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## Immigration history, entry jobs, and the labor market integration of immigrants

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# Immigration history, entry jobs, and the labor market integration of immigrants

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# Immigration history, entry jobs, and the labor market integration of immigrants<sup>a</sup>

Laura Ansala      Olof Åslund      Matti Sarvimäki

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## Abstract

We examine how immigrants enter the labor market and whether their integration process varies by host country's immigration history. We focus on two countries—Finland and Sweden—that have similar formal institutions, but differ vastly in their past immigration experience. Nevertheless, in both countries, immigrants tend to find their first jobs in low-paying establishments where the manager and colleagues often share their ethnic background. Time to entry and entry job characteristics vary widely by region of origin. Furthermore, entry job characteristics predict earnings dynamics and job stability. The patterns and associations are remarkably similar in Finland and Sweden. These findings suggest strong regularities in labor market integration and ethnic segregation that are independent of immigration history and ethnic diversity.

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# 1 Introduction

Newly arrived immigrants often face ethnically segregated labor markets as they try to make their way in the host country. This tendency is epitomized by the historical Chinatowns and Little Italys, but less visible ethnic segregation and segmentation remains pervasive also in current labor markets. The presence of ethnic networks may help immigrants to find entry jobs, but may also lead to careers contained in these ethnically segmented parts of the host country's labor market. However, despite a large literature on economic assimilation, we know relatively little about the first steps into the labor market among foreign-born workers. It also remains an open question whether segregation—and its association with economic outcomes—reflects fundamental features of the functioning of labor markets, or if it is predominantly context specific and contingent on history.

This paper documents how immigrants enter the labor market in Finland and Sweden. The two countries provide an informative case study, because they share similar formal labor market institutions, but differ starkly in their immigration histories. In 1990, when our analysis begins, Sweden was already an established immigrant host country with almost a tenth of the population born abroad. By contrast, Finland had strongly restricted immigration and less than one percent of the population were immigrants. On the other hand, both countries have remarkable data infrastructures that give us access to rich population-wide linked employer-employee data and allow us to observe aspects of labor market integration that have not been examined in previous work.

Our key finding is that immigrants start their careers in a very similar manner in Finland and Sweden. In both countries, immigrants tend to enter the labor market through low-paying establishments where a large fraction of other workers are also immigrants. This sorting is particularly strong along finer ethnic lines. On average, 11% of coworkers share the entrant's region of origin in both host countries. For comparison, if immigrants had been randomly allocated into establishments, 0.3% of their colleagues in Finland and 0.5% in Sweden would have belonged to the same minority group as the immigrant herself. We also find comparable deviations from randomness for the likelihood of immigrants finding their first jobs in establishments where the manager is of the same origin as the entrant.

The entry job characteristics vary widely across immigrant groups. For example, immigrants from Turkey start working in establishments with 20–25 percentage points

more own-group colleagues, on average, compared to observationally identical immigrants from the other OECD countries in similar local labor markets. Region of origin predicts entry job characteristics very similarly in Finland and Sweden regardless of whether there are large differences in previous immigration from the region (e.g. former Yugoslavia) or not (e.g. Somalia). We also document an acceleration in the ethnic segregation of entry jobs starting with the cohorts arriving at the turn of the millenium. This trend is, again, very similar in both host countries and is thus likely to be driven by factors unrelated to the characteristics of the immigrant communities.

We end by examining the extent to which entry job characteristics predict earnings and job stability. Those starting their careers under an immigrant manager tend to have higher earnings than observationally identical immigrants starting in otherwise similar establishments that have native managers. The association is particularly strong when the manager and the immigrant are born in the same region. Over time, however, the predictive power of the first manager's background diminishes. We also document a strongly nonlinear association between colleagues' ethnicity and entrants' earnings. Those starting their careers as the only immigrant in an establishment earn substantially less than immigrants who have a moderate share of immigrant or own-group colleagues in their entry job. On the other hand, those working in establishments where most colleagues are immigrants also have lower entry earnings. These patterns remain, somewhat attenuated, when we measure earnings five years after entering the labor market.

Our findings contribute to two strands of the literature. First, they add to earlier work documenting extensive ethnic segregation across workplaces (Bayard et al., 1999; Aydemir and Skuterud, 2008; Hellerstein and Neumark, 2008; Åslund and Skans, 2010; Andersson et al., 2014; Glitz, 2014; Tomaskovic-Devey, Hällsten, and Avent-Holt, 2015). These descriptive studies typically find that working in immigrant or minority-dense workplaces is negatively associated with wages. However, this association is likely to reflect selection rather than causality. Indeed, studies using plausibly exogeneous variation or longitudinal data suggest that access to a resourceful ethnic community improves labor market outcomes (Munshi, 2003; Edin, Fredriksson, and Åslund, 2003; Colussi, 2015; Dustmann et al., 2016).<sup>1</sup> The value of ethnic communities is also supported by the finding that

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<sup>1</sup>Jackson (2010) provides an overview of the broader literature on the importance of social networks in the labor market. Recent examples include Cingano and Rosolia (2012), Kramarz and Skans (2014), Burks et al. (2015), Hensvik and Skans (2016), Brown, Setren, and Topa (2016), and Barr, Bojilov, and

managers are more likely to hire workers of their own ethnicity (Giuliano, Levine, and Leonard, 2009; Åslund, Hensvik, and Skans, 2014).

In comparison to earlier work on workplace segregation, our contribution is twofold. First, we focus on entry jobs, where the presence of earlier immigrants may be particularly influential. More importantly, we seem to be the first to present a cross-country comparison of ethnic segregation across workplaces using high-quality and fully comparable data. The countries studied can be seen to represent if not extremes in terms of immigration experience, so at least one matured and one fledgling example.<sup>2</sup> Empirical results will thus be relevant for a broad group of countries.

We emphasize that our work is purely descriptive and that immigrants choosing to move to Sweden may differ from those who are willing to become the "pioneers" in Finland. We also discuss evidence suggesting that the attitudes of natives differ between the two host countries. Thus, it would not be surprising to find that immigrants integrate into the Finnish labor market differently than into the Swedish one. Yet, our key finding is the *similarity* in the results across different contexts. As we discuss in more detail in the concluding section, this similarity is consistent with the hypothesis that ethnic segregation and segmentation are such fundamental features of the labor market that they emerge quickly even in a country with very limited immigration history.

Our results also inform the large literature on economic assimilation starting with Chiswick (1978) and Borjas (1985).<sup>3</sup> This body of work typically aims to document how the immigrant-native wage or earnings gap evolves as immigrants spend more time in the host country. A limited number of studies have investigated the role of establishments in the assimilation process. Barth, Bratsberg, and Raaum (2012) find that 40% of the immigrant-native wage gap in Norway can be attributed to sorting across establishments and that immigrants do not increase their earnings by moving to higher-paying establishments (see also Eliasson, 2013). Our analysis provides new evidence on the transition into employment and the early stages of immigrants' careers, and thus enhances the

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Munasinghe (2016).

<sup>2</sup>Even though Sweden is not one of the classical immigration countries, it is worth noting that comparing the findings of Hellerstein and Neumark (2008) and Åslund and Skans (2010) indicates that ethnic labor market segregation appears to be highly similar in Sweden and the US.

<sup>3</sup>Kerr and Kerr (2011), Borjas (2014) and Duleep (2015) provide overviews. Relatively recent work includes Card (2005), Lubotsky (2007) and Borjas (2015) for the US; Algan et al. (2010) for the UK, France and Germany; Izquierdo, Lacuesta, and Vegas (2009) for Spain; Sarvimäki (2011, 2017) for Finland; Bratsberg, Raaum, and Roed (2017) for Norway; and Åslund, Forslund, and Liljeberg (2017) for Sweden.



understanding of labor market assimilation.

The rest of this paper is structured as follows. In the next two sections, we present a brief overview of the Finnish and Swedish immigration experiences and describe our data sources. Section 4 examines transitions to the first job, Section 5 documents the characteristics of the entry jobs and Section 6 shows how entry job characteristics predict entry earnings and future job stability and earnings. We provide some concluding thoughts in Section 7.

## 2 The Finnish and Swedish immigration experiences

Finland and Sweden share a long history (current Finland was part of Sweden until 1809) and have very similar formal institutions and labor markets. Fundamental economic indicators are quite similar: GDP per capita is comparable, wage dispersion is low in international comparison, jobs with very low wages are absent, unionization is high and the overall welfare system is comparatively generous (see Skedinger (2016) and Böckerman, Skedinger, and Uusitalo (2018) for further discussion).

However, the countries differ dramatically in their post-WWII immigration experience. At the beginning of our observation period in 1990, Sweden was already an established immigrant host country with 9.2% of the population being foreign-born (Appendix Figure A1). Partly, this was a result of substantial labor migration in the 1950s and 1960s. In the 1970s, flows shifted to refugees, asylum seekers and their family members from different parts of the world: e.g. Chile in the 1970s and Iran in the 1980s.<sup>4</sup> In later decades, Sweden has received the highest per-capita inflows of humanitarian migrants among the EU countries (Ruist, 2015). In terms of asylum seekers, this position was maintained through 2015 (Dustmann et al., 2017), before migration policies and regulations were rapidly altered.

By contrast, Finland strictly restricted immigration until the early 1990s. Statistics on Chilean migrants from the 1970s illustrate the difference in comparison to Sweden. Finland's modern immigration policy is typically attributed to start with the Chilean refugees allowed to settle in the country in 1973–1978 (Martikainen, Saukkonen, and Säävälä, 2013). However, the number of individuals was only 180 in total over this

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<sup>4</sup>We will use the terms asylum seekers and refugees interchangeably, which is common in the European context.

period. In comparison, Swedish statistics show that the number of Chilean citizens in the country increased from 212 to 7,225 between 1973 and 1980. By 1990, the figure was close to 20,000.<sup>5</sup> As a result of the restrictive immigration policy, Finland's foreign-born population remained minuscule. In 1990, only 1.3% of the population was foreign-born and even among them, half were foreign-born children of Finnish emigrants.<sup>6</sup> Around this time, however, the Finnish immigration policy started to change and, for the first time, a relatively large number of immigrants moved to Finland. Part of this immigration was specific to Finland, particularly the immigration from neighboring Russia and Estonia. However, Finland and Sweden also received immigrants of similar origin. In particular, many refugees escaping the civil wars of the former Yugoslavia and Somalia moved to both host countries. For Finland, the development is dramatic in a relative sense, with a more than tripling of the fraction of foreign-born residents over a 20-year period. Still, Finland remains a much less ethnically diverse country with the immigrant share of about one third of that observed in Sweden in 2010.

In addition to the differences in the number of immigrants, Finland and Sweden also differed in terms of native attitudes and the extent to which natives interact with immigrants. In the 2002 European Social Survey, for example, residents of Sweden had the most positive view on immigration among the 22 countries included in the study along all dimensions measured in the survey. In contrast, respondents in Finland were much more likely to support more restrictive immigration policy and to believe that immigrants take jobs from the natives. However, concerns about immigration posing a cultural threat were comparable in the two countries (Ervasti, 2004). In the same survey, 58% of respondents in Finland and 32% in Sweden reported to have no immigrant friends.

Panel A of Figure 1 presents another measure of immigrant-native interactions using data discussed in detail in the next section. It shows that in 1990, 22% of the Finns worked in an establishment that had at least one immigrant worker, while the corresponding figure for Sweden was 77%.<sup>7</sup> By 2010, the share of Finnish workers having immigrant

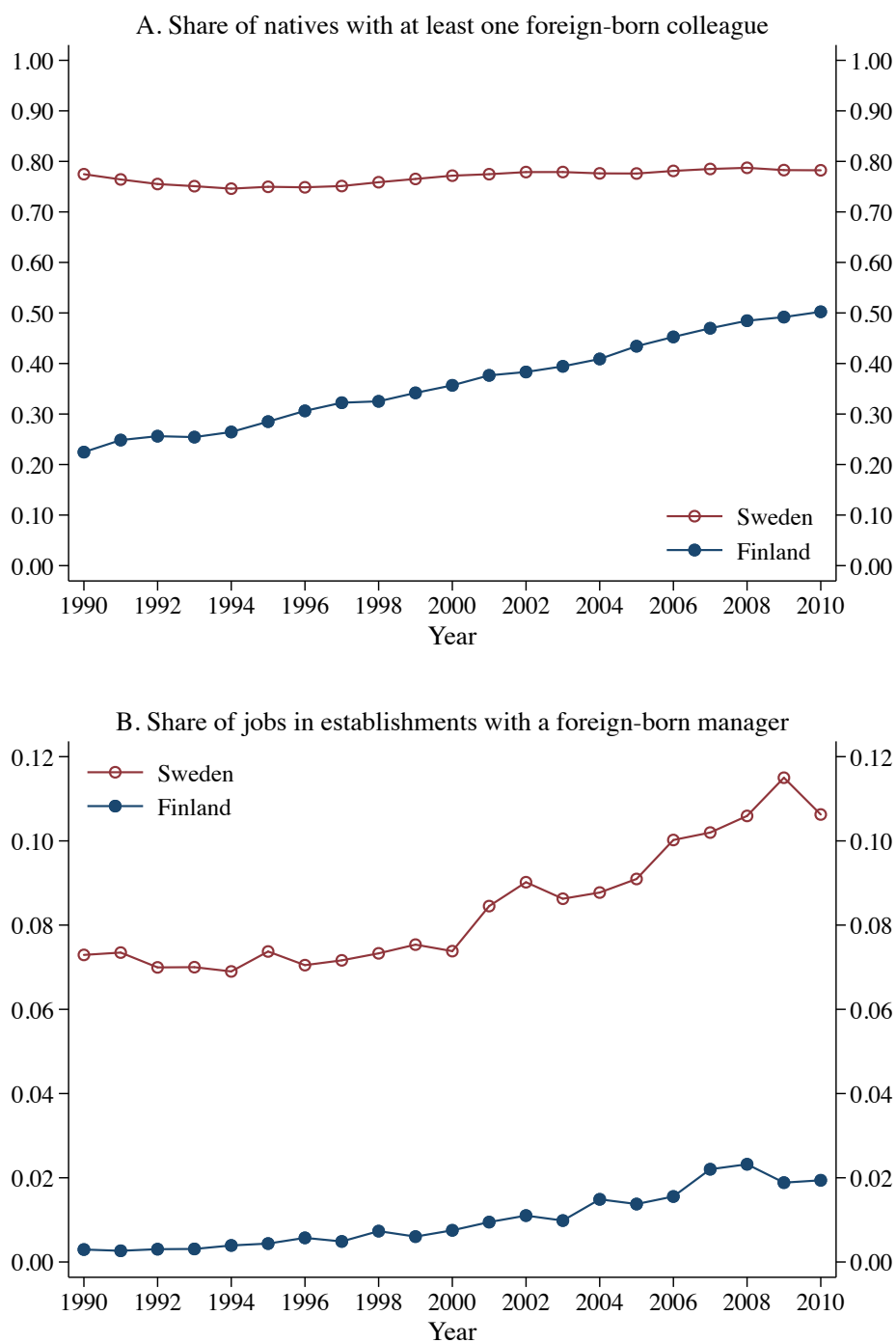
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<sup>5</sup>Sweden's larger population explains only a small part of the differences in absolute numbers. In the beginning of our study period, the populations of Finland and Sweden were 5.0 and 8.6 million, respectively.

