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# **Managerial Origin and Firms' Demand for Labor Migrants: Evidence from Sweden**

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## Abstract

This paper examines how managerial background influences firms' use of labor migration. Using Swedish data, we analyze whether firms led by foreign-born managers are more likely to apply for work permits for non-EU workers. We find that such managers significantly increase the likelihood of application, even after controlling for firm characteristics and regional conditions. Our results suggest that leadership diversity affects access to global labor and how firms engage with migration policy. The study adds new evidence on how firm-level decision-makers shape international recruitment and the institutional channels of cross-border labor mobility.

**JEL:** J61; M51; J15

**Keywords:** labor migration, managerial diversity, foreign-born managers, work permits, Sweden, hiring behavior

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## 1. Introduction

In an era marked by labor shortages, demographic transitions, and intensifying international competition for talent, firms increasingly look beyond national borders to meet their staffing needs (OECD, 2023). Labor migration is no longer a marginal phenomenon—it is a strategic imperative for many firms. Yet, despite its growing significance, surprisingly little is known about the characteristics of the firms that actively engage in recruiting foreign workers.

One key but understudied factor is the background of those making hiring decisions: firm managers. Do managers with foreign backgrounds view international recruitment differently? Are they more willing—or more able—to navigate complex migration systems and tap into global labor markets? These questions are not only important from a managerial perspective but also speak to broader debates on migration and the role of diversity in shaping economic outcomes.

Existing research has shown that the identity of decision-makers can influence who gets hired. In the U.S., Giuliano et al. (2009) find that the racial composition of managers significantly affects the race of new hires. Similarly, Åslund et al. (2014) show that managers in Sweden are more inclined to hire workers of their own origin, albeit it is unclear if it is through international recruitments or foreign born workers already present in Sweden. These patterns suggest that managers' own experiences and identities affects firms' recruitment policies.

However, the existing literature focuses on hiring outcomes without linking them to the institutional mechanisms—such as work permit systems—through which international labor mobility is regulated. By studying work permit applications, we can better understand not only who gets hired, but who is even considered for recruitment in the first place.

We contribute to filling this gap by examining the role of managerial origin in shaping firms' strategic engagement with labor migration. Using comprehensive matched data from Sweden,

we analyze whether firms led by foreign-born managers are more likely to apply for work permits for non-EU workers. In doing so, we examine managers born outside Europe separately and distinguish between foreign-born managers at different levels in the firm hierarchy. Sweden is an ideal case for such an analysis: it has a formalized and transparent labor migration system, detailed administrative data, and a substantial share of foreign-born individuals in leadership positions.

By examining actual applications for work permits, our study offers new insights into how managerial diversity intersects with migration policy, thus contributing to the literature on diversity in management, labor market integration, and the institutional channels of global talent flows.

## **2. Data and descriptive statistics**

Our analysis focuses on firms in the private sector that apply for, or employ, labor migrants from third countries, i.e., outside the European Union (EU). We use data from Statistics Sweden's LISA and STATIV databases, along with the Swedish Migration Agency's case database, in our empirical analysis. LISA contains rich information on employees' employment status. Labor migrants are identified through linkages to STATIV, which records non-EU/EEA nationals' grounds for residence (employment, studies, asylum, family reunification, etc.). The linked LISA-STATIV data cover the period 2005–2021.

The Migration Agency's database provides information for 2013–2023 on individuals for whom employers applied for work permits, including year of birth, gender, country of birth, occupation, and the employer's organization number. For each application, we observe the dates of application and decision, and whether the application was approved or denied. Linkages to Statistics Sweden's data are performed via firms' organization numbers.

Figure 1 shows the share of firms in Sweden employing at least one person with a work permit over the period 2005–2021. Although the overall share remains relatively low throughout the period, there is a clear and steady upward trend. The proportion of firms with at least one labor migrant increased from approximately 0.3 percent in 2005 to about 2.5 percent in 2021. This gradual increase suggests a growing reliance on third-country nationals among Swedish firms.

Our sample is restricted to firms for which at least one manager position is coded in the data and with at least two workers.<sup>1</sup> To identify managers, we use the Swedish Standard for Classification of Occupations (SSYK 2012). At the one-digit level, managers are identified regardless of their position in the manager hierarchy, and we will use this measure to begin with. Later, we will also experiment with the four-digit level in SSYK, to identify CEOs and middle managers.

To explore the hypothesis that managers with a foreign background are more likely to recruit labor migrants from outside the EU, we first conduct a descriptive analysis based on firm-level data for the period 2013–2021. Table 1 reports the average number of work permit applications submitted, the number of employees classified as labor migrants, and the share of migrant employees, across firms without foreign-born managers, with at least one foreign-born manager, and with at least one manager born in non-European countries.

