothesis 3b anticipates that other culture-related variables are positive and significant for the stock of managers. Indeed, colonial ties are highly significant ($p < 0.01$) not only for managers but also for lower and highly skilled migrants. A shared border is significant for managers at $p < 0.05$ but its significance increases for lower and highly skilled individuals ($p < 0.01$). While colonial relations matter more for highly skilled and managers, a shared border is more important for lower skilled migrants. The significance of both colonial ties and shared border remain constant through all regressions. But the size of the coefficient of the colonial relationship variable for all migrant groups drops once we control for institutional variables (columns 7 to 9). Overall, our language and colonial ties results differ from Mayda’s (2010), who finds that both a common language and past colonial links do not affect migration flows.

Hypothesis 4 anticipates that the fewer the days needed to open a business, the greater the stock of managers. Indeed, results show that the number of days to start a business has a negative relation with the stock of migrants and is highly significant ($p < 0.01$) for managers as well as for lower and highly skilled individuals. Although, the number of days to start a business is more relevant for managers. The significance of this variable highlights the fundamental role of the efficiency of institutions and the importance of institutions that facilitate entrepreneurship in attracting talent, which corroborates our hypothesis 4. One less day necessary to open a business in the destination country is associated with an increase in the stock of lower skilled migrants by 0.03%, highly skilled by 0.03% and managers by 0.08%. These results change when we control for the quality of life (columns 10 to 12). While institutions remain highly significant for highly skilled and managers, its significance drops to $p < 0.05$ for lower skilled migrants (column 10). This is so because the quality of life may absorb other institutional aspects related to the judicial system and the public administration in general, which may be more relevant for lower skilled migrants.

We anticipated (hypothesis 5) that immigration policy would significantly affect migration to our destination countries. Indeed, an immigration policy, in this case, freedom of movement, has a positive and highly significant impact on all our migrant groups. Interestingly, within the EU, lower skilled individuals seem to migrate less than their highly skilled counterparts and managers. Similar to the trend in our other institutional variable, the significance of migration policy for the lower skilled drops to $p < 0.10$ once we control for the quality of life (column 10). Policy significance also declines for managers to $p < 0.05$ (column 12).

Quality of life, conversely, is significant for all samples ($p < 0.01$), which hypothesis 6 anticipates. The difference in coefficients between the lower skilled group and managers shows that the quality of life matters slightly more for the managers' sample. In addition, this regression suggests that quality of life plays a greater role in managers' migration decisions than income considerations, which is non-significant (column 12). This finding differs from that of Liebig and Sousa-Poza (2005: 21) who point out that quality of life does not influence "the share of highly skilled" migrants.

We further disaggregate the managers' sample, which enables us to assess the impact of the above regressors specifically on executives' mobility (Table 5). Results show that for C-level executives, economic factors are non-significant across all specifications (columns 1 to 4). Interestingly, of all language variables, only common spoken language is significant for executives ($p < 0.01$) across all regressions. Colonial relationship is also significant at $p < 0.05$. Furthermore, shared border is significant at $p < 0.10$ but becomes non-significant once we control for institutional variables (column 3), which are non-significant. Finally, quality of life (column 4) is significant at $p < 0.01$. These results show that executives' mobility is mainly driven by the quality of life in the destination countries, the availability of a common spoken language and cultural ties. This means, for example, that a one-standard-deviation increase in quality of life (for instance, the difference in quality of life between Spain and Switzerland), increases, everything else constant, by 79% the number of foreign managers and by 50% that of foreign C-level executives coming into the country. Similar to the results for managers, ethnic factors (e.g., access to ethnic networks) are non-significant for executives. Furthermore, as may be expected, immigration policies are non-significant for executives. It seems also that executives, as established strategic decision-makers, are less concerned with institutional efficiency and entrepreneurship opportunities than are the other samples we consider.

[Table 5 goes about here]

Finally, controlling for gender (Tables 4 and 5), shows that, overall, women migrate less than men, thus corroborating hypothesis 7. Also, female managers are less likely to migrate than their lower skilled counterparts. It is important to note that our dependent variable is the stock of working migrants (age 15 and over) available in the destination countries. The lower female migration may thus reflect the trend of female migrants joining their spouses and not entering the labor force in the destination countries. It is, however, worth pointing out that our results, in relation to gender, differ from the evidence of the roughly balanced female and male stocks in OECD countries found by Dumont, et al. (2007). According to Docquier, et al. (2009), the existence of and access to networks as a driver of migration is more important for female migrants than it is for male. Similarly, Ruysen and Salomone (2018) indicate that female migration is in part determined by network effects, family responsibilities

and limited opportunities in countries of destination. Our results may thus reflect the difficulties that female migrants encounter in taking advantage of existing ethnic networks that could facilitate employment because such networks are social resources that are often not shared within households, among family members or even with spouses (Mahler & Pessar, 2006). In the case of female executives, the lower migration may signal the difficulties women confront in migrating as a result of family obligations or the opportunities available abroad for career advancement. Furthermore, women are more likely to join their spouses than vice versa (Doquier, et al., 2012). Female executives, therefore, may find it more difficult to convince their spouses to migrate, decreasing the likelihood of migration.

