

DISCUSSION PAPER SERIES

IZA DP No. 13089

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Labor Market Integration of Immigrants**

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**Laura Ansala**

*City of Helsinki*

**Olof Åslund**

*Uppsala University, IFAU, IZA, and CReAM*

**Matti Sarvimäki**

*Aalto University, VATT Institute, Helsinki GSE, IZA and CReAM*

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**IZA – Institute of Labor Economics**

Schaumburg-Lippe-Straße 5–9  
53113 Bonn, Germany

Phone: +49-228-3894-0  
Email: [publications@iza.org](mailto:publications@iza.org)

[www.iza.org](http://www.iza.org)

## ABSTRACT

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# Immigration History, Entry Jobs, and the Labor Market Integration of Immigrants\*

This paper studies the relationship between past immigration experiences of the host country and the way new immigrants enter the labor market. We focus on two countries—Finland and Sweden—that have similar formal institutions but starkly different immigration histories. In both countries, immigrants tend to find their first jobs in low-paying establishments, where the manager and colleagues share their ethnic background. The associations between background characteristics, time to first job, other entry job characteristics, earnings dynamics and job stability are also remarkably similar. These results are consistent with the hypothesis that the host country's immigration history plays a limited role in shaping the integration process.

**JEL Classification:** J61, J62

**Keywords:** immigration, labor market integration, ethnic segregation, entry jobs

**Corresponding author:**

Matti Sarvimäki  
Aalto University  
Ekonomianaukio 1  
02150 Espoo  
Finland

E-mail: [matti.sarvimaki@aalto.fi](mailto:matti.sarvimaki@aalto.fi)

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# 1 Introduction

In many countries, the formal and informal institutions that shape immigrants' labor market integration have evolved over decades or even centuries.<sup>1</sup> Immigrants arriving in these countries can often rely on established ethnic networks and interact with natives who are accustomed to immigrants. However, a large number of people also move to countries that have short, if any, immigration history. These immigrants might have to adopt different approaches in job search and career progression than those arriving in the more traditional destinations. Documenting these possible differences is important for the design of integration policies and, more broadly, for understanding how labor markets function. Yet, we have little direct evidence on how the integration process varies across host countries that differ in their past immigration experiences.

This paper examines how immigrants enter the labor market in Finland and Sweden. The two countries provide an informative case study, since they are similar in many dimensions, but differ starkly in their immigration histories. In 1990, when our analysis begins, Sweden was already an established 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. As a consequence, immigrants arriving to the two countries faced very different circumstances. For example, only 0.3% of jobs in Finland were in establishments that had an immigrant manager while the corresponding figure in Sweden was 7.3%. Furthermore, natives in Finland were much less used to working with foreigners and more likely to hold negative attitudes towards immigrants than natives in Sweden.

We find that despite the differences in immigration histories, immigrants start their careers in a remarkably similar manner in Finland and Sweden. In both countries, they tend to enter the labor market through low-paying establishments, where other workers and managers are disproportionately often immigrants—particularly from the same region of origin as the entrant herself. For example, 8% and 9% of immigrants to Finland and Sweden, respectively, enter the labor market through an establishment where the manager is from the same region of origin as the immigrant herself.

The similarities between Finland and Sweden extend to many details of labor market entry and subsequent careers. In both countries, immigrants enter the labor market

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<sup>1</sup>See e.g. [Hatton and Williamson \(2005\)](#) for a review of the global immigration history, [Abramitzky and Boustan \(2017\)](#) for the U.S. case, and [Dustmann and Frattini \(2013\)](#) for the European experience.

slowly. Only a third (quarter) of working age immigrants to Finland (Sweden) are employed in their year of arrival and roughly a tenth of them do not work at all during their first 15 years since migration. Immigrants' average annual earnings after finding their first jobs are also very similar, corresponding to the 30th percentile of the overall earnings distribution (roughly 15,000 euros in 2010 prices).

The fact that these associations are similar in the two host countries does not imply that all immigrants would enter the labor market in the same way. We document large heterogeneity in time to first employment and entry job characteristics by region of origin, arrival cohort, gender, age and family structure. Importantly, however, the associations between background characteristics and labor market entry are very similar in Finland and Sweden. A case in point are refugees arriving from the former Yugoslavia and Somalia in the early 1990s. In Sweden, there was already a significant community of immigrants from the former Yugoslavia due to labor migration that had started in the 1950s. No such community was present in Finland. Furthermore, there were virtually no earlier immigrants from Somalia in either of the two host countries. Yet, we find that those arriving from Yugoslavia enter the Finnish and Swedish labor markets in a similar way—as do those coming from Somalia.

Finally, we show that entry job characteristics predict earnings and job stability in a similar manner in Finland and Sweden. 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, compared to observationally identical immigrants starting in an otherwise similar establishment with native managers. The associations between coworkers' ethnicity and entrants' outcomes are highly nonmonotonic: 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.

These findings contribute to two strands of literature. First, we 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 et al. 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 a causal effect. Indeed, studies using plausibly exogenous variation or longitudinal data tend to suggest that access to a resourceful ethnic community improves labor market outcomes

(Munshi 2003; Edin et al. 2003; Damm 2009; Colussi 2015; Dustmann et al. 2016; Martén et al. 2019), although evidence to the contrary also exist (Battisti et al. 2018; Eriksson 2019). The value of ethnic communities is also supported by the finding that managers are more likely to hire workers of their own ethnicity (Giuliano et al. 2009; Åslund et al. 2014).