The results provide preliminary support for the hypothesis. Firms with any manager born outside Sweden appear substantially more engaged in recruiting labor migrants. On average, firms with only native managers submitted 0.1 applications for work permits and employed 0.1 migrant workers. The corresponding numbers for firms with at least one foreign-born manager are 1.5 applications and 1.9 labor migrants, while firms (in the overlapping group) with at least

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<sup>1</sup> In the data, there are occupational codes for managers in 28.7 percent of the observations, resulting in a sample size of 351,362. Firms without such codes have, on average, fewer employees, and are less likely to apply for work permits. Later, we will perform robustness checks with a larger subset of the data.

one manager born outside Europe submitted an average of 2.4 applications and employed 3.0 migrant workers.

The differences are pronounced also when considering the share of migrant employees in each firm. Firms with solely Swedish-born managers report a migrant workforce share of only 0.5 percent on average, compared to 1.6 percent among firms with any foreign-born manager and 1.8 percent among firms led by at least one non-European manager.

These patterns are consistent with the idea that managers with foreign backgrounds—particularly those born outside Europe—may have stronger international networks, fewer cultural or informational barriers, or more inclusive hiring preferences when it comes to recruiting foreign workers. However, while these descriptive statistics are informative, they do not account for other firm-level characteristics that may also correlate with both management origin and labor migration. For example, it is evident from Table 1 that firms with foreign-born managers are considerably larger on average than firms without such managers.

We therefore follow up with a multivariate regression analysis to isolate the relationship between manager origin and firms' desire to recruit migrant workers more precisely.

### 3. Econometric model and results

We estimate the following linear probability model (LPM) to analyze the determinants of firms' applications for work permits:

$$\text{Prob}(\text{PermitApplication})_{it} = \alpha + \beta_1 \text{Foreign-bornManager}_{it-1} + \beta_2 \text{Non-EuropeanManager}_{it-1} + \beta_3 \text{FemaleManager}_{it-1} + X_{it-1} + \delta_t + \varepsilon_{it}, \quad (1)$$

where  $\text{Prob}(\text{PermitApplication})_{it}$  a binary indicator equal to 1 if firm  $i$  applied for a work permit in year  $t$ , and 0 otherwise,  $\text{Foreign-bornManager}_{it-1}$  is a dummy variable for foreign-born

manager,  $NonEuropeanManager_{it-1}$  is a dummy variable for manager born outside of Europe,  $FemaleManager_{it-1}$  is a dummy variable for a female manager,  $X_{it-1}$  is a vector of additional control variables,  $\delta_t$  denotes year fixed effects, and  $\varepsilon_{it}$  is the error term.

The parameter  $\beta_2$  shows whether non-European managers have a different impact than foreign-born managers in general on the probability of work permit applications. The vector of control variables accounts for the number of employees, workforce composition (shares of foreign-born and with tertiary education), labor market slack via the regional unemployment rate, and a dummy variable indicating whether the firm had a previous application for work permit. Summary statistics for the variables in the regressions are shown in Table 2.

Equation (1) is our basic model, which we will modify as we proceed with the estimations, adding fixed effects for region (21 counties), industry (ISIC 2-digit level, 88 industries) and firm, to account for time-invariant unobserved heterogeneity, as well as industry-specific trends.

All independent variables (except for previous application) are measured in the preceding year to reduce the risk of reverse causality. Arguably, the fact that we use a measure of firms' *intention* to hire labor migrants, rather than actual hirings, should also mitigate problems with endogeneity.<sup>2</sup>

Table 3 presents regression estimates for firms with any foreign manager, regardless of level, with standard errors clustered at the firm level. All models include year fixed effects and Columns (2)–(5) successively introduce further fixed effects and industry-specific trends. The regression in Column (1) reveals that the presence of a foreign-born manager in the firm increases the probability of an application for work permit by around 2 percentage points.

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<sup>2</sup> This distinction is far from trivial, as 21.8 percent of applications for work permit were denied during 2013–2023, according to Hammarstedt & Skedinger (2025).

Relative to the average probability in the sample (0.062, see Table A.1) the increase is substantial, 33 per cent. With a manager born outside of Europe there is an even stronger increase in the absolute probability, amounting to almost 9 percentage points. However, there seems to be a negative relationship, albeit of small magnitude, between the presence of a female manager and the likelihood of application.

The coefficients of the control variables in Table 3 come out as expected – large firms, those with relatively many foreign-born employees, and those who have applied previously are more likely to engage in the recruitment of labor migrants, while the opposite holds for firms in slack labor markets. Also, the share of highly educated employees is positively associated with permit applications. As fixed effects for region and industry as well as industry-specific trends are added in Columns (2)–(4), coefficients remain largely unchanged with the exception of the one pertaining to the regional unemployment rate. Column (5) adds firm fixed effects, implying that the estimates capture only within-firm variation over time. When a firm switches to a foreign-born manager, the probability of applying increases by approximately 2 percentage points. The effect is not more pronounced when switching to a manager of non-European origin, though, as the coefficient is close to zero. Similarly, a transition to female manager yields an insignificant estimate.