CONCLUSIONS

We empirically assessed the drivers of international bilateral migration of managers and executives. This study finds some results that are consistent with previous studies but also uncovers evidence that differs from the traditional view of the determinants of migration. Business managers and executives do not behave in the same way as general workers.

This paper contributes to the understanding of migration dynamics in two ways. First, it provides an assessment of the determinants of managers' and executives' migration which have been largely neglected in the literature. Second, the paper brings into question some of the traditional understanding of the motivational factors behind migration; namely, that managers' and executives' decisions to migrate are economically based.

In summary, we find that income variables do not necessarily drive manager mobility. Culture, institutional and quality of life factors are more important in determining their movements. Results are similar for the executive sample. Economic factors do not drive executive migration; the quality of life in the destination country and cultural ties are more critical in their decision to migrate. Also, our results show that ethnic ties may drive the overall highly skilled migration, but they are non-significant for managers and executives. In addition, our results show that female managers and executives are less likely to migrate than their lower skilled and male counterparts.

We thus find that the economic conditions of a country are not sufficient to entice managers and executives. Cultural affinity drives talent flows depending on which sample we consider. In this regard, the existence of ethnic networks in the destination country may attract highly skilled migrants as a whole, but it may not have the same effect on managers. The presence of a common spoken language is more important for managers; more so for executives. Institutions drive the highly skilled and managers' migration but it seems not relevant for executives. Finally, quality of life is a major attractiveness element for all the different migrant groups we have studied but it is more significant for managers.

These results have implications for global companies interested in recruiting managers and executives and their recruitment strategies. International businesses attempting to maximize their access to the talent pool of international managers, for instance, can develop recruitment packages that capitalize on the particularities of the quality of life of the potential destination country. Such packages can contribute to streamlining the process and focusing on candidates' needs to increase the likelihood of relocation. Our results, in addition, have policy implications in terms of the "branding" of countries whose aim is to attract managers and other highly skilled talent. Officials, for example, can build an effective country-branding strategy on the existence of ethnic networks, effective institutions and quality of life to attract a particular segment of the talent pool, which can ultimately contribute to entrepreneurial practices in the country.

There are limitations to this paper. First, the study considers the stock of migrants at one point of time, which does not generate a precise picture of long-term migration flows. In addition, data on managers and executives do not include the USA because of the lack of harmonization in definitions of the occupational status. Greater efforts at data compilation are thus needed to increase the robustness of migration studies in general.

NOTE

¹ CEPII requires all common native/spoken languages to be spoken by at least 4% of the population in the two countries.