<sup>6</sup>Among the foreign-born living in Finland in 1990, Statistics Finland categorizes 48% to have "Finnish background", defined as at least one of their parents having been born in Finland.

<sup>7</sup>These numbers are likely to overestimate the extent to which natives actually interacted with immigrants in the workplace due to large establishments with a small number of immigrants affecting these shares. In the 2002 European Social Survey, 62% of Swedish and 31% of Finnish employed respondents report to have at least one immigrant colleague. In comparison, the corresponding shares using our data

Figure 1: Exposure to foreign-born colleagues and managers, 1990-2010



Note: Panel A reports the share of native workers who work in establishments that employ at least one foreign-born person. The analysis is restricted to workers in establishments with at least three persons. Panel B reports the share workers working in an establishment where the manager is born abroad. We define managers as the individual in an establishment, who has the highest annual earnings.

colleagues had increased to 50%, while the share remained stable in Sweden.

Panel B of Figure 1 plots the share of all jobs located in establishments with a foreign-born manager (defined by highest earnings at the workplace; see Section 5), and thus gives an indication of the extent to which the foreign-born managers influence hiring decisions. According to this metric, 7.3% of employed Swedish workers had an immigrant manager in 1990. In Finland, the corresponding share was 0.3%. This may be an important difference for the recently arrived given that earlier research suggests that the origin of the managers is strongly associated with the sorting of new hires across establishments. For example, Åslund, Hensvik, and Skans (2014) show that ethnic similarity increases the probability of a match within a given establishment over time and across establishments within a firm. Thus, the presence of immigrant managers in the economy may affect the speed of transition into employment and the type of establishments through which immigrants enter the labor market.

Taken together, the differences between Finland and Sweden suggest that immigrants might adopt very different ways to cope in these labor markets. Another reason to expect different integration strategies is that there may be compositional differences between immigrants living in the two host countries. Immigrants to Finland, particularly those arriving in the 1990s, can be regarded as "pioneers" who decided to move to a country with few preceding immigrants. They are likely to differ in their unobservable characteristics from those choosing to go to Sweden. Thus, we stress that our analysis is strictly descriptive and we are not able to identify the extent to which possible differences in the integration process are due to differences in the Finnish and Swedish context or due to differences in immigrant compositions. As we discuss in detail below, however, our main finding is a similarity in the integration process, overall and in the details, in the two host countries.

### 3 Data

We use linked employer-employee data covering the entire working age population living in Finland and Sweden from the late 1980s onwards. Data for Finland come from The 

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are 78% and 38%. Of course, also the definition of "immigrant" may differ between the register and survey data. Nevertheless, both data sources suggest that Swedish workers were twice as likely to have at least one immigrant colleague in comparison to Finnish workers in 2002.

Finnish Longitudinal Employer-Employee Data (FLEED) augmented with detailed information on immigrant background. The Swedish data are drawn from population-wide registers combined in the IFAU database (Louise and RAMS), originally collected by Statistics Sweden. The baseline analysis includes immigrants who were 18–60 years old at arrival and who immigrated during the period 1990–2010. We follow them through year 2010 or the year they turn 60 years old, emigrate or die. To be included in the population registers, one has to receive a residence permit indicating a right/intention to stay in the host country for at least one year. The year of immigration does not necessarily correspond to the time of actual entry into the country (e.g. for asylum seekers).<sup>8</sup> We use only the first observed spell of immigration for each individual in the observation period.

We define immigrants as foreign-born individuals. For Finland, we also require that they do not speak Finnish as their mother tongue and that they do not hold Finnish nationality at the time they enter the data. This stricter definition is motivated by substantial emigration from Finland (primarily to Sweden) in the 1960s and early 1970s, which means that many of the foreign-born individuals are children of Finnish emigrants (see footnote 6 above). Restricting the analysis to 18-60-year-old individuals who immigrated at age 18 or older allows us to focus on immigrants who have obtained their compulsory education outside of the host countries.

Table 1 reports average background characteristics for our final sample (see also Appendix Table A1 for variable definitions). The distribution of age at arrival is similar in Finland and Sweden, with immigrants on average being 31–32 years old at entry. Men and women constitute almost equal shares in both countries and the share of immigrants arriving without children is quite similar.<sup>9</sup> The table also provides an indication of the very different demographic compositions immigrants encounter upon arrival; average ex-

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<sup>8</sup>Waiting times have varied substantially depending on caseloads and political decisions. For most of the observation period, access to the formal labor market for refugees was dependent on a residence permit. Of course, it is possible that e.g. employer contacts are made earlier so that (similar to immigrants enjoying free mobility for short-term stays) immigration is actually registered after the first steps toward the Swedish labor market. For linguistic convenience we use “year of arrival” rather “year of residence permit”.

<sup>9</sup>The category of singles and unmarried couples includes also some unmarried couples with no children in common, as our data for Sweden does not distinguish between them and unmarried couples without children. Some of the latter couples are categorized as singles, and some as single parents. Our data for Finland does make the distinction between unmarried couples having no children and having no children in common, and shows the latter group to constitute only 3.1% of the category of singles and unmarried couples.

Table 1: Background characteristics at arrival and at entry to first job

	At arrival		At first job	
	Finland	Sweden	Finland	Sweden
Share of women	48.3	49.4	44.7	46.8
Age	31.6	31.4	32.9	32.2
Arrival year	2002.2	2001.8	2000.8	1999.6
Immigrant share in country	2.5	14.5	2.2	13.9
Immigrant share in travel-to-work area	3.3	16.0	3.0	15.5
Own-group share in country	0.3	0.7	0.3	0.6
Own-group share in travel-to-work area	0.4	1.0	0.4	0.9
Unemployment rate in travel-to-work area	16.6	12.0	16.6	11.6
Years until first job			1.86	1.96
<i>Family status, shares</i>				
single and unmarried	48.6	49.6	50.4	47.9
married no kids	21.5	18.6	20.2	18.5
partners w/ 1-2 kids	22.3	20.4	22.4	22.4
partners w/ 3+ kids	3.5	5.5	2.9	5.2
single parents	2.7	4.1	2.5	3.8
adult living with parent	1.5	1.8	1.6	2.2
Observations	155,116	742,012	86,807	367,471

Note: Background characteristics of immigrants at arrival and at their first jobs (defined as working in an establishment with at least three persons). Unemployment rate defined as fraction age 18–60 with zero earnings.

posure to other immigrants is much higher in Sweden. Further inspection of the data shows that while 96% of immigrants to Finland reside in an area with less than 7.5% foreign-born in the population, this is the case for less than a tenth of those arriving to Sweden. Roughly two fifths of immigrants to Finland originate from the Baltics or "Eastern Europe", mostly Russia (Appendix Table A2). For Sweden, no single category is as dominant, but a larger share of the immigrants to Sweden come from the Middle East and North Africa. As shown by Appendix Table A3, immigration is relatively evenly distributed over time, although more concentrated to later years in Finland.

## 4 Transition to the first job

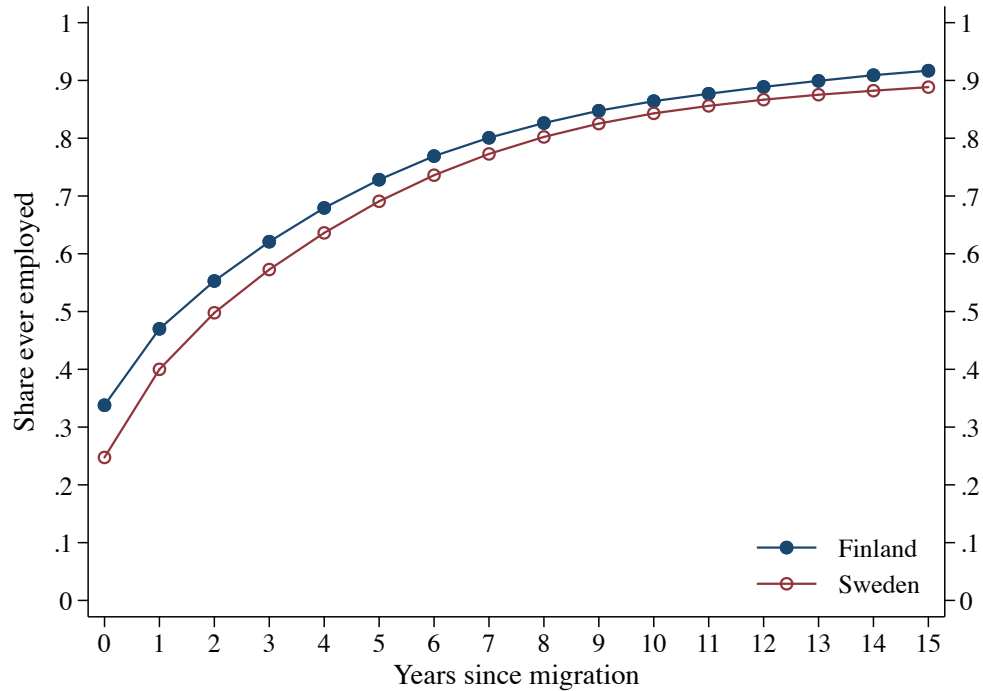
Outcomes variables will be further discussed below and definitions are given in the appendix. We start our analysis by documenting the variation in the time immigrants take to find their first jobs and then examine which observable factors predict this variation. Figure 2 presents the share of immigrants who have ever held a job by years since immigration (defined as having been registered as employed at an establishment). It shows that a quarter of immigrants to Sweden and a third of immigrants to Finland had a job during their year of arrival. The fraction "ever employed" grows relatively fast, but finding a first job takes a considerable amount of time for many and roughly a tenth of (working-age) immigrants do not hold a single job during their first 15 years in the host country. Immigrants to Finland enter the labor market slightly faster than those in Sweden, but this crude indicator still suggests that the overall pattern is quite similar in both countries.

We next ask how time to the first job varies by observable characteristics using a simple duration analysis.<sup>10</sup> Figure 3 presents estimates for two characteristics of particular interest: the country/region of origin and year of arrival fixed effects. Panel A reveals vast differences by origin. It also shows that groups that enter fast in Finland also do so in Sweden: those coming from Iran, Iraq and the African Horn (predominantly Somalia) took the longest to find their first jobs (conditional on other covariates), while those

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<sup>10</sup>We estimate proportional-hazard models of the form:  $h(t) = \lambda(t) \exp\{X\beta + \mu_c + \mu_a\}$ , where  $t$  measures years from arrival to the start of the first job,  $\lambda(t)$  is the baseline hazard,  $X$  is a vector of observable characteristics measured at the end of the year of arrival,  $\mu_c$  is a vector of region of origin fixed-effects, and  $\mu_a$  is a vector of year of arrival fixed-effects. The purpose is to describe associations between entry pace and individual and contextual variables in the two countries; the analysis does not attempt to handle e.g. differences due to unobserved heterogeneity.