We also inform the large literature on economic assimilation starting with Chiswick (1978) and Borjas (1985). Lazear (1999) argues that the incentives to invest in host country specific human capital decreases with the size of the immigrant's own group already present in the host country, thus predicting a negative link between previous immigration and assimilation. However, empirical work examining the topic has been limited. Earlier cross-country comparisons on labor market assimilation has examined countries with relatively long immigration histories and focused on institutional features such as labor market institutions and integration policies (Antecol et al. 2006; Algan et al. 2010).<sup>2</sup> Relatedly, Abramitzky et al. (2020) compare historical and contemporary social assimilation into the United States. However, the only earlier paper discussing the role of past immigration experience on the assimilation process in new immigration countries seems to be Dustmann and Frattini (2013), who find that employment gaps and occupational dissimilarity between immigrants and natives tend to be larger in European countries that have shorter immigration histories.

In comparison to earlier work, our contribution is twofold. First, we examine aspects of immigrants' entry jobs characteristics and their association with later labor market outcomes that have not been previously documented for any host country. Second, we present a detailed cross-country comparison of labor market entry of immigrants in a new and an old immigration country that are otherwise largely similar.

Our main limitation is that even though Finland and Sweden are similar in many ways, a comparison of two countries is unlikely to constitute a clean research design for causal inference. While variation in e.g. integration policies and native's attitudes may be partially shaped by differences in past immigration experiences, other relevant differ-

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<sup>2</sup>These papers compare Australia, Canada and the US; and the UK, France and Germany, respectively. In addition, a recent report for the Nordic Council of Ministers compares employment trajectories of refugees resettled in Denmark, Norway and Sweden between 2008 and 2016 (Hernes et al. 2019). Relatively recent work focusing on single countries includes Card (2005), Lubotsky (2007), Borjas (2015), and Abramitzky et al. (2014, 2020) for the US; Gagliardi and Lemos (2015); Ruiz and Vargas-Silva (2018) for the UK; Izquierdo et al. (2009) for Spain; Sarvimäki (2011, 2017) for Finland; Bratsberg et al. (2017) for Norway; and Åslund et al. (2017) for Sweden. Furthermore, Barth et al. (2012); Eliasson (2013) investigate the role of establishments in the assimilation process. See Kerr and Kerr (2011), Borjas (2014) and Duleep (2015) for overviews of this literature.

ences likely exist. Furthermore, immigrants choosing to move to Sweden are likely to differ from those who are willing to become the "pioneers" in Finland. 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 for the two countries.

The similarity of the integration process in Finland and Sweden 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. This conjecture is inevitably somewhat speculative since it is not based on a strong quasi-experimental research design. In principle, it is possible that other differences between Finland and Sweden would exactly cancel out the impact of different immigration histories. However, given that we examine the importance of national level immigration history, it seems unlikely that a clean research design would ever become available. Thus, we believe that detailed cross-country comparisons—as well as comparisons of different time periods within host countries—provide the best feasible way forward for examining this question.

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 end with some concluding thoughts.

## 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 et al. \(2018\)](#) 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>3</sup> In later decades, Sweden has received the highest per-capita inflows of humanitarian migrants among the EU countries (Ruist 2015).

By contrast, Finland strictly restricted immigration until the early 1990s. Finland's modern immigration policy is typically attributed to start when a small number of Chilean refugees were allowed to settle in the country in the mid 1970s (Martikainen et al. 2013).<sup>4</sup> The immigration policy was tight throughout the 1980s and the foreign-born population remained minuscule. In 1990, only 1.3% of the population was foreign-born and even among them, roughly half were foreign-born children of Finnish emigrants.<sup>5</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 was dramatic in a relative sense: the fraction of foreign-born residents more than tripled over a 20-year period. Still, Finland remained a much less ethnically diverse country than Sweden. For example, the immigrant population share was about one third of that in Sweden in 2010.

The approaches to integration policies also differed in Finland and Sweden, at least initially. Sweden started to recognize multiculturalism already in the 1970s and introduced individualized integration policies in the mid-1980s (Borevi 2014). By contrast, there were virtually no integration policies in place in Finland before the 1990s and the first legislation governing integration came in force only in 1999. The Finnish integration policies were based on Nordic and Dutch models (Saukkonen 2016) and the Finnish policies became quite comparable to the Swedish ones over time.<sup>6</sup> The 1999 reform appears to

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<sup>3</sup>We will use the terms asylum seekers and refugees interchangeably.

<sup>4</sup>In total, 180 Chilean refugees moved to Finland in 1973–1978. In comparison, the number of Chilean citizens living in Sweden increased from 212 in 1973 to 7,225 in 1980. Sweden's larger population explains only a small part of the differences in absolute numbers: Finland's population was 5.0 million and Sweden's 8.6 million in 1990.

<sup>5</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. For Sweden, the corresponding figure was 2%.