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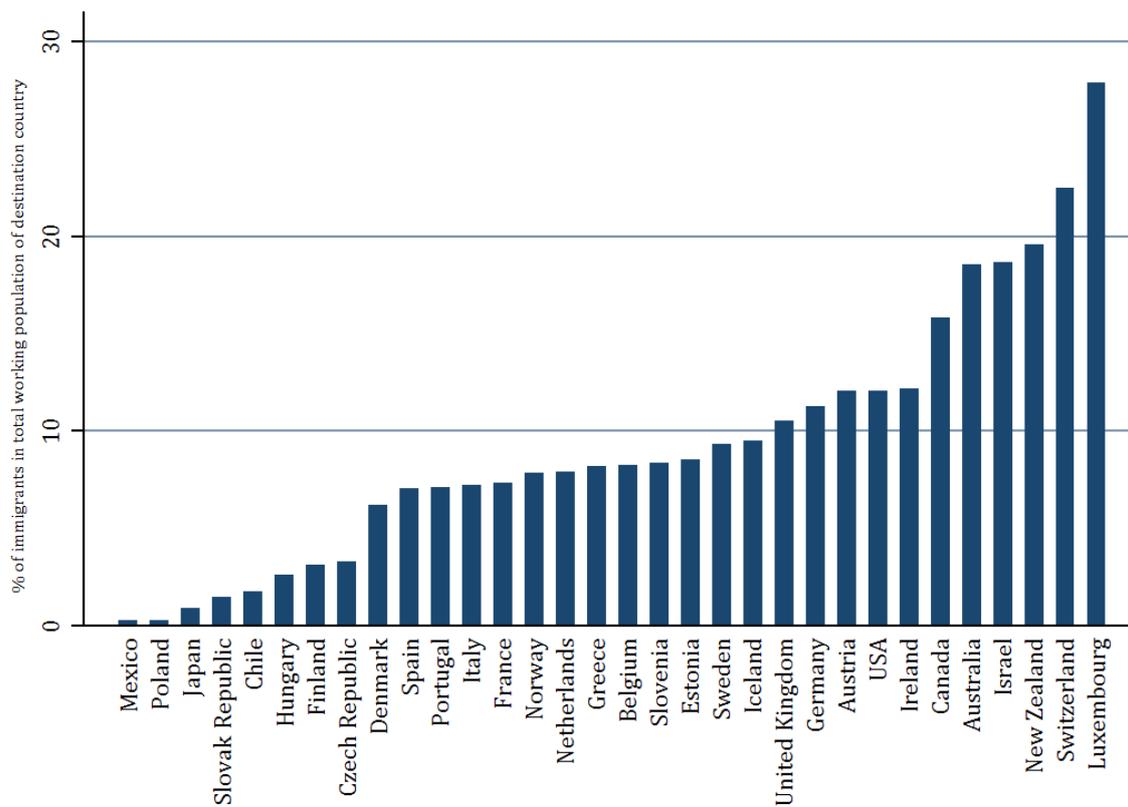
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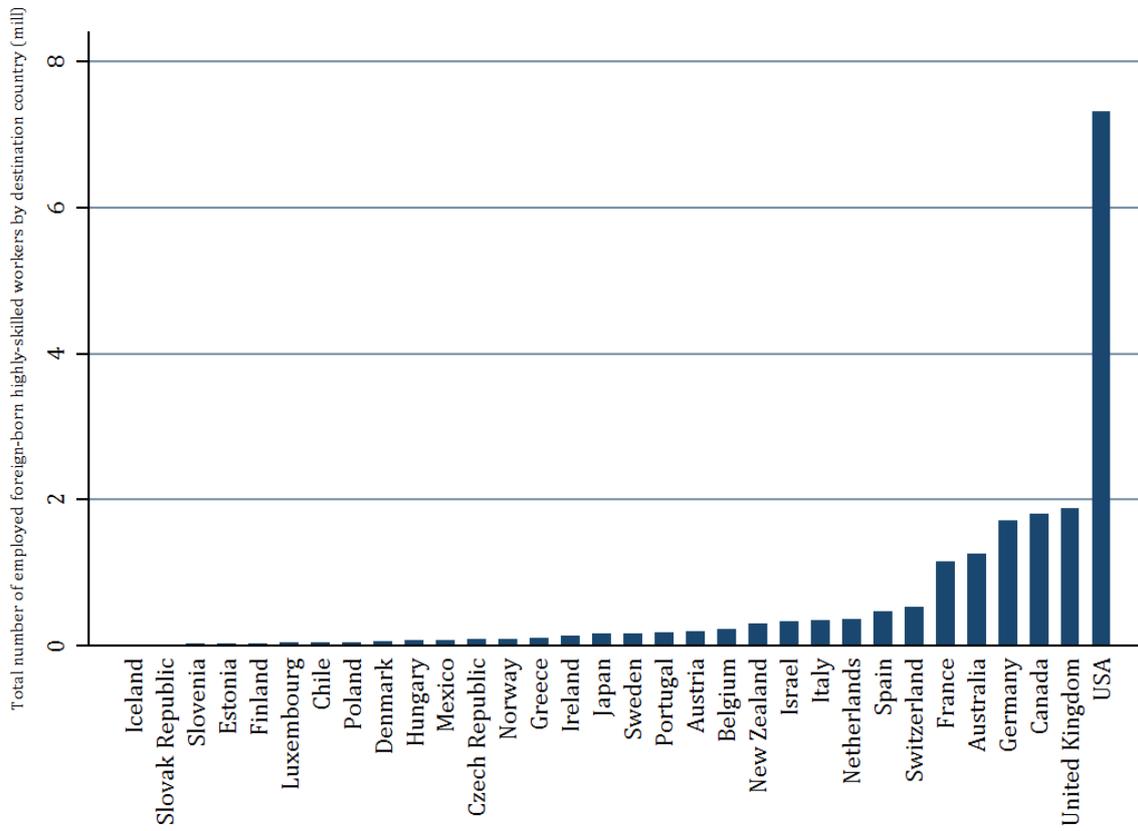
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FIGURE 1. Percentage of immigrants in the total working population, (destination), 2010–2011