Figure 2: Time to first registered establishment



Note: Share of immigrants who have ever been employed (defined as being registered to an establishment) by time spent in the host country after receipt of residence permit. The values are inverses of Kaplan-Meier estimates.

coming from other European countries tend to find employment relatively fast.<sup>11</sup> Finally, year of arrival fixed-effects reported in Panel B show that those arriving in later years tend to find a job faster than those arriving earlier, particularly in Finland.<sup>12</sup>

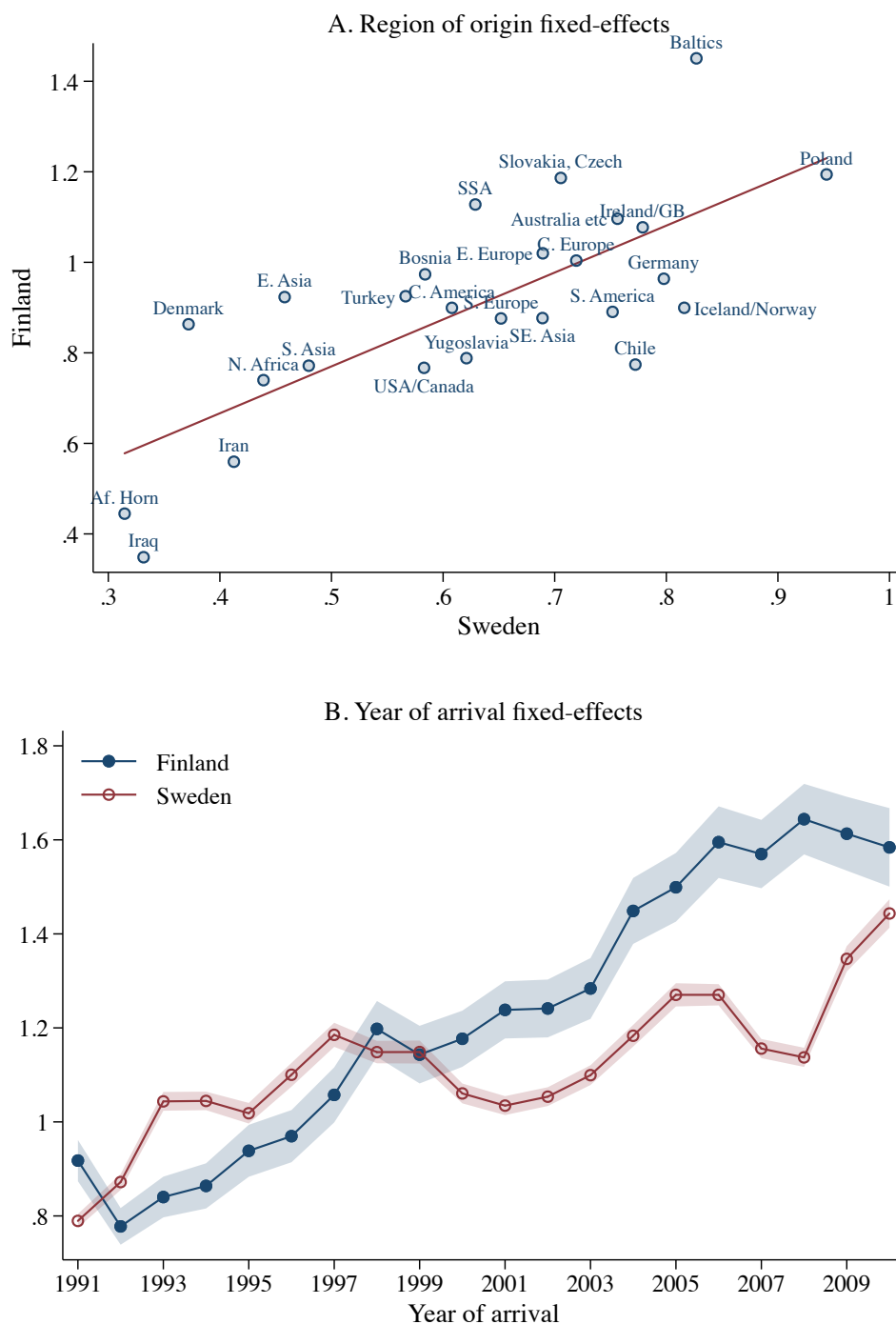
Appendix Table A4 reports the estimates for other background characteristics included in the analysis. It shows that while there are some differences, observable characteristics tend to predict the pace of labor market entry quite similarly in both host countries. It is important to note that there are no *a priori* reasons to expect the patterns to be so alike. If anything, one could expect the process of finding a job to differ significantly in an established immigration country like Sweden, where a larger number of firms are managed by immigrants (see section 2) and the native population is presumably more accustomed to working with immigrants. Furthermore, it seems reasonable to assume that individuals who choose to migrate into an established immigrant country

<sup>11</sup>Some estimates may be affected by cross-border commutes to the source country; e.g. the relatively low entry pace among Danish migrants to Sweden.

<sup>12</sup>One could be concerned that the year of arrival estimates are influenced by the fact that later cohorts are by definition censored earlier. However, treating all cohorts as having an observation window of three years yields very similar time trends.



Figure 3: Entry into employment by region of origin and year of arrival. Fixed-effects estimates from proportional-hazards models.



Note: This figure plots hazard ratios for region of origin fixed-effects (panel A) and year of arrival fixed-effects (panel B) from proportional-hazard models of time until entry to first establishment. The regression also controls for other observed characteristics measured at arrival (reported in Table A4). Here, we report results from a specification excluding education; results including observed education are highly similar. We have used Finnish immigrants as the omitted category in Sweden and Swedish immigrants as the omitted category in Finland.

differ from those who are willing to become the "pioneers" elsewhere. Nevertheless, we find strong similarities in the process of finding a job in the two countries. In the next section, we show that the characteristics of these first jobs are also very similar in Finland and Sweden.

## 5 Entry jobs

We now turn to study the characteristics of entry jobs among immigrants. Table 2 shows that in the first full year after entering the labor market, average annual earnings are roughly 15,000 Euros (adjusted to year 2010 price level), which places them at roughly the 30th percentile of the earnings distribution of the working (positive earnings) population of the same age and gender. Relative to the overall population of similar age and gender, including zero earners, the rank is naturally somewhat higher. Coworkers, defined as other people working in the same establishment, also tend to earn relatively little: Immigrants' entry establishments, ranked according to average coworker earnings are at the 40th percentile of the establishment distribution in both countries. This average reflects a rather substantial concentration to low-earner workplaces: while close to half of the immigrant entry jobs are found in establishments with a rank lower than 0.3, less than one in five natives work in such establishments.<sup>13</sup> Since their colleagues also tend to have relatively low earnings, immigrants enter at around the 40th percentile of the within-establishment earnings distribution, on average. While this pattern of entry earnings may not be qualitatively surprising, it is somewhat remarkable that it is so similar in such different contexts in terms of host country immigration experience.

We next turn to examine the country of origin mix of coworkers and managers. Panel C of Table 2 shows that immigrants tend to enter the labor market through establishments where many of their coworkers are also immigrants. The pattern is particularly striking for Finland. While the average share of immigrant coworkers in entry jobs is as high as 21%, the expected exposure—if immigrant entrants had been randomly allocated into establishments—is only 2%. The ratio of the observed and expected immigrant share can be considered a measure of "overexposure". For Finland, immigrant overexposure is then

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<sup>13</sup>In 1990–2010, 43 (49)% of immigrant entrants worked in an establishment with a rank less than 0.3 in Finland (Sweden). The corresponding share of all natives in the 2010 establishment distribution was 16 (18)%. For immigrants in general (not just entrants), the share was 31 (29)%.

Table 2: Entry job characteristics

	Finland		Sweden	
	Mean	SD	Mean	SD
<i>A: Own earnings</i>				
Annual earnings (1000 euros)	15.298	18.092	15.597	20.295
Annual earnings (rank)				
In working population	0.293	0.274	0.307	0.284
In population	0.382	0.257	0.388	0.265
Within-establishment earnings rank	0.376	0.262	0.395	0.272
<i>B: Establishment earnings</i>				
Annual earnings (1000 euros)	20.042	15.469	18.394	11.566
Annual earnings (rank)	0.431	0.296	0.382	0.280
<i>C: Coworker immigrant share</i>				
Observed	0.211	0.292	0.354	0.302
Expected, uncond.	0.021	0.010	0.111	0.013
Expected, cond. on industry and LLM	0.035	0.030	0.148	0.073
<i>D: Manager immigrant share</i>				
Observed	0.130	0.336	0.280	0.449
Expected, uncond.	0.018	0.008	0.103	0.013
Expected, cond. on industry and LLM	0.029	0.036	0.151	0.128
<i>E: Coworker same-origin share</i>				
Observed	0.111	0.241	0.111	0.223
Expected, uncond.	0.003	0.003	0.005	0.005
Expected, cond. on industry and LLM	0.005	0.007	0.010	0.018
<i>F: Manager same-origin share</i>				
Observed	0.077	0.267	0.092	0.290
Expected, uncond.	0.002	0.002	0.005	0.004
Expected, cond. on industry and LLM	0.004	0.008	0.010	0.022
Observations	86,807		367,471	

Note: Means and standard deviations of characteristics of immigrants' first jobs in establishments with at least three persons. Panel B includes earnings also for managers at the establishment. Individual earnings ranks are constructed conditional on age and gender. See the Appendix for details of variable definitions.

$0.211/0.021 = 10.0$ . Immigrants tend to enter also the Swedish labor market through establishments with an overpresence of immigrants, but given Sweden's substantially larger immigrant population, the observed share of immigrant coworkers (35%) deviates less from the benchmark of random allocation (11%) leading to an overexposure of 3.2.

These patterns in coworker immigrant shares are consistent with the hypothesis that ethnic segregation plays an important role in the labor market. On the other hand, they could also reflect differences in preferences, comparative advantages or residential patterns that would lead immigrants to concentrate in certain industries and/or locations. As we show in Appendix Table A5, first jobs are often found in service industries employing many low-skilled workers with a particularly large overrepresentation in hotels and restaurants. We examine the role of industry and local labor markets by presenting expected immigrant coworker shares conditional on these factors. These benchmarks are constructed by taking the joint industry-local labor market distribution of immigrants of each year as given and calculating the expected coworker characteristics if immigrants had been randomly allocated into establishments within these industry-location pairs in the year of their entry (see Åslund and Skans (2009, 2010) for further discussion). While the conditional expectations are somewhat higher than the unconditional expectations, the overexposure measures remain at 6.0 and 2.4 in Finland and Sweden, respectively.

The remainder of Table 2 provides further evidence on ethnic segregation in entry jobs. Panel D shows that excess exposure to immigrant coworkers also extends to "managers", defined as the person with the highest earnings in the establishment.<sup>14</sup> The levels of manager immigrant share are in all cases somewhat lower than for coworker exposure, but the degree of overexposure is broadly similar as in the case of coworkers.

We also find extensive overexposure to "own-group" workers and managers, i.e. people from the same origin region as the individual herself. Despite each country group constituting a very small share of the overall workforce, immigrants in both Finland and Sweden enter the labor market through establishments where, on average, 11% of coworkers are from the same origin region (panel E). This gives rise to overexposure measures of 41.1 (Finland) and 21.8 (Sweden). The results are broadly similar for own-group managers (Panel F).

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<sup>14</sup>Statistics based on occupational classifications produce lower fractions of immigrants in leading positions (Åslund, Hensvik, and Skans, 2014). However, our definition has the advantage of including establishments where no one is classified as having a manager occupation, and arguably captures at least people in influential positions.

Taken together, these patterns suggest that immigrant status and finer "ethnic" groupings matter in the labor market. As we discuss in the introduction, this conclusion is not new. However, a novel and intriguing insight from Table 2 is that ethnically segregated immigrant labor markets are so similar in Finland and Sweden despite the vast differences in their immigration histories. Even though the pre-existing stock of earlier arrivals is substantially smaller in Finland than in Sweden, immigrants start in establishments with similar levels of own-group immigrant shares. This finding suggests that, at least for some fraction of immigrants, ethnic segregation is very important—even in a country like Finland with very limited supply of established immigrants from the origin areas of the new arrivals.

On the other hand, it is important to note that most immigrants do *not* start in workplaces fully dominated by other immigrants. As a matter of fact, the fraction of entrants who encounter more than 90% immigrant coworkers at their first job is less than a tenth in both countries (see Appendix Figure A2). While these individuals contribute to the general overexposure, the bulk of it is driven by entry in workplaces with a modest to substantial overrepresentation of foreign employees. Similarly, the figure also shows that entry jobs are dispersed over a wide range of establishment types as measured by average coworker earnings, but again skewed toward the ones where earnings are lower.