<sup>6</sup>For example, the Migrant Integration Policy Index (MIPEX) placed Sweden at positions fifth (Sweden) and sixth (Finland) in their first ranking of European countries in 2005. In 2014, Sweden ranked first and Finland fourth. See [www.mipex.eu](http://www.mipex.eu) for further details.

have had large impact on the earnings of immigrants ([Sarvimäki and Hämäläinen 2016](#)). Thus, it seems likely that immigrants arriving to Finland during the 1990s were exposed to less developed integration policies than those moving to Sweden at the same time, but it is less clear whether those arriving in the 2000s were exposed to significantly different integration policies in the two host countries.

In addition to the differences in the number of immigrants and formal immigration policies, Finland and Sweden also differed in terms of native attitudes and the extent to which natives interacted with immigrants. In the 2002 European Social Survey, for example, residents of Sweden had the most positive view on immigration along all measured dimensions among the 22 countries included in the study. By 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](#)).

Native Finns were also less likely to interact with immigrants than native Swedes. In the 2002 European Social Survey, 42% of respondents in Finland and 68% in Sweden reported to have immigrant friends.<sup>7</sup> 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>8</sup> By 2010, the share of Finnish workers who had immigrant colleagues had increased to 50%, while the share remained stable at slightly below 80% in Sweden.

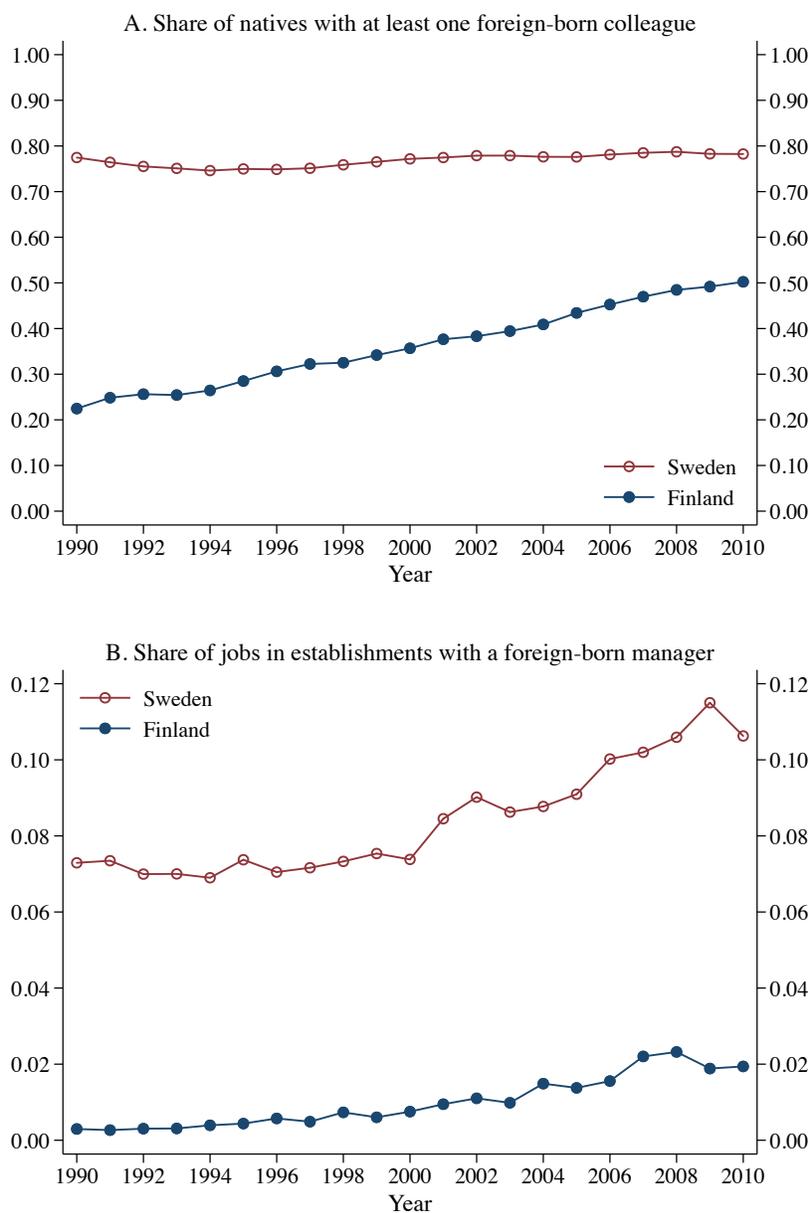
Finally, there were substantially more managers of immigrant background in Sweden than in Finland. These differences are illustrated by panel B of Figure 1, which plots the share of all jobs located in establishments with a foreign-born manager (defined as having the highest earnings at the workplace; see Section 5). According to this metric, 7.3% of workers in Sweden had an immigrant manager in 1990. In Finland, the corresponding share was 0.3%. This may be an important difference given earlier research suggesting

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<sup>7</sup>The differences also extend to the number of friends. In Sweden, 29% of the respondents answered that they had several and 39% that they had a few immigrant friends. In Finland, the corresponding figures were 8% and 34%.

<sup>8</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. 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 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.