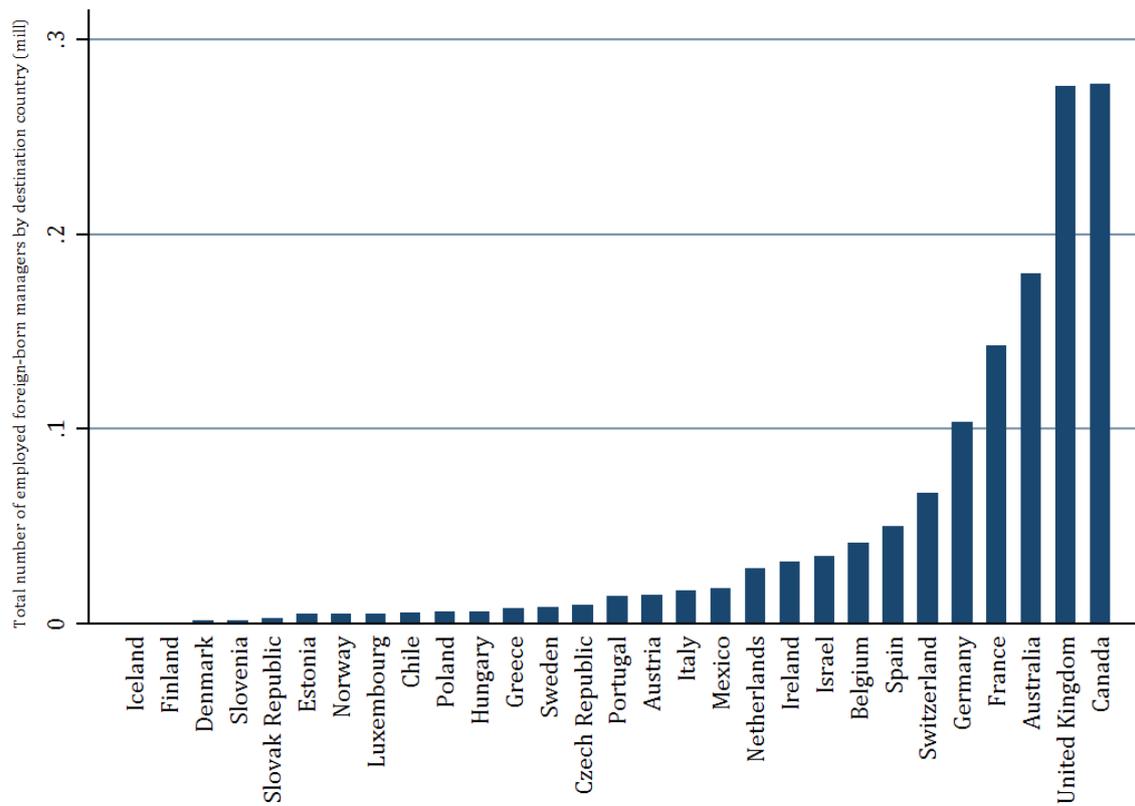
Source: Database on Immigrants in OECD Countries (DIOC)

FIGURE 2. Stock of highly skilled migrants in OECD countries (destination), 2010–2011



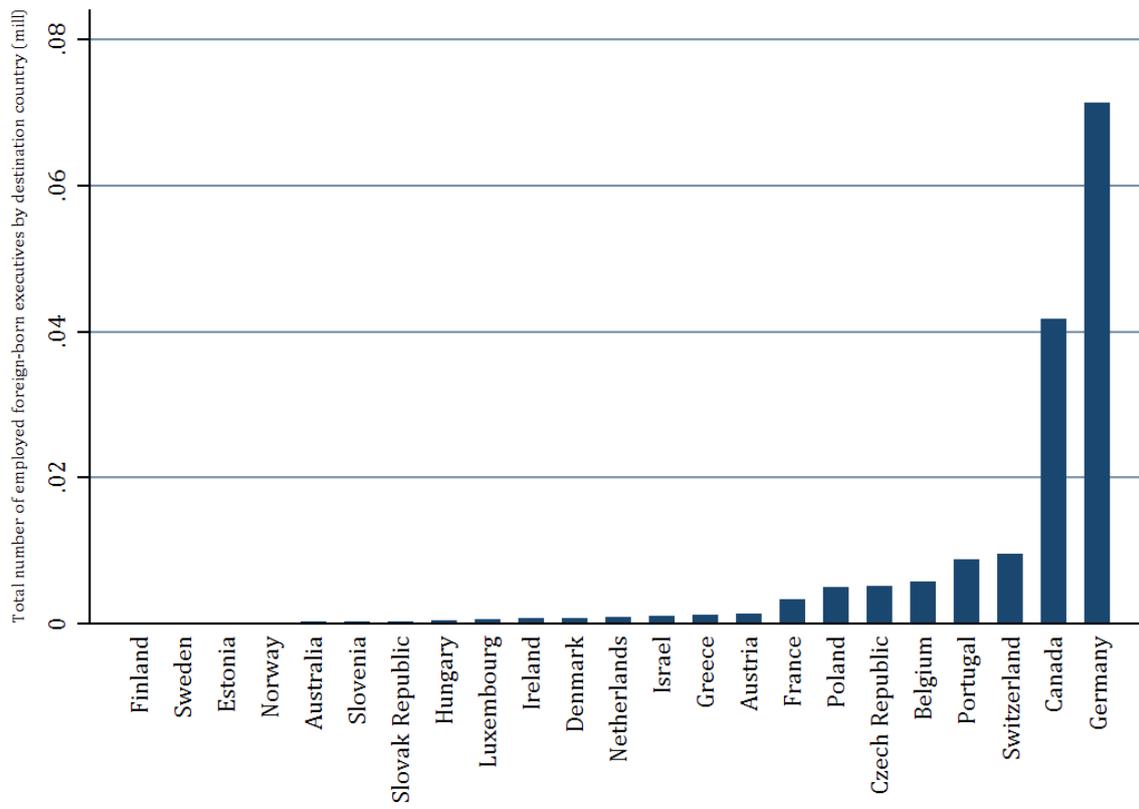
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FIGURE 3. Stock of manager migrants in OECD countries (destination), 2010–2011