## 5.1 Predictors of entry job characteristics

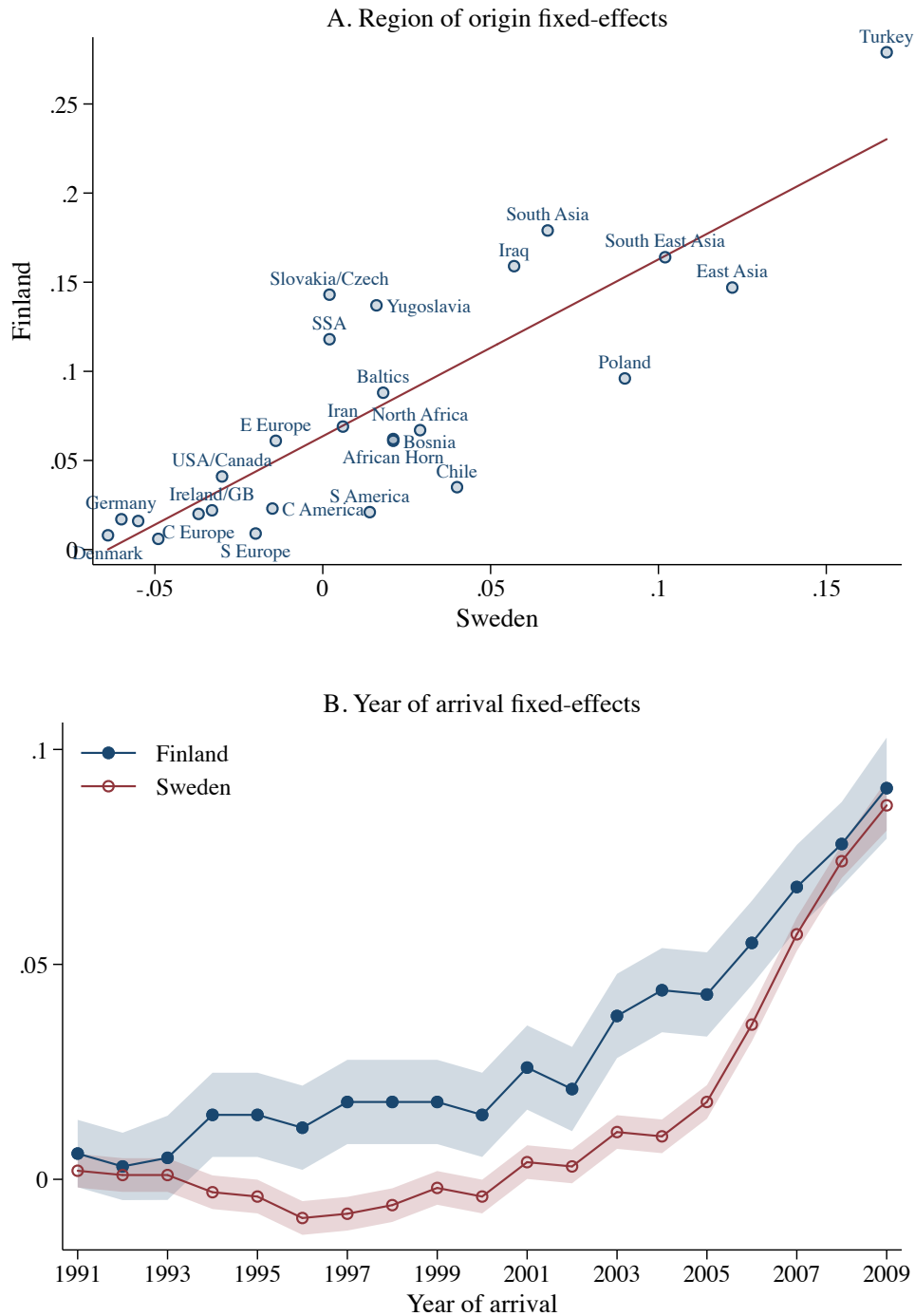
The average entry jobs characteristics discussed above mask significant heterogeneity across immigrant groups. We summarize this heterogeneity by regressing each entry job characteristic on individual background characteristics and time to the first job.<sup>15</sup> Our primary focus is on region of origin and year of arrival, but we also control for demographics, time between arrival and entry, and conditions in the initial local labor market (immigrant and own-group shares and unemployment rate at the first local labor market where the immigrant resided in the host country). The latter control variables are included in order to reduce the risk of mechanical relationships between population composition and entry establishment characteristics (e.g. coworker immigrant share), and to take into account possible effects of the business cycle within a host country.<sup>16</sup>

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<sup>15</sup>Given the poor quality of education data for Finland, we only report results from specifications excluding education.

<sup>16</sup>Note, though, that we measure the local labor market characteristics at the time of immigration.

Figure 4: Predictors of coworker same-origin share at entry jobs. Estimates for country of origin and year of arrival fixed-effects.



Note: This figure plots region of origin fixed-effects (panel A) and year of arrival fixed-effects (panel B) from regressions using the share of coworkers from the same region of origin at entry jobs as an outcome variable. The regression also controls for other observed characteristics measured at arrival (reported in Table A6).

Conditioning on these local labor market characteristics does not per se remove differences in population composition or unemployment rates between Finland and Sweden, since we estimate the regressions separately for both countries. In practice, estimating models excluding local labor market controls yields similar results.

Figure 4 reports the main estimates when using the share of own-group colleagues at the entry job as an outcome variable. The upper panel reveals large differences in the segregation of the labor market by region of origin. In a local labor market with the same presence of countrymen and conditional on other observable characteristics, immigrants from Turkey start their careers in establishments with, on average, 20–25 percentage points higher share of own-group coworkers than immigrants from other OECD countries. We also find extensive segregation among some groups of Asian migrants.

Interestingly, the region of origin fixed-effects are, again, highly similar in Finland and Sweden. These patterns thus appear to be independent of origin-host country level immigration histories. Perhaps the most illustrative case in point are refugees fleeing the civil wars of Somalia and former Yugoslavia in the early 1990s. Those coming from Somalia had few previously arrived countrymen in either host country. In contrast, a large Yugoslavian community already existed in Sweden—due to labor migration starting in the late 1960s—but not in Finland.<sup>17</sup> Yet, the share of own-group coworkers at the entry job was very similar for people from the African Horn and Bosnians in Finland and Sweden, and substantially larger in Finland for other groups from the former Yugoslavia. We interpret this pattern as suggesting that the pre-existing size of ethnic networks are unlikely to be the main drivers for differences in own-group exposure across source countries.

The lower panel of Figure 4 plots the year of arrival fixed-effects from the same regressions (showing time trends, not allowing for cross-country comparisons in levels). Conditional on other characteristics, there were little changes in initial own-group shares in entry jobs for immigrants arriving during the 1990s. However, for later cohorts, we find a steady and large increase in entry job own-group shares in both countries. These results suggest that both the Finnish and the Swedish labor market have recently become increasingly segregated for entrants, even after we condition on changes in observed individual and local labor market characteristics, as well as time to the first job. Explaining

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<sup>17</sup>In 1990, there were 43,346 individuals born in Yugoslavia living in Sweden and 136 in Finland. The corresponding figures for Somalis were 1,411 in Sweden and 44 in Finland.

the reasons for this trend is beyond the scope of this paper, but we have performed some supplementary analyses showing that it is not driven by increased labor migration following the EU enlargement in the 2000s, or by changes in industry structure.<sup>18</sup> While later observation years exhibit a trend toward entry in smaller establishments (where immigrant and own-group exposure is higher on average), this does not explain the overall time trend in coworker characteristics. Also, the similarity of the trends suggests that they are not due to Finland becoming a more "matured" immigration country over time. It can also be noted that the increase in ethnic segregation seen here appears to start later than the rise in skill-sorting previously documented in Sweden (Håkanson, Lindqvist, and Vlachos, 2015).

The estimates for the remaining observed characteristics are reported in the first columns of Appendix Table A6. We find that men are more likely than women to start working with own-group colleagues, but somewhat mixed estimates for age groups. In Finland, single and unmarried migrants enter in more immigrant dense establishments. As expected, those who immigrate to local labor markets with higher own-group population shares more often find work with people sharing their origin. Furthermore, immigrants who start working immediately upon arrival tend to have more own-group colleagues than other immigrants.

The appendix also reports results from identical analyses for other entry job characteristics. The findings are similar to those discussed above. Immigrants from regions of origin that tend to have a high share of own-group colleagues also tend to work in establishments with overall high immigrant shares and to be more likely to find jobs in establishments with an own-group or immigrant manager, while the order is roughly reversed for establishment earnings rank (Appendix Figure A3). We also document a similar increase in segregation of the labor market in terms of overall immigration share and the tendency to start working in an establishment with an own-group or immigrant manager (Appendix Figure A4). This trend also coincides with a decrease in entry job quality as measured by coworkers' earnings, suggesting increased segmentation in addition to the rise in segregation.

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<sup>18</sup>We excluded throughout countries joining the EU in 2004 and retrieved similar time trends. Furthermore, controlling for industry does not change the results.



## 5.2 Persistence in workplace characteristics

The long-term significance of sorting across entry establishments depends on whether segregation is persistent or quickly passing. Appendix Table A7 examines this issue by regressing workplace characteristics measured five years after entry on the corresponding set of characteristics measured at entry. Of course, these specifications are conditional on employment five years after entry; we will examine job stability in detail below. We find strong persistence for all of the workplace characteristics we measure. However, we also see that there are many significant estimates across characteristics. Particularly, starting in an establishment with high-earning colleagues predicts lower fractions of immigrant/own-group colleagues and managers five years later (conditional on other entry job characteristics). On the other hand, those starting in establishments with many other immigrants from the same region of origin tend to work with lower earning coworkers five years later (conditional on initial establishment rank). Again, the associations are remarkably similar in the two host countries.

## 6 Entry context, earnings and job stability

The last step of our analysis is to examine how entry job characteristics predict earnings and job stability. In the light of a general trend toward greater firm wage differentials (Skans, Edin, and Holmlund, 2009; Barth et al., 2016), it is particularly relevant to study how workplace sorting at entry relates to individual outcomes. We start with entry earnings and then examine earnings and employment during five years after finding the first job.

### 6.1 Entry earnings

Table 3 presents estimates from regressing immigrants' entry earnings on entry job characteristics. We report results from two specifications that differ from each other only in whether we condition for establishment earnings rank. All regressions control for the same individual and local labor market level observable characteristics as the specifications discussed in the previous section. We also control for establishment size. In order to capture the possible nonlinearities we divide continuous variables into indicator variables.

Table 3: Entry job characteristics and entry earnings

	Specification 1				Specification 2			
	Finland		Sweden		Finland		Sweden	
	coef.	se.	coef.	se.	coef.	se.	coef.	se.
<i>A: Coworkers born in the same origin region (%)</i>								
0	omitted		omitted		omitted		omitted	
0–5	0.46	(0.19)	1.25	(0.10)	1.12	(0.18)	1.31	(0.09)
5–10	-1.15	(0.19)	-0.35	(0.11)	0.61	(0.18)	1.04	(0.11)
10–50	-0.92	(0.16)	-1.46	(0.09)	0.53	(0.15)	0.43	(0.08)
50–90	-3.01	(0.25)	-4.27	(0.14)	-1.16	(0.22)	-1.45	(0.13)
90–100	-1.47	(0.37)	-4.77	(0.21)	0.18	(0.34)	-1.70	(0.18)
<i>B: Coworkers born in other foreign regions (%)</i>								
0	omitted		omitted		omitted		omitted	
0–5	0.77	(0.20)	2.02	(0.18)	-0.06	(0.19)	0.11	(0.17)
5–10	-0.79	(0.21)	2.78	(0.15)	0.04	(0.20)	1.59	(0.15)
10–50	-2.08	(0.18)	-0.71	(0.11)	0.27	(0.17)	0.40	(0.10)
50–90	-3.07	(0.26)	-3.33	(0.12)	-0.57	(0.23)	0.13	(0.11)
90–100	-4.31	(0.51)	-3.58	(0.23)	-1.79	(0.45)	-0.11	(0.21)
<i>C: Manager's origin</i>								
Native	omitted		omitted		omitted		omitted	
Own imm. group	2.72	(0.30)	2.96	(0.17)	2.56	(0.27)	3.55	(0.16)
Other imm. group	1.27	(0.29)	1.90	(0.10)	1.32	(0.27)	2.41	(0.09)
<i>E: Establishment rank (%)</i>								
<25	.		.		omitted		omitted	
25–50	.		.		3.84	(0.09)	4.30	(0.05)
50–75	.		.		7.72	(0.12)	8.84	(0.07)
≥75	.		.		17.43	(0.21)	22.49	(0.15)
Obs.	86,807		367,471		86,807		367,471	
$R^2$	0.14		0.17		0.24		0.27	

Note: Point estimates and robust standard errors (in parentheses) from regressing earnings on entry job characteristics. Each column comes from a separate regression that also controls for observed characteristics measured at arrival (gender, age, family status, LLM population composition and unemployment—see Table A4), establishment size (9 categories), and region of origin and year of arrival fixed-effects. The outcome is defined as annual earnings (in thousand 2010 euros) during the first full calendar year after first employment.

The association between entry earnings and the share of immigrant/own-group colleagues appears to be nonlinear. Immigrants who start their careers in establishments where all other workers are natives tend to earn less than those starting in establishments with a moderate share of immigrant coworkers. However, higher levels of immigrant and own-group coworker shares predict lower earnings. Even though there are differences in the peaks and slopes, a common pattern is that earnings decrease as the immigrant and own-group concentration becomes very high. As shown by specification 2, however, part of the association is due to the overall sorting of immigrants into lower paying establishments. Establishment rank strongly predicts individual earnings, and attenuates the association between entry earnings and origin composition.

Panel C of Table 3 reveals that immigrant entrants earn more in establishments managed by another immigrant than in those managed by a native, particularly if the manager is from the same country of origin as the entrant. Furthermore, in contrast to the case of immigrant and own-group coworkers, the associations are at least as strong when we condition on establishment earnings rank. The predictive power of manager origin is statistically and economically highly significant. For example, the estimates from specification 2 show that the entry earnings of immigrants in an establishment where the manager is from the same region of origin are roughly 2,600 and 3,600 euros higher in Finland and Sweden, respectively, in comparison to observationally identical immigrants working in otherwise comparable establishments and local labor markets.

Our results broadly conform with previous work suggesting that coworker segregation is negatively associated with individual outcomes (e.g. Catanzarite and Aguilera (2002), Åslund and Skans (2010) and Glitz (2014)). The findings are also in line with earlier work showing that immigrants working in establishments with an own-group manager have higher wages and lower separation rates than other workers in comparable workplaces (Åslund, Hensvik, and Skans, 2014).