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.

that the origin of the managers is strongly associated with the sorting of new hires across establishments. For example, Åslund et al. (2014) show that ethnic similarity increases the probability of a match across establishments within Swedish firms. 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 comparable immigrants might adopt very different ways to cope in these two labor markets. Furthermore, there are likely to 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. There are thus several reasons to expect the descriptive analysis to reveal significant differences across contexts. As we discuss in detail below, however, our main finding is a similarity in the integration process 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 Statistics Finland and include the 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. For our baseline analysis, we include 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. We use only the first observed spell of immigration for each individual in the observation period.<sup>9</sup> Unfortunately, we cannot pool the Finnish and Swedish data together and thus all our analysis

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<sup>9</sup>In some cases the year of immigration does not necessarily correspond to the time of actual entry in the country. This is particularly true for asylum seekers for whom waiting times have varied substantially depending on caseloads and asylum policy. 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 in job search. For linguistic convenience we use "year of arrival" rather "year of residence permit".

is done separately for Finland and Sweden.

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 5 above). Sweden did not experience any substantial immigration of people with Swedish ancestry in the post-war period, and data on mother tongue is not generally available. 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 and about 70% of immigrants arrive without children in both countries. The key difference between the two host countries is that immigrants arriving to Sweden have much higher exposure to other immigrants than those arriving to Finland. For example, 96% of immigrants to Finland reside in an area with less than 7.5% foreign-born in the population, while this is the case for less than a tenth of those arriving to Sweden. Immigrants living in Finland and Sweden also differ in terms of their origin region. Roughly two fifths of immigrants to Finland come 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.

## 4 Transition to the first job

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—defined as having been registered as employed at an establishment—by years since immigration. It shows that a quarter of immigrants to Sweden and a third of immigrants to Finland had a job during their year of arrival. For many, finding a first job takes a considerable amount of time and roughly a tenth of (working-age) immigrants do not hold a single job during their

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.

first 15 years in the host country. Immigrants to Finland enter the labor market slightly faster than those in Sweden, but the overall pattern is similar in both countries. Of course, these crude figures may be influenced by compositional differences in observable as well as unobservable dimensions.

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. The top panel reveals vast differences by origin. It also shows that groups that tend to find a job quickly in Finland also do so in Sweden: those coming from Iran, Iraq and the African Horn (predominantly Somalia) took the longest to enter the labor market, while those coming from other European countries tend to find employment relatively fast.<sup>11</sup>

The bottom panel of Figure 3 presents estimates for the year of arrival. It shows that immigrants arriving in later years tend to find a job substantially faster than those arriving earlier. This pattern is particularly strong in Finland and hence consistent with the hypothesis that labor market entry of immigrants becomes faster as ethnic networks grow and the Finnish society becomes more accustomed to immigrants. However, the results suggest that labor market entrance becomes faster also in Sweden over time. While the pattern is less pronounced in Sweden than in Finland, it suggests that the development in Finland is unlikely to be entirely due to Finland becoming a more mature immigrant country.<sup>12</sup>

Appendix Table A3 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 estab-

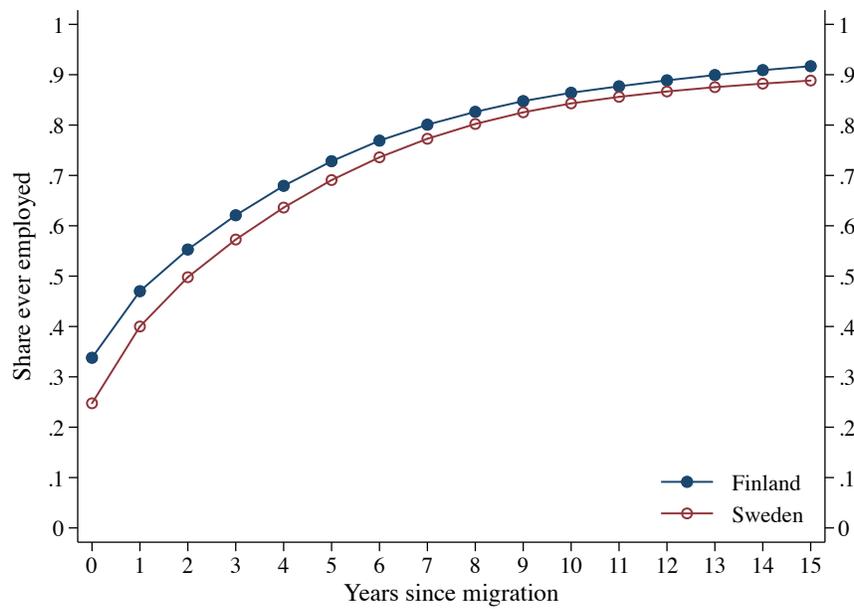
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<sup>10</sup>We estimate proportional-hazard models of the form:  $h(t) = \lambda(t) \exp\{X\beta + \mu_c + \mu_a\}$ , where  $t$  measures years from arrival to the start of the first job,  $\lambda(t)$  is the baseline hazard,  $X$  is a vector of 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 of this analysis is to describe associations between entry pace and individual and contextual variables in the two countries. That is, we do not attempt to take into account differences due to unobserved heterogeneity.

<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, see Bratu et al. (2018) for details.