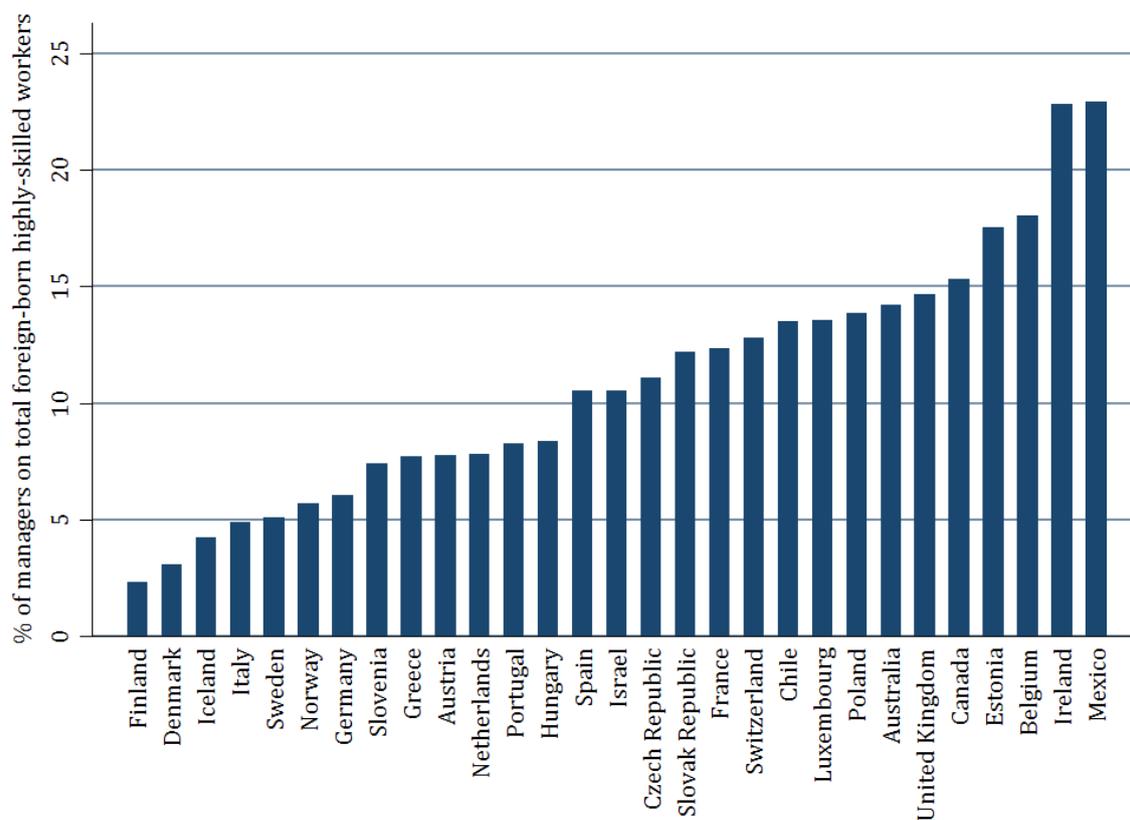
Source: Database on Immigrants in OECD Countries (DIOC)