## 6.2 Job stability

We next examine the association between entry context and later job stability using a similar regression approach as for entry earnings. We focus on the year of finding the first job and the following five years. Furthermore, we restrict the analysis to those who remain in the host country for this period. Let us first note that there are some

Table 4: Entry job characteristics and job stability during five years after labor market entry

	Length of the first employment spell (months)		Number of establishments in the first six years after entry		Months employed in the first six years after entry	
	Sweden		Sweden		Sweden	
	coef.	se.	coef.	se.	coef.	se.
<i>A: Coworkers born in the same origin region (%)</i>						
0	omitted	omitted	omitted	omitted	omitted	omitted
0-5	2.16 (0.27)	1.69 (0.14)	-0.12 (0.03)	-0.11 (0.01)	1.83 (0.28)	0.43 (0.13)
5-10	2.59 (0.38)	2.30 (0.17)	-0.22 (0.05)	-0.24 (0.02)	1.89 (0.40)	-0.10 (0.17)
10-50	1.21 (0.32)	1.49 (0.15)	-0.35 (0.04)	-0.23 (0.02)	-0.22 (0.35)	-1.15 (0.15)
50-90	1.06 (0.55)	0.26 (0.23)	-0.45 (0.06)	-0.26 (0.03)	-1.01 (0.60)	-2.34 (0.26)
90-100	2.31 (0.73)	1.76 (0.37)	-0.46 (0.08)	-0.37 (0.04)	0.90 (0.75)	-0.63 (0.38)
<i>B: Coworkers born in other foreign regions (%)</i>						
0	omitted	omitted	omitted	omitted	omitted	omitted
0-5	-0.32 (0.29)	-0.59 (0.27)	0.12 (0.04)	-0.01 (0.03)	-0.20 (0.31)	-0.09 (0.24)
5-10	-0.24 (0.32)	-0.02 (0.22)	0.08 (0.04)	0.02 (0.02)	0.42 (0.35)	0.32 (0.20)
10-50	0.13 (0.29)	0.13 (0.18)	0.15 (0.04)	-0.01 (0.02)	0.97 (0.31)	-0.08 (0.17)
50-90	-0.59 (0.51)	-0.99 (0.21)	0.24 (0.08)	0.07 (0.02)	0.76 (0.60)	-0.99 (0.21)
90-100	-2.34 (0.87)	-0.07 (0.35)	-0.14 (0.13)	-0.08 (0.04)	-0.83 (1.14)	-1.14 (0.38)
<i>C: Manager's origin</i>						
Native	omitted	omitted	omitted	omitted	omitted	omitted
Same origin	2.64 (0.50)	2.43 (0.20)	-0.02 (0.06)	-0.05 (0.02)	1.79 (0.52)	2.19 (0.21)
Other foreign origin	-0.30 (0.43)	0.94 (0.12)	0.17 (0.06)	0.04 (0.01)	0.56 (0.49)	1.38 (0.12)
<i>E: Establishment rank</i>						
<25	omitted	omitted	omitted	omitted	omitted	omitted
25-50	5.08 (0.22)	4.47 (0.10)	-0.12 (0.03)	-0.19 (0.01)	6.22 (0.25)	4.02 (0.11)
50-75	8.71 (0.27)	9.17 (0.14)	-0.33 (0.03)	-0.52 (0.01)	10.02 (0.28)	6.36 (0.13)
≥75	13.31 (0.29)	13.70 (0.18)	-0.78 (0.03)	-1.00 (0.02)	14.17 (0.29)	8.16 (0.15)
Obs.	45,731	211,924	45,731	211,924	45,731	211,924
R <sup>2</sup>	0.10	0.09	0.11	0.07	0.14	0.09
Mean outcome	16.3	21.2	3.3	3.2	38.3	47.2

Note: Point estimates and robust standard errors (in parentheses) from regressing outcomes during the first five years after entering the labor market on entry job characteristics. Each column comes from a separate regression that also controls for observed characteristics measured at arrival (gender, age, family status, LLM population composition and unemployment—see Table A4), establishment size (9 categories), and region of origin and year of arrival fixed-effects.

significant cross-country differences in the length of the first employment spell as well as in the number of months worked during the first six years. On average, initial spells last about five months longer in Sweden (21 vs. 16), and months worked differ by 9 (47 vs. 38). However, the average number of establishments during the first five years after labor market entry is in both countries 3.2.<sup>19</sup>

Table 4 reports estimates for three measures of job stability using a specification controlling for establishment earnings rank. Having zero own-group coworkers at the entry workplace is associated with approximately a 2 months shorter initial employment spell (and with less clear-cut differences across the non-zero categories). For other-group exposure, estimates tend to go in the opposite direction, but are much smaller and typically not significant. Furthermore, having a manager from the same region of origin predicts that the initial employment spell will last 2.5 months longer, which is arguably also an economically meaningful association.

The results for the number of establishments mirror those for the length of the entry jobs. Those who start in e.g. establishments dominated by people sharing their origin are predicted to work in 0.3–0.5 fewer establishments during this period compared to those who have no origin peers at their first job. The last columns of Table 4 examine months in employment (including, but not restricted to, entry jobs) during our 72 months follow-up period. In both countries immigrants who start with an own-group manager work for roughly two months more than those whose first managers were natives. There is a similar tendency for foreign-born managers of other descent, but less pronounced. The estimates for coworker origin are more mixed, but entry in very high exposure workplaces is linked to fewer months in employment.

Finally, higher establishment earnings rank at entry predicts substantially better outcomes for the entrants in a mid-term perspective. Starting out in a top quartile establishment (conditional on its size) e.g. means over one year longer initial employment spell in expectation, and about one less employer in the first six years. It is also worth noting that these associations are gradual across the distribution of establishment wages and in most cases very similar in the two host countries.

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<sup>19</sup>As we here focus on associations within a given context, investigating the reasons for across-group differences has to be left for future work.

Table 5: Entry job characteristics and earnings five years after labor market entry

	Conditional on positive earnings				Including zero earnings			
	Finland		Sweden		Finland		Sweden	
	coef.	se.	coef.	se.	coef.	se.	coef.	se.
<i>A: Coworkers born in the same origin region (%)</i>								
0	omitted		omitted		omitted		omitted	
0-5	0.99	(0.30)	0.94	(0.13)	0.77	(0.28)	0.73	(0.12)
5-10	0.08	(0.33)	-0.09	(0.14)	0.28	(0.32)	-0.27	(0.13)
10-50	0.02	(0.30)	-0.14	(0.13)	-0.33	(0.27)	-0.62	(0.12)
50-90	-1.51	(0.54)	-1.34	(0.23)	-1.90	(0.47)	-1.70	(0.20)
90-100	0.95	(0.88)	-2.42	(0.35)	-0.68	(0.62)	-2.17	(0.28)
<i>B: Coworkers born in other foreign regions (%)</i>								
0	omitted		omitted		omitted		omitted	
0-5	0.36	(0.29)	1.03	(0.25)	0.55	(0.28)	1.21	(0.24)
5-10	1.09	(0.34)	2.07	(0.21)	0.63	(0.31)	2.03	(0.19)
10-50	0.23	(0.29)	0.20	(0.16)	0.15	(0.26)	0.07	(0.14)
50-90	0.41	(0.51)	-0.41	(0.18)	0.45	(0.45)	-0.52	(0.17)
90-100	-4.21	(0.92)	-1.38	(0.32)	-1.24	(1.69)	-1.58	(0.26)
<i>C: Manager's origin</i>								
Natives	omitted		omitted		omitted		omitted	
Same origin	1.34	(0.57)	0.89	(0.25)	1.21	(0.48)	1.05	(0.21)
Other foreign origin	1.00	(0.49)	1.18	(0.12)	0.92	(0.44)	1.30	(0.11)
<i>E: Establishment rank (%)</i>								
<25	omitted		omitted		omitted		omitted	
25-50	2.96	(0.18)	1.65	(0.08)	2.86	(0.16)	2.10	(0.07)
50-75	6.80	(0.22)	5.09	(0.11)	6.26	(0.21)	5.41	(0.10)
≥75	17.26	(0.33)	14.85	(0.21)	15.57	(0.33)	15.04	(0.21)
Obs.	30,071		146,791		45,731		211,924	
R <sup>2</sup>	0.26		0.22		0.18		0.18	

Note: Point estimates and robust standard errors (in parentheses) from regressing earnings five years after labor market entry on entry job characteristics. Each column comes from a separate regression that also controls for observed characteristics measured at arrival and region of origin and year of arrival fixed-effects. The outcome is defined as annual earnings (in thousands 2010 euros) in the fifth full calendar year after the immigrant finds her first job.

### 6.3 Later outcomes

Our final analysis concerns the association between entry context and outcomes five years after entering the labor market. We focus on earnings, but let us just briefly remind ourselves about the ways initial contexts relate to future ones (see discussion in section 5.2 and Appendix Table A7). As expected, there is persistence in coworker and manager composition, as well as in earnings ranks; starting out in a certain type of environment makes it more likely to be there also five years later. Initial coworker and manager exposure to some extent independently predicts the earnings levels among future coworkers, but estimates are scattered and the associations are moderate particularly in comparison with how segregation in one origin dimension predicts future segregation in another.

The first columns of Table 5 report the estimates for immigrants with positive earnings in their fifth year after starting to work. The nonlinear relationship between coworkers' background and earnings is not as clear here as in the entry year, but very high levels of immigrant/own-group coworker exposure is associated with lower earnings. Entering under immigrant management means somewhat higher earnings also after five years. The estimates for establishment rank are also very similar for entry and later earnings (and broadly in line with evidence from North America; see Ci and Hou (2017)).

Interpreting these results is complicated by the fact that we observe positive earnings five years after entry for only about 60% of the immigrants in our data. This attrition is due to 23% of the immigrants having emigrated or died, and 24% and 20% of those remaining in Finland and Sweden, respectively, not having any earnings five years after entering the labor market.<sup>20</sup> Furthermore (in line with the results on job stability), entry job characteristics predict the likelihood of employment: high initial own-group exposure predicts lower employment rates, whereas high-earning coworkers are linked to higher employment (Appendix Table A8).

In order to partly mitigate the issues of non-random attrition, the last columns of Table 5 report estimates for the full population of immigrants remaining in the host country five years after labor market entry. That is, we exclude those who emigrated from the sample, but include those who have zero earnings. The results are similar to

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<sup>20</sup>Emigration/death is defined from no longer being in the population register. Actual emigration rates (in the meaning of not living in the host country) may be higher and include individuals here classified as non-employed.

those from a sample conditioning on positive earnings.

## 7 Conclusions

This paper investigates the role of immigration history and ethnic diversity through for the early stages of immigrant labor market integration through detailed documentation of contexts and outcomes in Finland and Sweden. In our view, three patterns deserve particular attention. First, we find pervasive ethnic segregation in entry jobs. Immigrants tend to enter the labor market through establishments where other workers and managers are disproportionately often immigrants—particularly from the same region of origin as the immigrant herself. The extent of ethnic segregation strongly varies across immigrant groups. Furthermore, ethnic segregation in entry jobs increases rapidly among the more recently arrived immigrant cohorts.

Second, entry job characteristics strongly predict initial earnings and later labor market outcomes. Those starting their careers in an establishment with an own-group manager have higher initial earnings, longer initial employment spells and higher earnings five years after entry than observationally identical immigrant starting in an otherwise similar establishment with a native manager. The associations between coworkers' ethnicity and entrants' outcomes are highly nonlinear. Immigrants entering the labor market through establishments with a modest share of immigrants tend to have better outcomes than those starting with a very high share of foreign-born colleagues or those who are the only immigrant in their first establishment.

Our third, and arguably most intriguing, finding is that all patterns discussed above are highly similar in Finland and Sweden. This similarity stands in stark contrast with our priors. Based on the earlier literature illustrating the importance of ethnic networks and the fact that Sweden has a much longer and richer immigration history than Finland, we expected to see origin, segregation and segmentation playing a different role in labor market entry in the two countries. The similarity of the integration process is all the more striking given that immigrants choosing to move to Finland are likely to differ from those moving to Sweden in their unobservable characteristics. Moreover, while the difference in immigration history is arguably the most important difference between the Finnish and Swedish labor markets, the two countries are not otherwise identical. Despite all of these



differences, immigrants enter the labor market through similar establishments, the same background characteristics predict time to entry and entry job characteristics in a very similar way, and the associations between entry job characteristics and later outcomes are broadly similar in both countries.

Our results are consistent with the hypothesis that the host country's immigration history has a limited role in shaping the integration process. This conclusion should not be confused with the process of entering the labor market being common to all immigrants. On the contrary, there is substantial heterogeneity across immigrant groups in terms of time to entry, type of entry jobs and future career progression. Rather, the regularity we document concerns the relative performance of different origin groups and the associations between characteristics of the first jobs and later outcomes. Of course, a descriptive study of two countries can only be suggestive about the mechanisms underlying the integration process. Given the considerable social and policy interest in the determinants of immigrant labor market outcomes, future research closely examining labor market entry of immigrants in different contexts would be highly valuable.