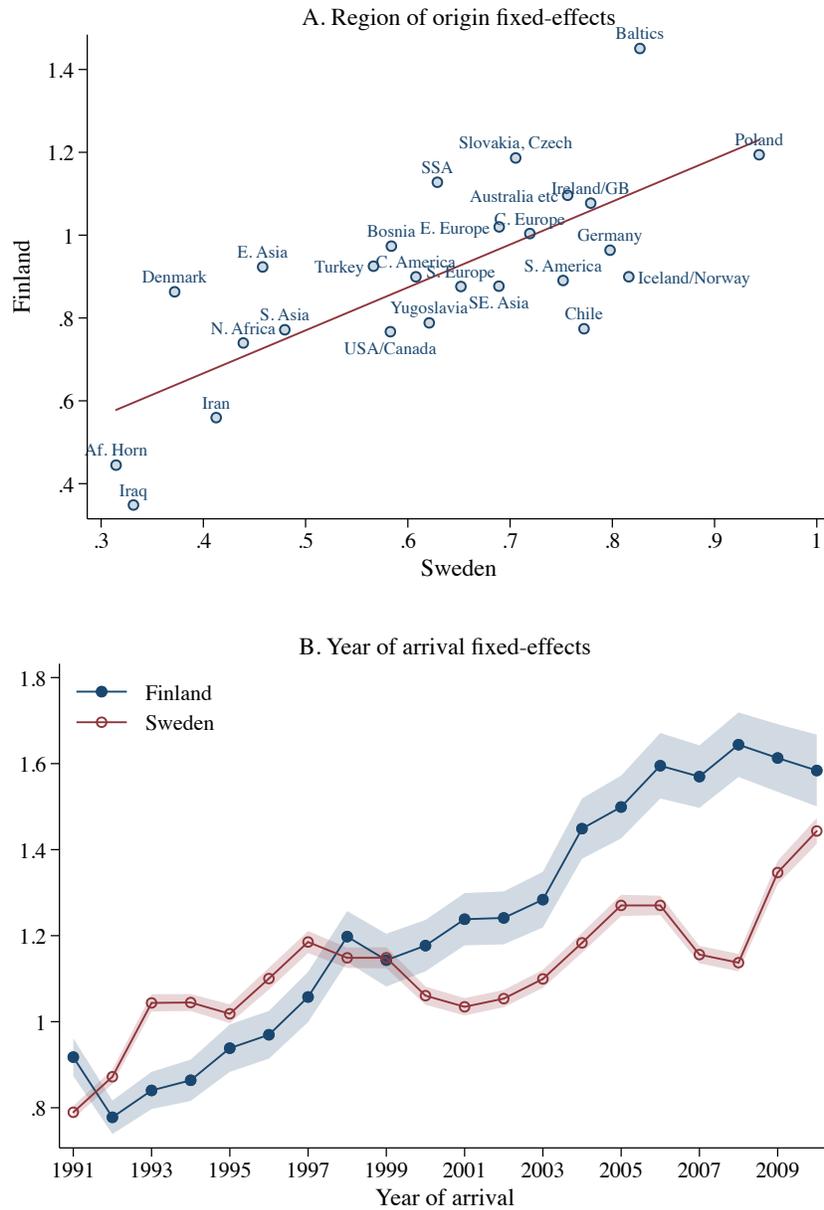
<sup>12</sup>A potential concern regarding the year of arrival estimates is that they could be influenced by the fact that later cohorts are by definition censored earlier. In order to examine this possibility, Appendix Figure A2 presents estimates using data, where all arrival cohorts have an observation window of three or five years. The results are very similar to those reported in Figure 3.

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.

Figure 3: Entry into employment by region of origin and year of arrival



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 (see footnote 10 for details). The regression also controls for other observed characteristics measured at arrival (reported in Table A3). We have used Finnish immigrants as the omitted category in Sweden and Swedish immigrants as the omitted category in Finland.

lished 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 than in a new immigration country like Finland. Furthermore, it seems reasonable to assume that individuals who choose to migrate into an established immigrant country 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 immigrants' entry jobs. Table 2 shows that in the first full year after entering the labor market, immigrants' average annual earnings were about 15,000 euros (adjusted to year 2010 price level), which places them at roughly the 30th percentile of the earnings distribution of the working population of the same age and gender. The average earnings and percentile ranks are almost identical in Finland and Sweden. 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 in establishments below the 30th percentile of the establishment distribution, less than one in five natives work in such establishments (see Appendix Figure A3).<sup>13</sup> Since their colleagues also tend to have relatively low earnings, immigrants enter at the 38th and 40th percentile of the within-establishment earnings distribution in Finland and Sweden, respectively.

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, where the average share of immigrant coworkers in entry jobs is 21%. In comparison, if immigrant entrants had been randomly allocated into establishments, only 2% of their coworkers would be immigrants. The ratio of the observed and benchmark im-

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<sup>13</sup>In 1990–2010, 43 (49)% of immigrant entrants worked in an establishment below the 30th percentile 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: Coworker earnings</i>				
Annual earnings (1000 euros)	22.292	17.304	20.411	12.304
Annual earnings (rank of the establishment)	0.431	0.296	0.382	0.280
<i>C: Coworker immigrant share</i>				
Observed	0.211	0.292	0.354	0.302
Benchmark, uncond.	0.021	0.010	0.111	0.013
Benchmark, 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
Benchmark, uncond.	0.018	0.008	0.103	0.013
Benchmark, 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
Benchmark, uncond.	0.003	0.003	0.005	0.005
Benchmark, 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
Benchmark, uncond.	0.002	0.002	0.005	0.004
Benchmark, 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.