FIGURE 4. Stock of executive migrants in OECD countries (destination), 2010–2011



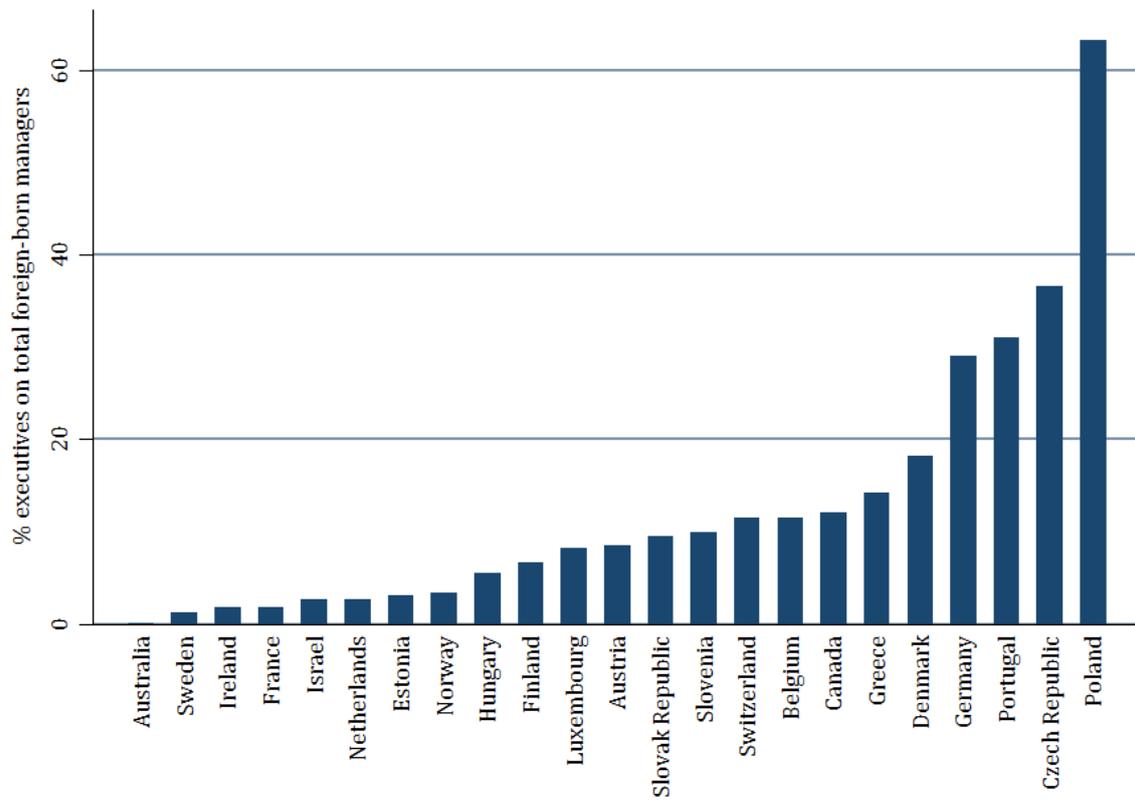
Source: Database on Immigrants in OECD Countries (DIOC)

FIGURE 5. Share of managers (in highly skilled migrants) in OECD countries (destination), 2010–2011



Source: Database on Immigrants in OECD Countries (DIOC)

FIGURE 6. Share of executives (in highly skilled migrants) in OECD countries (destination), 2010–2011



Source: Database on Immigrants in OECD Countries (DIOC)

TABLE 1. Summary statistics: Managers and executives

Destination country	Managers	Executives
	Number of individuals	Number of individuals
Australia	179,944	292
Austria	14,601	1,342
Belgium	41,543	5,689
Canada	277,460	41,710
Chile	5,620	NA
Czech Republic	9,345	5,152
Denmark	1,858	720
Estonia	4,854	170
Finland	781	104
France	142,865	3,298
Germany	103,591	71,387
Greece	7,882	1,262
Hungary	6,387	403
Iceland	218	NA
Ireland	31,943	676
Israel	34,761	1,067
Italy	17,291	NA
Japan	NA	NA
Luxembourg	5,336	581
Mexico	18,266	NA
Netherlands	28,309	959
New Zealand	NA	NA
Norway	5,322	181
Poland	5,944	5,049
Portugal	14,341	8,734
Slovak Republic	2,566	356
Slovenia	1,937	302
Spain	50,015	NA
Sweden	8,735	140
Switzerland	66,970	9,531
United Kingdom	276,440	NA
United States	NA	NA

Source: Database on Immigrants in OECD Countries (DIOC)

TABLE 2. Summary statistics: Stocks by origin and gender

Origin		Gender	
Highly skilled	Number of individuals	Highly skilled	Number of individuals
Non-OECD	11,405,310	Men	9,055,515
OECD	7,937,362	Women	8,056,509
		Not specified	2,192,675

Managers		Managers	
	Number of individuals		Number of individuals
Non-OECD	704,586	Men	696,136
OECD	660,539	Women	397,688
		Not specified	271,301

Executives		Executives	
	Number of individuals		Number of individuals
Non-OECD	71,076	Men	102,720
OECD	88,029	Women	36,344
		Not specified	20,041

Source: Database on Immigrants in OECD Countries (DIOC)

TABLE 3. Variables

Variable	Definition	Source
<i>Dependent variable</i>		
Stock of migrants	Log of the stock of employed migrants in OECD countries during the 2010–2011 period	OECD
<i>Economic conditions</i>		
GDP per capita	Log-difference between GDP per capita (US\$) in the destination country and income per capita in country of origin	World Development Indicators
FDI	Log-difference between FDI stock in the country of origin and FDI stock at destination country	World Development Indicators
<i>Cultural affinity</i>		
Common official language	A dummy, value of 1 when the country of origin and destination share a common official language	CEPII Language dataset
Common spoken language	An index that measures the share of population in the country of origin and destination with a common spoken language	CEPII Language dataset
Common native language	An index that measures the share of population in the country of origin and destination with common national language	CEPII Language dataset
Linguistic proximity	Measures the proximity of the languages between destination and origin countries according to the Ethnologue classification of language trees	CEPII Language dataset
Colonial relationship	Evaluates whether the country of origin shares colonial ties with the country of destination, 1=yes, 0=no	CEPII GeoDist dataset
Shared border	Assesses whether the country of origin shares a border with the country of destination, 1=yes, 0=no	CEPII GeoDist dataset
<i>Institutions</i>		
Days spent to start a business	Measures the number of calendar days needed to complete the procedures to legally operate a business, difference in days spent between destination and origin countries	Doing Business database, World Bank
EU membership	A dummy variable, 1= destination country is EU and OECD member, 0=non-member of EU. It is employed as a proxy for the impact of freedom of movement for EU national migrants	
<i>Quality of life</i>		
Quality of life	A survey question, evaluates the level of the quality of life in the destination countries	IMD-World Competitiveness Center
<i>Other</i>		
Gender	A dummy variable, 1=female, 0=male	