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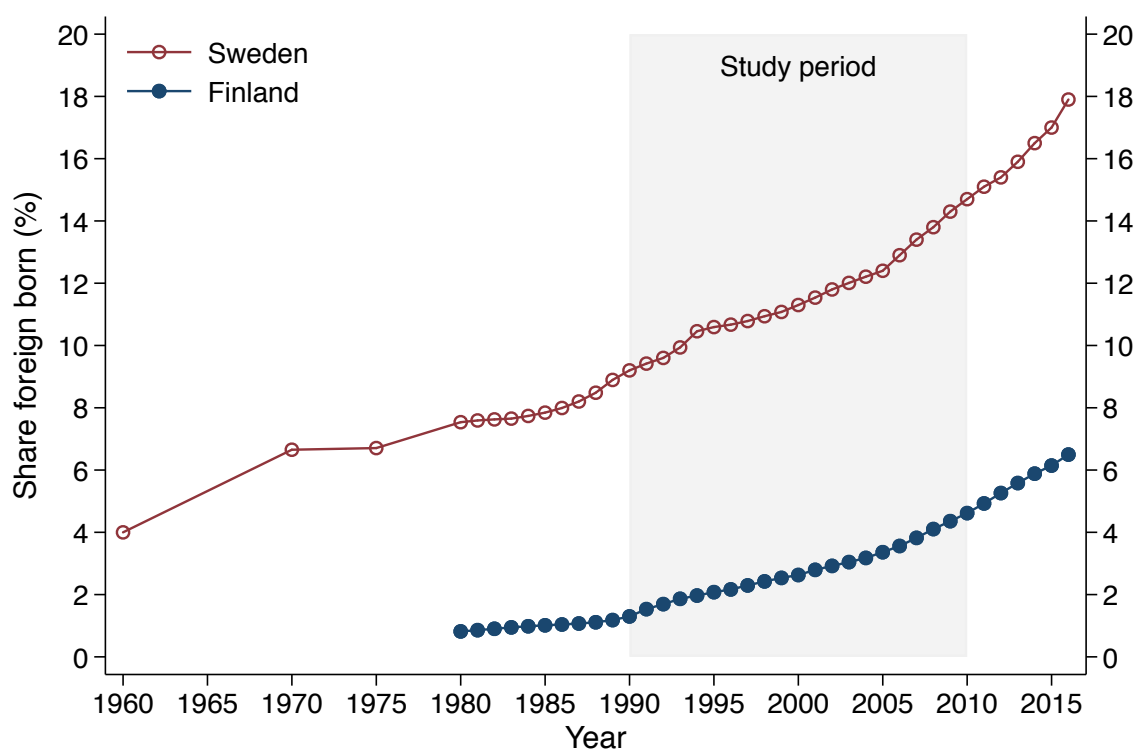
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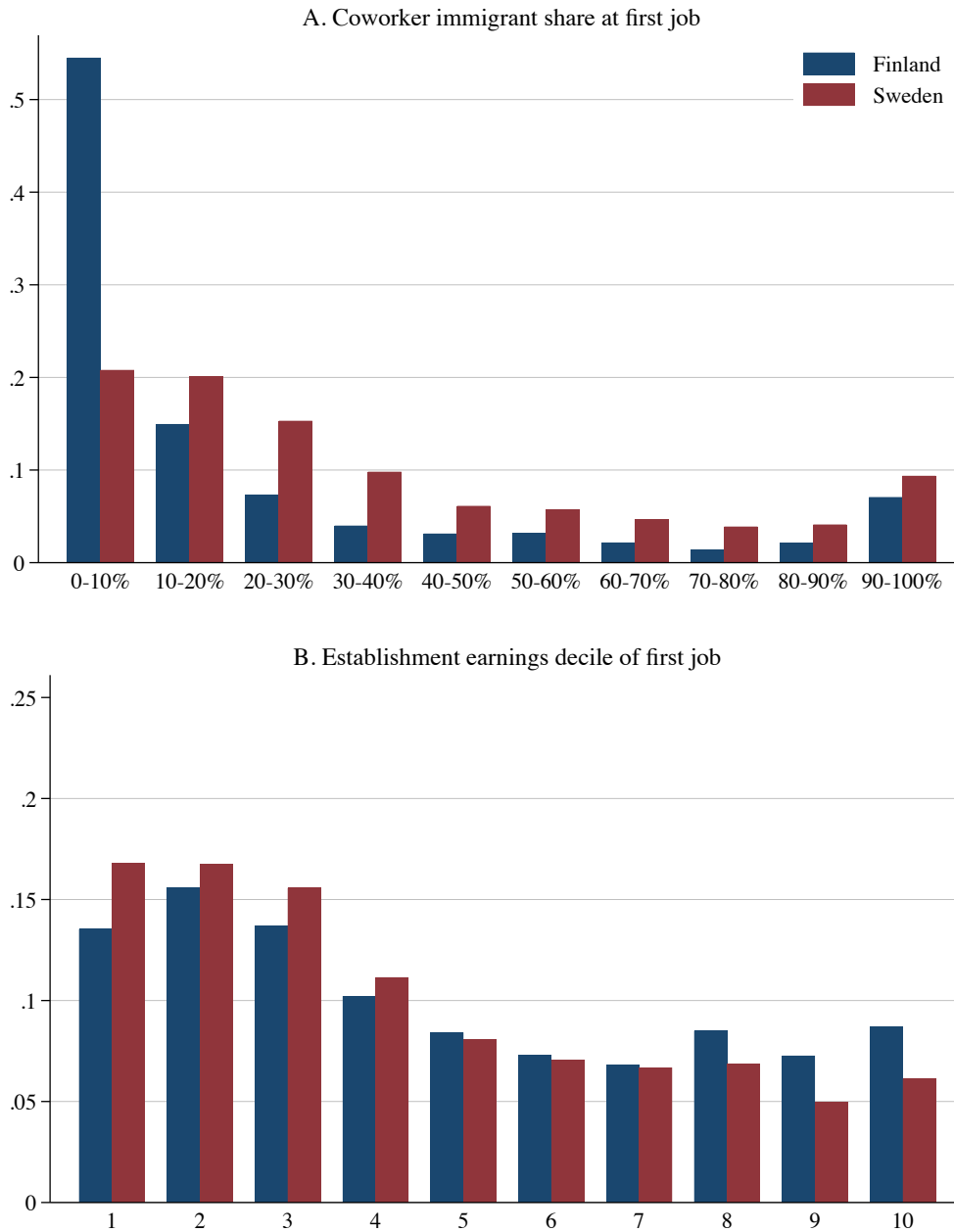
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Figure A1: Share of foreign-born population in Finland and Sweden, 1960–2016



Sources: Statistics Finland, Statistics Sweden.

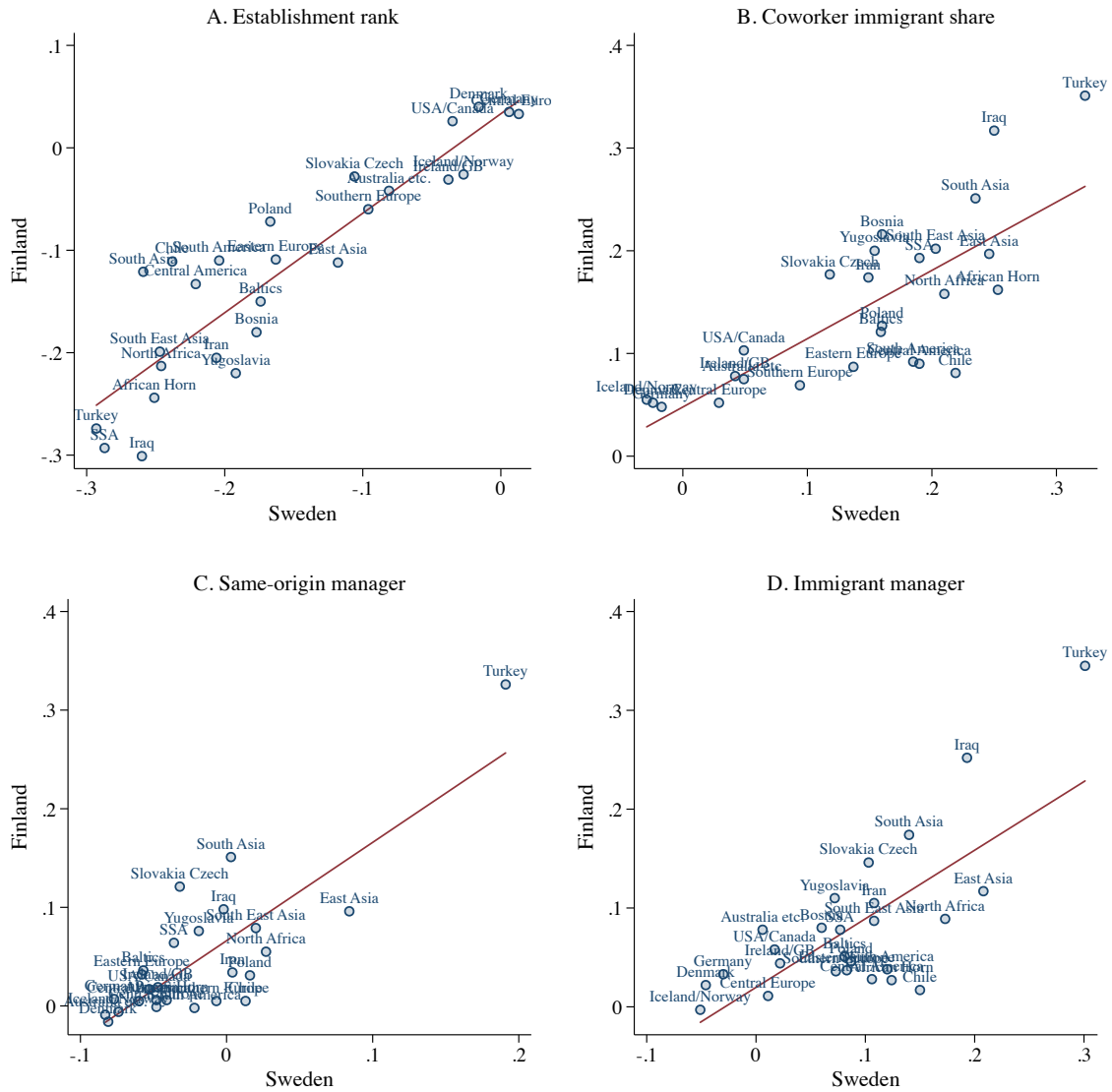
Figure A2: Distribution of entry job characteristics



Note: This histogram shows the share of immigrant coworkers (Panel A) and the establishment earnings decile (Panel B) of immigrants' entry jobs.

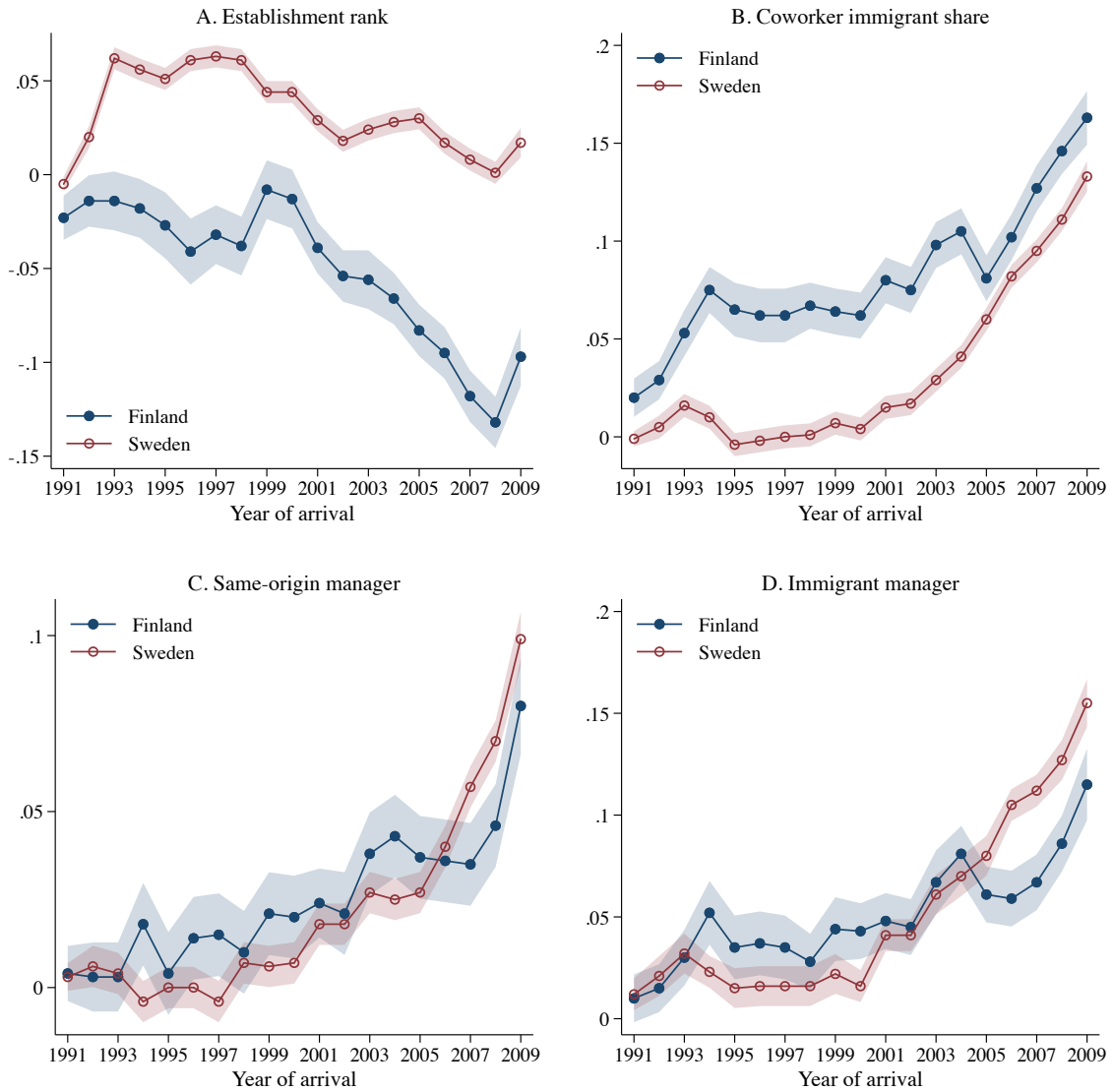


Figure A3: Region of origin fixed-effects and entry job characteristics



Note: This figure plots region of origin fixed-effects from separate regressions using the establishment rank (Panel A), coworker immigrant share (Panel B), same-origin manager (Panel C) and immigrant manager (Panel D) at entry jobs as outcome variable. The regressions also control for other observed characteristics measured at arrival, see Table A6.