Does the type of manager matter for whether a firm applies for a work permit? This is explored in Table 4, which repeats the format of Table 3 but disaggregates the manager variable into top (including CEOs) and middle managers, with lower-level managers as the reference category. For brevity, the table shows the results for the manager variables only. The estimates suggest that the foreign-born manager effect we have demonstrated is driven largely by top and middle managers, with coefficients ranging between 0.02 and 0.05. It should be noted that a top or middle manager is identified in only 40 per cent of the sample with any manager in the firm, implying a considerable reduction of the sample.

As a robustness check, we re-ran our estimations with the share of management that is foreign-born or female. The results remain largely unchanged, as evident from panel A in Table 5, repeating the compact format of the previous table. Moreover, we assigned manager status to all self-employed workers, irrespective of whether they already had such classification in the data. This resulted in a substantially enlarged sample, but with little change in the estimates (see panel B).

#### **4. Concluding remarks**

We find foreign-born management in Swedish firms, and especially top and middle managers, to be relatively more likely to seek workers from outside the common European labor market. One interpretation is reduced discrimination: foreign-born managers may be more open or less biased against immigrant workers. Another explanation is network-based hiring, where managers rely on contacts in their countries of origin to recruit workers. Relatedly, foreign-born managers might face constraints in accessing native labor markets, making international recruitment more attractive or necessary. These results align with the literature showing that foreign-born managers are significantly more likely to hire immigrant workers.

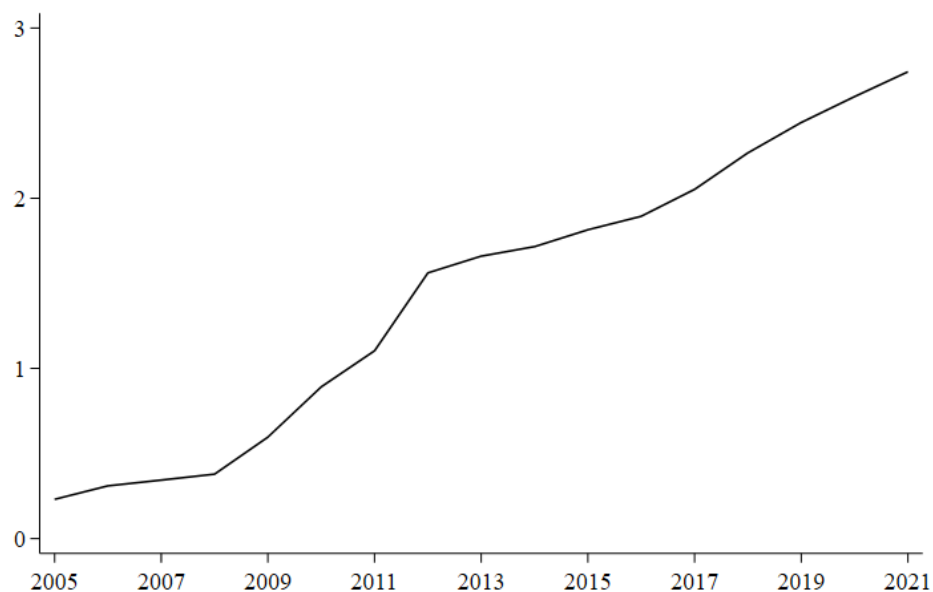
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**Figure 1. Share of firms employing at least one person with a work permit, 2005–2021 (percent)**



Note: Own calculations using data from Statistics Sweden.

**Table 1. Firms' work permit applications and migrant employees, by managerial origin**

	No foreign-born manager	With foreign-born manager	With non-European manager
Number of applications	0.1	1.5	2.4
Share of migrant employees, %	0.5	1.6	1.8
Number of migrant employees	0.1	1.9	3.0
Number of employees	27.1	117.8	172.3
Number of obs.	301,908	47,834	30,554

Note: The numbers refer to annual averages over the period 2013–2021. The total number of unique observations is 351,362.

**Table 2. Summary statistics**

	Mean	SD	Min	Max
Probability that firm applies for work permit	0.062	0.242	0.000	1.000
Foreign-born manager	0.131	0.337	0.000	1.000
Non-European manager	0.083	0.276	0.000	1.000
Female manager	0.411	0.492	0.000	1.000
Log number of employees	2.565	1.238	0.693	10.051
Share foreign-born	0.096	0.175	0.000	1.000
Share high education	0.235	0.263	0.000	1.000
Unemployment rate	0.053	0.009	0.030	0.087
Previous application	0.072	0.259	0.000	1.000

Note: Observation period is 2013–2021. The number of observations is 351,362. All independent variables except Previous application are lagged one year.