FIGURE 7. A model of managers' and executives' international mobility

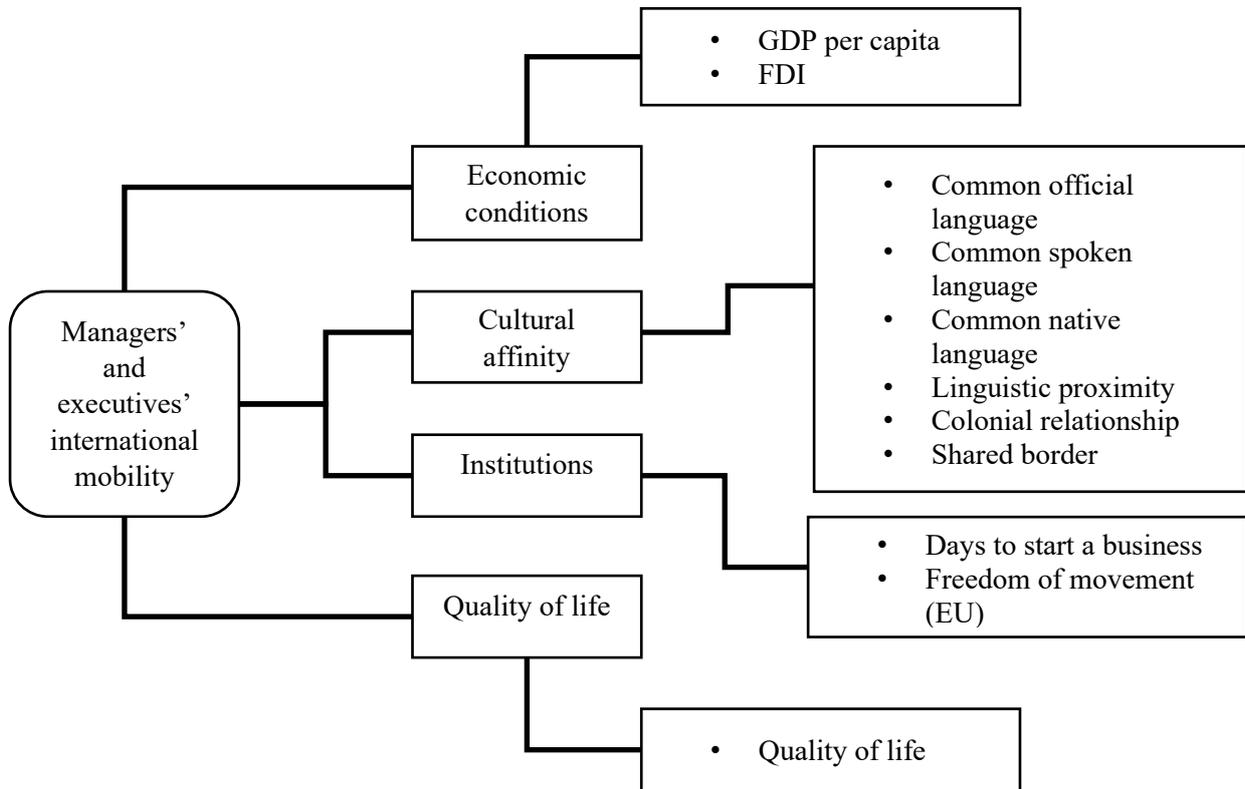


TABLE 4. Regressions for lower skilled, highly skilled and manager stocks

VARIABLES	(1) Lower skilled	(2) Highly skilled	(3) Managers	(4) Lower skilled	(5) Highly skilled	(6) Managers
GDP per capita	0.14*** (0.03)	0.07*** (0.03)	0.07 (0.07)	0.21*** (0.03)	0.11*** (0.03)	-0.02 (0.01)
FDI	-0.01 (0.02)	0.07*** (0.02)	0.02 (0.06)	-0.04** (0.02)	0.04** (0.02)	0.01 (0.07)
Common official language				0.30*** (0.03)	0.48*** (0.04)	0.57*** (0.12)
Common spoken language				0.88*** (0.10)	0.60*** (0.11)	0.96*** (0.35)
Common native language				0.68*** (0.11)	0.62*** (0.12)	-0.18 (0.38)
Linguistic proximity				0.03** (0.01)	0.09*** (0.01)	0.15*** (0.04)
Colonial relationship				0.86*** (0.04)	1.18*** (0.04)	1.03*** (0.13)
Shared border				1.40*** (0.06)	0.77*** (0.07)	0.60** (0.27)
Gender				-0.11*** (0.01)	-0.10*** (0.01)	-0.31*** (0.05)
Constant	1.77*** (0.48)	0.14 (0.48)	1.81 (1.62)	2.03*** (0.56)	0.51 (0.57)	2.99 (1.99)
Observations	63,083	44,816	4,486	51,103	36,242	3,525
R-squared	0.54	0.58	0.59	0.57	0.62	0.61