Figure A4: Year of arrival fixed-effects and entry job characteristics



Note: This figure plots year of arrival fixed-effects from separate regressions using the establishment rank (Panel A), coworker immigrant share (Panel B), same-origin manager (Panel C) and immigrant manager (Panel D) at entry jobs as outcome variable. The regressions also control for other observed characteristics measured at arrival, see Table A6.

Table A1: Variable definitions

Variable	Definition
Entry job/first job	The first employment spell where a person is linked to an establishment for the first time after immigration. Observing a firm identifier for the establishment is also required. In the case of multiple spells starting in the same year and month, one of them is chosen randomly.
Time to entry	Difference between the year of entry to first job and the year of immigration.
Entry job characteristics	Characteristics of the establishment identified as the entry job.
Job/establishment	Establishment identifier corresponding to the first employment spell of a particular year.
Job/establishment characteristics	Characteristics of the establishment identified for that year.
Individual annual earnings	Sum of earned and entrepreneurial income in 1000 euros, CPI-adjusted to year 2010 level. Earnings are registered regardless of employer. In the case of the entry job, earnings are measured in the first full year after entering the job.
Individual earnings rank	The percentile of individual annual earnings in i) population of 18–60-year-olds that year (including observations of zero earnings), and in ii) population of 18–60-year-olds who had an observed establishment that year (in the case of the entry job, in population who had an observed establishment in previous year). The ranks are constructed conditional on age and gender. Within-establishment earnings rank is relative to those working in the same establishment in the same year.
Establishment annual earnings	Average of individual annual earnings of workers in the same establishment, excluding the individual earnings of the person him-/herself, in 1000 euros, CPI-adjusted to year 2010 level.
Establishment earnings rank	The percentile of establishment annual earnings in the population of establishments that year.
Coworkers	Individuals other than the manager working in the same establishment as oneself that year.
Manager	The individual in the establishment observed to have the highest earnings that year. In the case of multiple observations of same earnings, one individual is chosen randomly.
Coworker immigrant share/exposure	The share of foreign-born coworkers among all coworkers.
Coworker same-origin/own-group share/exposure	The share of coworkers born in the same foreign origin region as oneself.
Coworker other-foreign-origin share	The share of coworkers born in another foreign origin region than oneself.
Immigrant manager	Foreign-born manager (0/1).
Same-origin/own-group manager	Manager born in the same foreign origin region as oneself (0/1).
Other-foreign-origin manager	Manager born in another foreign region than oneself (0/1).
Unemployment rate	Fraction with zero earnings, age 18–60 .

Appendix tables and figures

Table A2: Region of origin in sample of establishment entrants. Percentage points.

		Finland	Sweden
Sweden/Finland		1.40	4.52
Denmark		0.34	1.99
Iceland/Norway		0.46	3.92
Bosnia		0.25	7.44
Yugoslavia	Croatia, Macedonia & Slovenia	3.75	8.15
Poland		1.51	5.65
Ireland/GB		2.54	2.73
Germany		2.16	3.29
Southern Europe	Greece, Italy, Malta, Monaco, Portugal, San Marino & Spain	2.38	2.29
Baltics	Estonia, Latvia & Lithuania	14.87	1.87
Eastern Europe	Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Romania, Russia (and form. Soviet Union), Tajikistan, Turkmenistan, Ukraine, Uzbekistan	29.38	6.54
Central E Europe	Slovakia, Czech Republic, Hungary	1.52	1.10
Central Europe	Andorra, Austria, Belgium, France, Lichtenstein, Luxemburg, the Netherlands & Switzerland	2.57	2.58
USA/Canada		2.04	2.14
Central America	Antigua & Barbuda, Bahamas, Barbados, Belize, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, St. Lucia, St. Vincent & Grenadines, St. Kitt & Nevis, Trinidad & Tobago	0.79	1.24
Chile		0.14	1.11
South America	Argentina, Bolivia, Brazil, Colombia, Ecuador, Guyana, Paraguay, Peru, Surinam, Uruguay & Venezuela	1.27	2.94
African Horn	Djibouti, Eritrea, Ethiopia, Somalia & Sudan	3.12	3.91
North Africa	Algeria, Bahrain, Cyprus, Egypt, Gaza, Israel, Jordania, Kuwait, Lebanon, Libya, Morocco, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, Yemen & the United Arab Emirates	2.83	5.59
Sub-Saharan Africa	Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cabo Verde, the Central African Republic, Comorros, Congo, Cote d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sansibar, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Swaziland, South Africa, Tanzania, Tzad, Togo, Uganda, Zaire, Zambia & Zimbabwe	5.12	3.44
Iran		1.55	3.46
Iraq		1.55	8.13
Turkey		2.31	2.63
East Asia	Hong Kong, Japan, China, the Democratic Republic of Korea, the Republic of Korea & Taiwan	5.03	2.76
South East Asia	Burma (Myanmar), Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand & Vietnam	5.17	5.49
South Asia	Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, India, Maldives, Mongolia, Nepal, Oman, Pakistan & Sri Lanka	5.42	4.25
Australia etc.	Australia, Fidzi, Kiribati, Micronesia, Nauru, New Zealand, Palau, Papua New Guinea, Solomon Islands, Tonga, Vanuatu & Western Samoa	0.56	0.84
Observations		86,807	367,471

Note: Country of birth distribution of immigrants in first jobs in establishments with at least three persons.

Table A3: Arrival year

	Finland	Sweden
1990	3.12	5.93
1991	6.37	4.97
1992	4.47	4.13
1993	4.65	6.5
1994	3.19	7.91
1995	3.12	3.39
1996	3.19	2.89
1997	3.46	3.66
1998	3.69	4.14
1999	3.59	3.71
2000	4.42	4.59
2001	5.31	4.75
2002	4.73	5.00
2003	4.41	4.95
2004	5.97	4.79
2005	6.29	5.24
2006	7.08	7.72
2007	8.60	7.07
2008	8.92	5.47
2009	5.43	3.19
Observations	86,807	367,471

Note: Year of arrival distribution of immigrants in first jobs in establishments with at least three persons.

Table A4: Predictors of time to first employment

	Finland				Sweden			
	HR	se.	HR	se.	HR	se.	HR	se.
<i>A: Woman</i>	0.65	(0.00)	0.65	(0.00)	0.67	(0.00)	0.67	(0.00)
<i>B: Age group</i>								
18-24	omitted		omitted		omitted		omitted	
25-34	1.16	(0.01)	1.15	(0.01)	1.12	(0.00)	1.10	(0.00)
35-44	1.06	(0.01)	1.06	(0.01)	0.95	(0.00)	0.94	(0.00)
45-54	0.88	(0.01)	0.88	(0.01)	0.62	(0.00)	0.62	(0.00)
55 and older	0.57	(0.01)	0.57	(0.01)	0.32	(0.01)	0.33	(0.01)
<i>C: Family status</i>								
single and unmarried	omitted		omitted		omitted		omitted	
married no kids	0.74	(0.01)	0.74	(0.01)	1.01	(0.00)	0.99	(0.00)
partners w/ 1-2 kids	0.68	(0.01)	0.68	(0.01)	0.91	(0.00)	0.89	(0.00)
partners w/ 3+ kids	0.56	(0.01)	0.56	(0.01)	0.68	(0.00)	0.69	(0.00)
single parents	0.76	(0.01)	0.75	(0.01)	0.88	(0.01)	0.88	(0.01)
adult living with parent	0.67	(0.02)	0.67	(0.02)	0.89	(0.01)	0.92	(0.01)
<i>D: Immigrant share (%)</i>								
0-2.5	omitted		omitted		omitted		omitted	
2.5-5	0.94	(0.01)	0.94	(0.01)	1.15	(0.17)	1.16	(0.19)
5-7.5	0.98	(0.01)	0.98	(0.01)	1.09	(0.16)	1.09	(0.18)
7.5-10	1.06	(0.02)	1.07	(0.02)	1.04	(0.16)	1.04	(0.17)
10-12.5					1.00	(0.15)	1.00	(0.16)
12.5-15					1.01	(0.15)	1.01	(0.16)
15-					1.12	(0.17)	1.12	(0.18)
<i>E: Same-origin share (%)</i>								
0-0.25	omitted		omitted		omitted		omitted	
0.25-0.5	1.02	(0.01)	1.02	(0.01)	0.95	(0.00)	0.96	(0.00)
0.5-0.75	1.02	(0.01)	1.02	(0.01)	0.96	(0.01)	0.97	(0.01)
0.75-1	1.01	(0.01)	1.01	(0.01)	0.95	(0.01)	0.97	(0.01)
1-	1.00	(0.01)	1.00	(0.01)	0.90	(0.01)	0.92	(0.01)
<i>F: Unemployment rate</i>	0.98	(0.00)	0.98	(0.00)	0.92	(0.00)	0.92	(0.00)
<i>G: Education</i>								
less than upper secondary			omitted				omitted	
upper secondary			1.02	(0.01)			1.38	(0.01)
tertiary			1.08	(0.01)			1.35	(0.00)
Observations	155,116		155,116		742,012		742,012	

Note: Hazard ratio estimates from proportional-hazards regressions of time until entry to first job on observed background characteristics measured at arrival. Specifications also include fixed effects for region of origin and year of arrival; estimates (from regressions not controlling for education) reported in Figure 3.

Table A5: Industry distribution and plant size

	At first job		All immigrants		Natives		Everyone	
	FI	SE	FI	SE	FI	SE	FI	SE
<i>A: Industry</i>								
Agriculture, forestry, hunting and fishing	0.03	0.03	0.02	0.01	0.03	0.01	0.02	0.01
Mining and quarrying	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manufacturing	0.15	0.14	0.17	0.19	0.20	0.18	0.20	0.19
Electricity, gas, steam and air conditioning supply	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
Construction	0.06	0.03	0.05	0.03	0.06	0.06	0.06	0.05
Wholesale and retail trade	0.08	0.08	0.10	0.09	0.13	0.14	0.12	0.12
Hotels and restaurants	0.08	0.14	0.10	0.11	0.03	0.04	0.04	0.06
Transport, storage and communication	0.08	0.05	0.09	0.06	0.08	0.07	0.08	0.07
Financial intermediation	0.00	0.01	0.00	0.01	0.03	0.02	0.02	0.02
Real estate, renting and business activities	0.26	0.23	0.19	0.18	0.11	0.11	0.12	0.13
Public administration and defence	0.02	0.02	0.01	0.03	0.06	0.06	0.06	0.05
Education	0.10	0.09	0.10	0.10	0.07	0.09	0.07	0.09
Health and social work	0.10	0.14	0.10	0.17	0.15	0.18	0.15	0.17
Other services, international organizations	0.04	0.04	0.05	0.04	0.05	0.05	0.04	0.05
<i>B: Plant size</i>								
Mean	291	337	326	420	239	392	249	400
Standard deviation	669	975	744	1189	573	1102	596	1128
1st decile	6	6	6	7	7	7	6	7
Median	46	57	49	69	49	56	49	59
9th decile	736	637	875	800	570	850	595	835

Note: Industry distribution and plant size for immigrants in first jobs, all immigrants, all natives, and the full working population in establishments with at least three persons.

Table A6: Predictors of entry job characteristics

	Coworker same-origin share				Coworker immigrant share			
	Finland		Sweden		Finland		Sweden	
	coef.	se.	coef.	se.	coef.	se.	coef.	se.
<i>A: Woman</i>	-0.045	(0.002)	-0.030	(0.001)	-0.041	(0.002)	-0.019	(0.001)
<i>B: Age group</i>								
18-24	omitted		omitted		omitted		omitted	
25-34	0.009	(0.002)	-0.005	(0.001)	0.000	(0.002)	-0.015	(0.001)
35-44	0.021	(0.002)	0.000	(0.001)	0.009	(0.003)	-0.012	(0.001)
45-54	0.016	(0.003)	0.011	(0.002)	0.005	(0.004)	0.002	(0.002)
55 and older	0.002	(0.008)	0.027	(0.005)	0.004	(0.010)	0.014	(0.006)
<i>C: Family status</i>								
single and unmarried	omitted		omitted		omitted		omitted	
married no kids	-0.031	(0.002)	0.000	(0.001)	-0.040	(0.003)	0.002	(0.001)
partners w/ 1-2 kids	-0.029	(0.002)	0.000	(0.001)	-0.037	(0.002)	-0.007	(0.001)
partners w/ 3+ kids	-0.032	(0.004)	0.000	(0.002)	-0.037	(0.005)	-0.003	(0.002)
single parents	-0.024	(0.004)	0.004	(0.002)	-0.033	(0.005)	0.009	(0.002)
adult living with parent	-0.021	(0.005)	-0.011	(0.002)	-0.027	(0.007)	-0.023	(0.003)
<i>D: Immigrant share (%)</i>								
0-2.5	omitted		omitted		omitted		omitted	
2.5-5	0.001	(0.003)	0.024	(0.026)	0.033	(0.003)	0.062	(0.043)
5-7.5	0.003	(0.004)	0.022	(0.026)	0.073	(0.004)	0.068	(0.043)
7.5-10	-0.017	(0.037)	0.015	(0.026)	0.139	(0.043)	0.069	(0.043)
10-12.5	.		0.014	(0.026)	.		0.082	(0.043)
12.5-15	.		0.010	(0.026)	.		0.100	(0.043)
15-	.		0.032	(0.026)	.		0.181	(0.043)
<i>E: Same-origin share (%)</i>								
0-0.25	omitted		omitted		omitted		omitted	
2.5-5	0.04	(0.003)	0.015	(0.001)	0.034	(0.003)	0.025	(0.002)
0.5-0.75	0.065	(0.004)	0.044	(0.001)	0.058	(0.004)	0.064	(0.002)
0.75-1	0.099	(0.004)	0.063	(0.001)	0.086	(0.005)	0.089	(0.002)
1-	0.097	(0.004)	0.083	(0.001)	0.096	(0.005)	0.095	(0.002)
<i>F: Unemployment rate</i>	0.000	(0.000)	0.001	(0.000)	-0.003	(0.000)	-0.003	(0.000)
<i>G: Time to first job</i>								
0 years	omitted		omitted		omitted		omitted	
1-2 years	-0.028	(0.002)	-0.028	(0.001)	-0.026	(0.002)	-0.028	(0.001)
3-5 years	-0.025	(0.002)	-0.039	(0.001)	-0.022	(0.003)	-0.046	(0.002)
6-9 years	-0.001	(0.003)	-0.031	(0.001)	0.011	(0.004)	-0.026	(0.002)
10 years or more	0.034	(0.005)	-0.018	(0.002)	0.066	(0.006)	0.010	(0.003)
Obs.	86,807		367,471		86,807		367,471	
$R^2$	0.12		0.12		0.17		0.18	
Mean outcome	0.11		0.11		0.21		0.35	

Note: Point estimates and robust standard errors (in parentheses) from regressing entry job characteristics on observed background characteristics measured at arrival. All regressions also control for region of origin and year of arrival fixed-effects, reported in Figures 4, A3 and A4.