**Table 3. Probability that firm applies for work permit**

	(1)	(2)	(3)	(4)	(5)
Foreign-born manager	0.0206*** (0.0039)	0.0206*** (0.0039)	0.0207*** (0.0039)	0.0203*** (0.0039)	0.0222*** (0.0048)
Non-European manager	0.0690*** (0.0052)	0.0677*** (0.0052)	0.0645*** (0.0051)	0.0651*** (0.0051)	0.0013 (0.0058)
Female manager	-0.0089*** (0.0010)	-0.0094*** (0.0010)	-0.0079*** (0.0010)	-0.0079*** (0.0010)	0.0013 (0.0015)
Log number of employees	0.0318*** (0.0008)	0.0319*** (0.0008)	0.0330*** (0.0008)	0.0330*** (0.0008)	0.0353*** (0.0017)
Share foreign-born	0.1992*** (0.0059)	0.1959*** (0.0059)	0.1693*** (0.0057)	0.1704*** (0.0057)	0.0734*** (0.0083)
Share high education	0.0503*** (0.0023)	0.0449*** (0.0023)	0.0428*** (0.0024)	0.0424*** (0.0024)	0.0015 (0.0040)
Unemployment rate	-0.4278*** (0.0561)	-0.2654*** (0.0848)	-0.2576*** (0.0844)	-0.2484*** (0.0843)	-0.0070 (0.0835)
Previous application	0.2956*** (0.0048)	0.2946*** (0.0048)	0.2851*** (0.0047)	0.2860*** (0.0047)	
Fixed effects	Y	Y x C	Y x C x I	Y x C x I	Y x C x I x F
Industry-specific trends	No	No	No	Yes	Yes
Adj. R <sup>2</sup>	0.2431	0.2437	0.2533	0.2538	0.4892

Note: Dependent variable equals 1 if the firm applied for a work permit in a given year, 0 otherwise. Fixed effects: Y = year, C = county, I = industry, F = firm. All independent variables except Previous application are lagged one year. Estimation period is 2013–2021. The number of observations is 351,362. Robust standard errors, clustered at the firm level, in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.10.

**Table 4. Probability that firm applies for work permit, by type of manager**

	(1)	(2)	(3)	(4)	(5)
Foreign-born manager	0.0356*** (0.0043)	0.0343*** (0.0044)	0.0350*** (0.0043)	0.0347*** (0.0043)	0.0133*** (0.0045)
Foreign-born top/middle manager	0.0482*** (0.0064)	0.0483*** (0.0064)	0.0481*** (0.0062)	0.0484*** (0.0062)	0.0202*** (0.0054)
Female manager	-0.0134*** (0.0016)	-0.0140*** (0.0016)	-0.0113*** (0.0016)	-0.0114*** (0.0017)	-0.0027 (0.0022)
Fixed effects	Y	Y x C	Y x C x I	Y x C x I	Y x C x I x F
Industry-specific trend	No	No	No	Yes	Yes
Adj. R <sup>2</sup>	0.2873	0.2879	0.3003	0.3005	0.5182

Note: The number of observations is 140,115. See also note to Table 3. Robust standard errors, clustered at the firm level, in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.10.

**Table 5. Probability that firm applies for work permit, robustness checks**

	(1)	(2)	(3)	(4)	(5)
<i>A: Shares of managers</i>					
Share foreign-born managers	0.0244*** (0.0066)	0.0248*** (0.0066)	0.0241*** (0.0065)	0.0236*** (0.0065)	0.0265** (0.0106)
Share non-European managers	0.0565*** (0.0081)	0.0556*** (0.0081)	0.0491*** (0.0080)	0.0500*** (0.0080)	-0.0224 (0.0138)
Share female managers	-0.0108*** (0.0013)	-0.0116*** (0.0013)	-0.0089*** (0.0014)	-0.0090*** (0.0014)	0.0009 (0.0023)
<i>B: Assigning manager status also to self-employed</i>					
Foreign-born manager	0.0289*** (0.0026)	0.0287** (0.0026)	0.0289*** (0.0025)	0.0287*** (0.0025)	0.0223*** (0.0036)
Non-European manager	0.0667*** (0.0036)	0.0660*** (0.0036)	0.0624*** (0.0036)	0.0627*** (0.0036)	0.0014 (0.0037)
Female manager	-0.0038*** (0.0005)	-0.0041*** (0.0005)	-0.0041*** (0.0006)	-0.0041*** (0.0006)	0.0020* (0.0011)
Fixed effects	Y	Y x C	Y x C x I	Y x C x I	Y x C x I x F
Industry-specific trend	No	No	No	Yes	Yes

Note: The number of observations is 351,362 in panel A and 822,723 in panel B. See also note to Table 3. Robust standard errors, clustered at the firm level, in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.10.