***p<0.01, **p<0.05, *p<0.1

Standard errors in parentheses

TABLE 4. Continued

VARIABLES	(7) Lower skilled	(8) Highly skilled	(9) Managers	(10) Lower skilled	(11) Highly skilled	(12) Managers
GDP per capita	0.20*** (0.04)	0.11*** (0.04)	-0.01 (0.11)	0.20*** (0.04)	0.11*** (0.04)	-0.01 (0.11)
FDI	-0.09*** (0.02)	-0.02 (0.02)	-0.02 (0.08)	-0.09*** (0.02)	-0.02 (0.02)	-0.02 (0.08)
Common official language	0.50*** (0.04)	0.67*** (0.04)	0.62*** (0.12)	0.50*** (0.04)	0.67*** (0.04)	0.62*** (0.12)
Common spoken language	1.02*** (0.11)	0.49*** (0.12)	1.06*** (0.38)	1.02*** (0.11)	0.49*** (0.12)	1.06*** (0.38)
Common native language	0.70*** (0.12)	0.82*** (0.13)	-0.08 (0.41)	0.70*** (0.12)	0.82*** (0.13)	-0.08 (0.41)
Linguistic proximity	0.10*** (0.01)	0.15*** (0.01)	0.12*** (0.04)	0.10*** (0.01)	0.15*** (0.01)	0.12*** (0.04)
Colonial relationship	0.76*** (0.04)	1.10*** (0.05)	0.92*** (0.14)	0.76*** (0.04)	1.10*** (0.05)	0.92*** (0.14)
Shared border	1.20*** (0.08)	0.48*** (0.09)	0.63** (0.30)	1.20*** (0.08)	0.48*** (0.09)	0.63** (0.30)
Days to start a business	-0.03*** (0.01)	-0.03*** (0.01)	-0.08*** (0.02)	-0.01** (0.00)	-0.01*** (0.01)	-0.06*** (0.02)
EU membership	0.24*** (0.03)	0.37*** (0.03)	0.31*** (0.12)	0.06* (0.03)	0.29*** (0.04)	0.26** (0.12)
Quality of life				0.68*** (0.06)	0.60*** (0.06)	0.70*** (0.16)
Gender	-0.09*** (0.01)	-0.09*** (0.02)	-0.31*** (0.05)	-0.09*** (0.01)	-0.09*** (0.02)	-0.31*** (0.05)
Constant	2.97*** (0.63)	1.62** (0.63)	3.27 (2.11)	-3.29*** (0.65)	-3.97*** (0.63)	-3.19* (1.82)
Observations	39,727	27,374	3,106	39,727	27,374	3,106
R-squared	0.55	0.61	0.62	0.55	0.61	0.62

***p<0.01, **p<0.05, *p<0.1

Standard errors in parentheses

TABLE 5. Regressions for executive stocks

VARIABLES	(1) Executives	(2) Executives	(3) Executives	(4) Executives
GDP per capita	0.09 (0.06)	-0.01 (0.08)	-0.04 (0.09)	-0.04 (0.09)
FDI	0.06 (0.05)	0.05 (0.06)	0.04 (0.06)	0.04 (0.06)
Common official language		0.01 (0.16)	-0.08 (0.19)	-0.08 (0.19)
Common spoken language		2.86*** (0.48)	2.92*** (0.59)	2.92*** (0.59)
Common native language		-0.36 (0.45)	-0.03 (0.53)	-0.03 (0.53)
Linguistic proximity		0.01 (0.04)	0.05 (0.05)	0.05 (0.05)
Colonial relationship		0.60** (0.23)	0.66** (0.26)	0.66** (0.26)
Shared border		0.32* (0.18)	0.26 (0.19)	0.26 (0.19)
Days to start a business			0.02 (0.02)	0.03 (0.02)
EU membership			0.13 (0.17)	0.15 (0.18)
Quality of life				0.45*** (0.12)
Gender		-0.41*** (0.06)	-0.39*** (0.07)	-0.39*** (0.07)
Constant	-0.23 (0.76)	1.21 (0.98)	1.69 (1.07)	-2.47* (1.27)
Observations	1,498	1,083	875	875
R-squared	0.73	0.78	0.79	0.79

***p<0.01, **p<0.05, *p<0.1

Standard errors in parentheses