Table A6: (con't) Predictors of entry job characteristics

	Establishment rank						Same-origin manager						Immigrant manager							
	Finland		Sweden		Finland		Sweden		Finland		Sweden		Finland		Sweden		Finland		Sweden	
	coef.	se.	coef.	se.	coef.	se.	coef.	se.	coef.	se.	coef.	se.	coef.	se.	coef.	se.	coef.	se.	coef.	se.
<i>A: Woman</i>	-0.056	(0.002)	-0.043	(0.001)	-0.033	(0.002)	-0.025	(0.001)	-0.039	(0.002)	-0.017	(0.002)	-0.039	(0.002)	-0.017	(0.002)	-0.039	(0.002)	-0.017	(0.002)
<i>B: Age group</i>	omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted	
18-24	0.063	(0.002)	0.062	(0.001)	0.005	(0.002)	-0.006	(0.001)	0.005	(0.002)	-0.016	(0.002)	0.005	(0.003)	-0.016	(0.002)	0.005	(0.003)	-0.009	(0.002)
25-34	0.044	(0.003)	0.068	(0.001)	0.016	(0.003)	0.004	(0.002)	0.016	(0.003)	0.012	(0.004)	0.004	(0.002)	0.012	(0.004)	0.012	(0.004)	-0.009	(0.002)
35-44	0.013	(0.004)	0.046	(0.002)	0.003	(0.004)	0.018	(0.002)	0.003	(0.004)	-0.003	(0.005)	0.018	(0.002)	-0.003	(0.005)	0.003	(0.003)	0.002	(0.003)
45-54	0.022	(0.009)	0.025	(0.006)	0.011	(0.010)	0.039	(0.007)	0.013	(0.012)	0.020	(0.010)	0.039	(0.007)	0.013	(0.012)	0.020	(0.010)	0.020	(0.010)
<i>C: Family status</i>	omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted	
single and unmarried	-0.006	(0.003)	-0.002	(0.001)	-0.019	(0.002)	0.008	(0.001)	-0.019	(0.002)	0.009	(0.002)	0.008	(0.001)	-0.024	(0.003)	0.009	(0.002)	0.009	(0.002)
married no kids	0.002	(0.003)	0.007	(0.001)	-0.014	(0.002)	0.005	(0.001)	-0.014	(0.002)	0.001	(0.002)	0.005	(0.001)	-0.019	(0.003)	0.001	(0.002)	0.001	(0.002)
partners w/ 1-2 kids	-0.041	(0.006)	-0.015	(0.002)	-0.019	(0.005)	-0.004	(0.002)	-0.019	(0.005)	-0.032	(0.007)	-0.004	(0.002)	-0.032	(0.007)	-0.016	(0.003)	-0.016	(0.003)
partners w/ 3+ kids	-0.015	(0.006)	-0.034	(0.002)	-0.018	(0.005)	0.008	(0.002)	-0.018	(0.005)	0.016	(0.004)	0.008	(0.002)	-0.028	(0.006)	0.016	(0.004)	0.016	(0.004)
single parents	-0.036	(0.007)	-0.017	(0.003)	-0.019	(0.006)	-0.008	(0.003)	-0.019	(0.006)	-0.019	(0.005)	-0.008	(0.003)	-0.026	(0.008)	-0.019	(0.005)	-0.019	(0.005)
adult living with parent	omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted	
<i>D: Immigrant share (%)</i>	omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted	
0-2.5	0.030	(0.003)	0.030	(0.044)	0.013	(0.003)	0.008	(0.035)	0.013	(0.003)	0.025	(0.004)	0.008	(0.035)	0.025	(0.004)	0.008	(0.035)	-0.004	(0.072)
2.5-5	0.070	(0.004)	0.054	(0.044)	0.015	(0.004)	0.006	(0.035)	0.015	(0.004)	0.027	(0.005)	0.006	(0.035)	0.027	(0.005)	-0.002	(0.071)	-0.002	(0.071)
5-7.5	-0.052	(0.024)	0.067	(0.044)	-0.005	(0.050)	0.001	(0.035)	-0.005	(0.050)	-0.01	(0.058)	0.001	(0.035)	-0.01	(0.058)	-0.001	(0.071)	-0.001	(0.071)
7.5-10	.		0.067	(0.044)	.		-0.005	(0.035)	.		.		-0.005	(0.035)	.		-0.005	(0.035)	-0.008	(0.071)
10-12.5	.		0.069	(0.044)	.		0.003	(0.035)	.		.		0.003	(0.035)	.		0.011	(0.071)	0.011	(0.071)
12.5-15	.		0.102	(0.044)	.		0.023	(0.035)	.		.		0.023	(0.035)	.		0.094	(0.071)	0.094	(0.071)
15-	.		.		.		.		.		.		.		.		.		.	
<i>E: Same-origin share (%)</i>	omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted	
0-0.25	0.001	(0.003)	-0.005	(0.002)	0.025	(0.003)	0.011	(0.001)	0.025	(0.003)	0.023	(0.004)	0.011	(0.001)	0.023	(0.004)	0.014	(0.002)	0.014	(0.002)
2.5-5	-0.021	(0.005)	-0.022	(0.002)	0.047	(0.004)	0.034	(0.002)	0.047	(0.004)	0.046	(0.005)	0.034	(0.002)	0.046	(0.005)	0.043	(0.003)	0.043	(0.003)
0.5-0.75	-0.027	(0.005)	-0.043	(0.002)	0.042	(0.005)	0.037	(0.002)	0.042	(0.005)	0.044	(0.006)	0.037	(0.002)	0.044	(0.006)	0.067	(0.003)	0.067	(0.003)
0.75-1	-0.028	(0.005)	-0.052	(0.002)	0.044	(0.005)	0.055	(0.002)	0.044	(0.005)	0.063	(0.006)	0.055	(0.002)	0.063	(0.006)	0.071	(0.003)	0.071	(0.003)
1-	-0.005	(0.000)	-0.010	(0.000)	0.000	(0.000)	0.002	(0.000)	0.000	(0.000)	-0.002	(0.000)	0.002	(0.000)	-0.002	(0.000)	-0.002	(0.000)	-0.002	(0.000)
<i>F: Unemployment rate</i>	omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted		omitted	
0 years	-0.029	(0.003)	-0.028	(0.001)	-0.020	(0.002)	-0.033	(0.001)	-0.020	(0.002)	-0.019	(0.003)	-0.033	(0.001)	-0.019	(0.003)	-0.044	(0.002)	-0.044	(0.002)
1-2 years	-0.039	(0.003)	-0.046	(0.002)	-0.019	(0.003)	-0.043	(0.001)	-0.019	(0.003)	-0.013	(0.003)	-0.043	(0.001)	-0.013	(0.003)	-0.063	(0.002)	-0.063	(0.002)
3-5 years	-0.072	(0.004)	-0.026	(0.002)	0.000	(0.003)	-0.033	(0.002)	0.000	(0.003)	0.010	(0.004)	-0.033	(0.002)	0.010	(0.004)	-0.046	(0.003)	-0.046	(0.003)
6-9 years	-0.093	(0.006)	0.010	(0.003)	0.029	(0.006)	-0.015	(0.003)	0.029	(0.006)	0.070	(0.008)	-0.015	(0.003)	0.070	(0.008)	-0.005	(0.006)	-0.005	(0.006)
10 years or more	86,807	367,471	86,807	367,471	86,807	367,471	86,807	367,471	86,807	367,471	86,807	367,471	86,807	367,471	86,807	367,471	367,471	367,471	367,471	367,471
Obs.	86,807	367,471	86,807	367,471	86,807	367,471	86,807	367,471	86,807	367,471	86,807	367,471	86,807	367,471	86,807	367,471	367,471	367,471	367,471	367,471
$R^2$	0.13	0.15	0.07	0.06	0.07	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07
Mean outcome	0.43	0.38	0.08	0.08	0.08	0.08	0.09	0.09	0.08	0.08	0.13	0.13	0.09	0.09	0.13	0.13	0.28	0.28	0.28	0.28

Table A7: Job characteristics five years after labor market entry

	Establishment rank		Coworker same-origin share		Coworker immigrant share		Same-origin manager		Immigrant manager	
	Finland	Sweden	Finland	Sweden	Finland	Sweden	Finland	Sweden	Finland	Sweden
Establishment rank	0.45 (0.01)	0.37 (0.00)	-0.03 (0.00)	-0.02 (0.00)	-0.05 (0.00)	-0.05 (0.00)	-0.01 (0.00)	-0.01 (0.00)	-0.03 (0.01)	-0.04 (0.00)
Coworker same-origin share	-0.03 (0.01)	-0.03 (0.00)	0.32 (0.01)	0.27 (0.01)	0.35 (0.01)	0.33 (0.01)	0.24 (0.02)	0.21 (0.01)	0.27 (0.02)	0.24 (0.01)
Coworker other-foreign-origin share	0.02 (0.01)	0.00 (0.00)	0.03 (0.01)	0.03 (0.00)	0.28 (0.01)	0.30 (0.00)	-0.01 (0.01)	0.01 (0.00)	0.10 (0.02)	0.16 (0.01)
Same-origin manager	-0.01 (0.01)	-0.01 (0.00)	0.06 (0.01)	0.05 (0.00)	0.06 (0.01)	0.06 (0.00)	0.14 (0.01)	0.14 (0.01)	0.13 (0.02)	0.15 (0.01)
Other-foreign-origin manager	-0.00 (0.01)	-0.00 (0.00)	-0.00 (0.01)	0.00 (0.00)	0.02 (0.01)	0.02 (0.00)	0.01 (0.01)	0.01 (0.00)	0.07 (0.01)	0.09 (0.00)
Obs.	30071	146791	30071	146791	30071	146791	30071	146791	30071	146791
$R^2$	0.34	0.29	0.23	0.21	0.24	0.28	0.15	0.11	0.11	0.09
Mean outcome	0.54	0.53	0.07	0.07	0.15	0.29	0.05	0.05	0.09	0.22

Note: Point estimates and robust standard errors (in parentheses) from regressing job characteristics five years after entry on entry job characteristics. Each column comes from a separate regression that also controls for observed background characteristics measured at arrival, and region of origin and year of arrival fixed-effects.

Table A8: Employment five years after entering the labor market

	Employment			
	Finland		Sweden	
	coef.	se.	coef.	se.
<i>A: Coworkers born in the same origin region (%)</i>				
0	omitted		omitted	
0-5	0.00	(0.01)	-0.01	(0.00)
5-10	-0.00	(0.01)	-0.02	(0.00)
10-50	-0.03	(0.01)	-0.04	(0.00)
50-90	-0.03	(0.01)	-0.06	(0.01)
90-100	-0.02	(0.02)	-0.04	(0.01)
<i>B: Coworkers born in other foreign regions (%)</i>				
0	omitted		omitted	
0-5	0.00	(0.01)	0.01	(0.01)
5-10	-0.01	(0.01)	0.01	(0.00)
10-50	0.01	(0.01)	-0.01	(0.00)
50-90	0.01	(0.01)	-0.02	(0.00)
90-100	-0.00	(0.03)	-0.03	(0.01)
<i>C: Manager's origin</i>				
Native	omitted		omitted	
Same origin	0.01	(0.01)	0.01	(0.00)
Other foreign origin	0.00	(0.01)	0.01	(0.00)
<i>E: Establishment earnings rank (%)</i>				
<25	omitted		omitted	
25-50	0.06	(0.01)	0.04	(0.00)
50-75	0.08	(0.01)	0.06	(0.00)
≥75	0.10	(0.01)	0.08	(0.00)
Obs.	45,731		211,924	
$R^2$	0.03		0.04	

Note: Point estimates and robust standard errors (in parentheses) from regressing employment five years after labor market entry, defined as having positive earnings, on entry job characteristics. The regression also controls for observed background characteristics measured at arrival, and region of origin and year of arrival fixed-effects.