migrant share can be considered a measure of "overexposure". For Finland, immigrant overexposure is then  $0.211/0.021 = 10.0$ . 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. Immigrants often start their careers in service industries employing many low-skilled workers with a particularly large overrepresentation in hotels and restaurants (Appendix Table A4). We examine the role of industry and local labor markets by presenting benchmark 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 details). 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). Furthermore, 8% of immigrants in Finland and 9% of immigrants

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<sup>14</sup>Statistics based on occupational classifications produce lower fractions of immigrants in leading positions (Åslund et al. 2014). However, our definition has the advantage of including establishments where no one is classified as having a manager occupation. It also seems likely that the highest earning workers are in influential positions within the establishment regardless of their formal job title.

to Sweden find their first jobs in establishments where the manager is from the same origin area as the immigrant herself, leading to overexposures of 38.5 (Finland) and 18.4 (Sweden).

Taken together, these patterns suggest that immigrant status and finer "ethnic" groupings matter in the labor market. As we discussed 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 comparable 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. Indeed, the fraction of entrants who encounter more than 90% immigrant coworkers at their first job is less than a tenth in both countries (Appendix Figure A3). While these individuals contribute to the general overexposure, the bulk of overexposure is driven by workplaces with a modest to substantial overrepresentation of foreign employees. Similarly, 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 (Appendix Figure A3).

## 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. 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 at arrival. However, as we estimate

the regressions separately for both countries, conditioning on these local labor market characteristics does not remove differences in population composition or unemployment rates between Finland and Sweden.

Figure 4 reports the estimates for origin region and year of entry when using the share of own-group colleagues at the entry job as an outcome variable.<sup>15</sup> Interestingly, the region of origin fixed-effects are, again, highly similar in Finland and Sweden. These patterns thus appear to be largely independent of the history of immigration between specific origin and host countries. Perhaps the most illustrative case in point are refugees escaping the civil wars of Somalia and former Yugoslavia in the 1990s. Those coming from Somalia had few previously arrived countrymen in either host country. By contrast, a large Yugoslavian community already existed in Sweden—due to labor migration starting in the late 1960s—but not in Finland.<sup>16</sup> Yet, the share of own-group coworkers (relative to that among migrants of Finnish/Swedish origin) 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. Thus the pre-existing size of ethnic community is unlikely to be the main driver 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. These estimates are informative about time trends (in comparison to year 1990), but do not lend themselves to cross-country comparisons in levels (see Appendix Table A5 for raw averages). For the 1990s, we find a modest increase in the share of own-group coworkers in entry jobs for immigrants arriving to Finland, while the patterns are flat for Sweden. However, for later cohorts, there is 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.

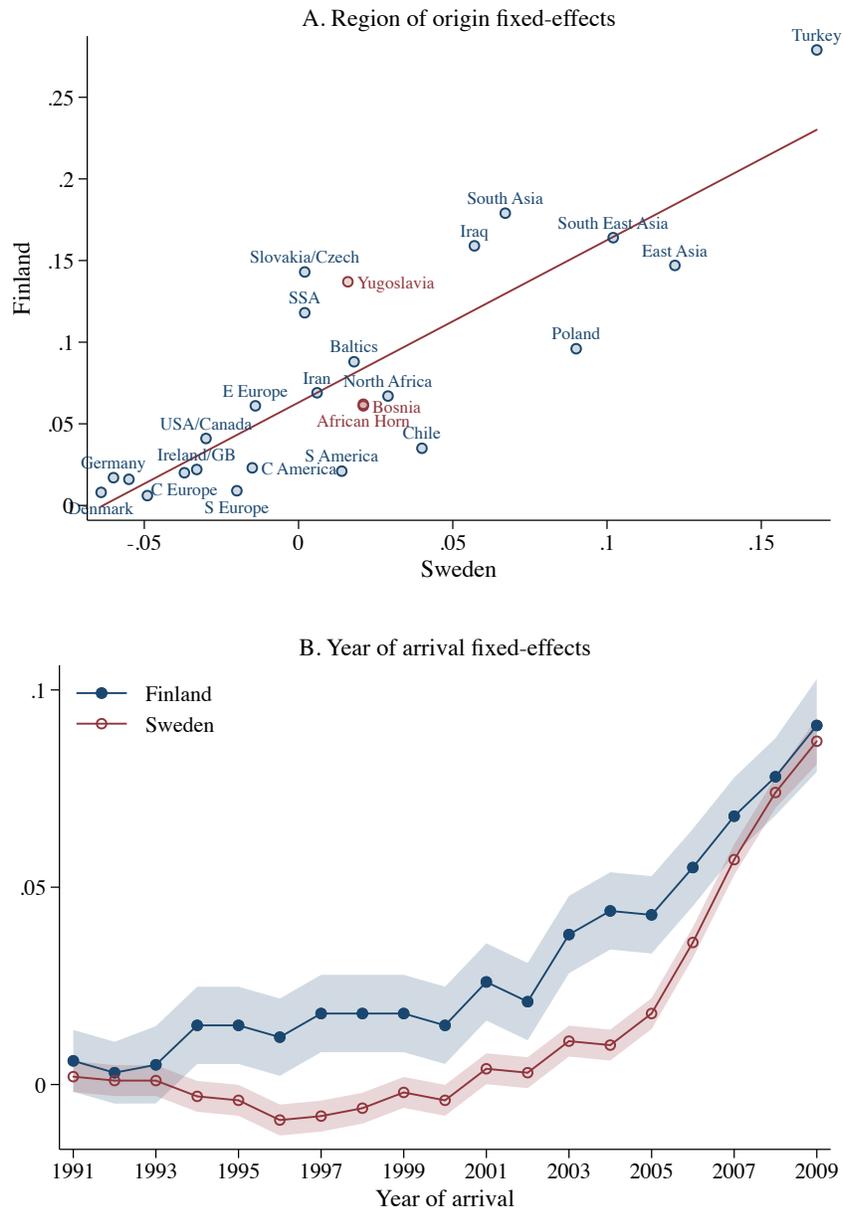
We believe that this increase in the segregation of entry level labor markets is an im-

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<sup>15</sup> Specifically, we estimate regression equation  $y_i = \alpha + X_i\beta + \mu_c + \mu_a$ , where  $y$  is the characteristic of the first job,  $X$  includes individual (gender, age, family status) and local labor market characteristics (immigrant share, own-group share, local unemployment rate) measured at the end of the year of arrival as well as the time between arrival and entering the first job,  $\mu_c$  is a vector of region of origin fixed-effects and  $\mu_a$  is a vector of year of arrival fixed-effects. We report estimates for  $\mu_c$  and  $\mu_a$  in Figure 4 and estimates for  $\beta$  in Appendix Table A6

<sup>16</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.

Figure 4: Coworker same-origin share at entry jobs



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 Appendix Table A6). African Horn and former Yugoslavia are highlighted in the top panel, see discussion in the text.

portant finding that merits further research (beyond the scope of this paper). Here, we note that the similarity of the trends in Finland and Sweden suggests the trend for Finland is not due to the country becoming a more "matured" immigration destination over time. Furthermore, Appendix Figure A6 shows that while part of the changes can be attributed to changes in industry and size of the entry establishments, as well as to increased labor migration following the EU enlargement in the 2000s, the basic pattern remains intact even after conditioning on these factors. Finally, we note that the increase in ethnic segregation seen here appears to start later than the rise in skill-sorting previously documented in Sweden (Håkanson et al. 2015).

The estimates for the remaining observed characteristics are reported in Appendix Table A6. We find that men are more likely than women to start working with own-group colleagues (see also Appendix Table A7 for raw averages by gender). The estimates for age groups are somewhat mixed. Single and unmarried migrants start working in establishments with higher shares of own-group immigrants in Finland, while we find no association between family status and own-group share in Sweden. Not surprisingly, 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 findings for other entry job characteristics 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 A4). 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 A5). This trend also coincides with a decrease in entry job quality as measured by coworkers' earnings, suggesting increased overall segmentation in addition to the rise in segregation along region of origin lines.

## 5.2 Persistence in workplace characteristics

The long-term significance of sorting across entry establishments depends on whether segregation is persistent or occurs only at the beginning of labor market entry. Appendix

Table A8 examines this issue by regressing workplace characteristics measured five years after entry on the corresponding set of characteristics measured at entry. 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 later on (conditional on initial establishment rank). Again, the associations are remarkably similar in the two host countries.

## 6 Entry jobs, earnings and job stability

The last step of our analysis is to examine how entry job characteristics predict earnings and job stability. We start with entry earnings and then examine earnings and employment 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 colleagues' earnings (establishment earnings rank) at first job.<sup>17</sup>

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 initial establishment size. In order to capture the possible nonlinearities we divide continuous variables into indicator variables.

The association between entry earnings and the share of immigrant/own-group colleagues appears to be nonmonotonic. Immigrants who start their careers in establish-

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<sup>17</sup> Specifically, we estimate  $y_i = \alpha + Z_i\gamma + X_i\beta + \mu_c + \mu_a$ , where  $y_i$  is annual earnings during the first full calendar year after entering the labor market,  $Z$  is a vector of entry job characteristics (own-group and other immigrant shares of co-workers, indicators for having an own-group or other immigrant manager, establishment rank and establishment size),  $X_i$  includes the same control variables as we used in the regressions for entry job characteristics above (see footnote 15, Figure 4 and Appendix Table A6),  $\mu_c$  is a vector of region of origin fixed-effects and  $\mu_a$  is a vector of year of arrival fixed-effects. Table 3 reports estimates for  $\gamma$ .

Table 3: Entry earnings and entry job characteristics

	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: Coworker earnings (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 <sup>2</sup>	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 A3), 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. See footnote 17 for details.

ments 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 in both Finland and Sweden 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 et al. 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.

Table 4, panel B, reports the sample average of three measures for job stability. For reference, we also report the average time to first job (panel A), which is quite similar

Table 4: Job stability and later earnings

	Finland		Sweden	
	Mean	SD	Mean	SD
<i>A. Time to first job (months)</i>	26.7	31.7	27.6	31.1
<i>B. Job stability during first six years in labor market</i>				
Length of the first spell (months)	16.3	19.9	21.1	21.1
Number of establishments	3.2	2.5	3.2	2.2
Months employed	38.3	21.7	47.2	19.4
<i>C. Earnings five years after entry</i>				
Conditional on being employed	23.352	19.317	22.557	18.519
Including nonemployed	17.211	20.454	17.559	19.376
Observations	45,731		211,924	

Note: Means and standard deviations of time to first job, job stability after labor market entry and earnings five years after finding the first job.

in the two host countries (see Section 4 for detailed discussion using the full sample). However, subsequent employment is somewhat more stable in Sweden than in Finland. During the first six years in the labor market, immigrants are employed for 47 months in Sweden and 38 months in Finland, on average. The difference is driven by longer average job spells, rather than more jobs. Average initial spells last 21 months in Sweden and 16 months in Finland, whereas the number of establishments during this period is 3.2–3.3 in both countries.

Interestingly, while the average outcomes differ between Finland and Sweden, the associations between entry job characteristics and later outcomes are very similar in the two countries. Table 5 reports estimates from regressing measures of job stability on entry job characteristics. The first columns show that having no own-group coworkers at the entry workplace predicts roughly two months shorter initial employment spells, while the pattern for the non-zero categories is less clear-cut. The point estimates for immigrant coworkers from other regions tend to have the opposite sign, but the estimates are small and most of them are statistically insignificant. Having a manager from the same region of origin predicts roughly 2.5 months longer initial employment spells. Furthermore, there is a strong positive association between the length of the first employment spell and average earnings of coworkers. For example, those starting in a top quartile establishment tend to have over one year longer initial employment spells than those starting in

Table 5: 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		Finland		Sweden		Finland		Sweden		
	coef.	se.	coef.	se.	coef.	se.	coef.	se.	coef.	se.	
<i>A: Coworkers born in the same origin region (%)</i>											
0	omitted	omitted	omitted	omitted	omitted	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: Coworker earnings (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					

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 A3), establishment size (9 categories), and region of origin and year of arrival fixed-effects.

otherwise similar establishments.

The results for the number of establishments and total months in employment mirror those for the length of the entry jobs. In both countries immigrants who start with an own-group manager work for roughly two months more than those whose first manager was a native. There is a similar, but less pronounced, tendency for those starting in an establishment with a foreign-born manager of other descent. The estimates for coworker origin are more mixed, although we find that entry through workplaces where a very large share of coworkers are immigrants predicts fewer months in employment. Again, higher average earnings of coworkers at entry predicts substantially better outcomes during the next six years.

### 6.3 Subsequent earnings

We end by documenting the association between entry job characteristics and earnings five years after entering the labor market. The first columns of Table 6 report the estimates for immigrants who are employed in their fifth year after starting to work (the specifications include the same other covariates as in the entry year analysis). The nonmonotonic relationship between coworkers' background and earnings is not as clear as in the entry year (see Table 3), but being the only immigrant in the entry establishment or starting in an establishment with very high levels of immigrant/own-group coworker appear to be associated also with lower medium-term earnings. Similar to entry earnings, we find that having an immigrant manager at entry predicts 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 Canada; see [Ci and Hou \(2017\)](#)).

Interpreting these results is complicated by the fact that only about 60% of the immigrants in our data are employed five years after finding their first jobs. This attrition is due to 23% of the immigrants leaving the sample, and 24% (Finland) or 20% (Sweden) of those remaining being out of work.<sup>18</sup> In order to partly mitigate the issues of non-random attrition, the last columns of Table 6 report estimates for the full population of immigrants remaining in the sample five years after labor market entry. That is, we exclude from the

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<sup>18</sup>Immigrants may leave our sample through turning 60, emigrating or dying. Emigration/death is defined as 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. Appendix Table A9 report estimates for the likelihood of having positive earnings on entry job characteristics. The results show that high initial own-group exposure predicts lower employment rates, whereas high-earning coworkers are linked to higher employment.

Table 6: 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 (gender, age, family status, LLM population composition and unemployment; see Table A3), size of entry establishment (9 categories), 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.

sample those who emigrated or turned 60, but include those who are not employed. The results are similar to those from a sample conditioning on employment.

## 7 Conclusions

This paper presents a detailed examination of the early stages of the labor market assimilation process in Finland and Sweden—two countries that resemble each other in many dimensions, but differ vastly in their immigration histories. We find that immigrants enter the labor market through similar establishments, the same background characteristics predict time to entry and entry job characteristics, and the associations between entry job characteristics and later outcomes are similar in both countries. We also document substantial heterogeneity across immigrant groups in terms of time to entry and type of entry jobs. Importantly, this heterogeneity is very similar in Finland and Sweden.

These results starkly contrast our priors, which were primarily guided by earlier literature illustrating the importance of ethnic communities. Based on this earlier work and the fact that Sweden has a much longer and richer immigration history than Finland, we expected to see origin, segregation and segmentation to play a different role in labor market entry in the two countries. The similarities are 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.

Our findings are consistent with the hypothesis that ethnic segregation and segmentation emerge quickly after a country starts receiving immigrants, and thus the host country's immigration history plays only a limited role in shaping the integration process. Of course, a descriptive study of two countries is not sufficient for establishing generality for this conjecture. On the other hand, the "treatment" we examine—immigration history of an entire country—is such that it is unlikely that there will ever be a clean research design for examining it. Thus, we argue that careful cross-country comparisons on immigrants' labor market entry and subsequent careers provide the best feasible way forward. Given the high social and policy importance of understanding the determinants of immigrant labor market outcomes, we believe that documenting these patterns also for other countries would be highly valuable.

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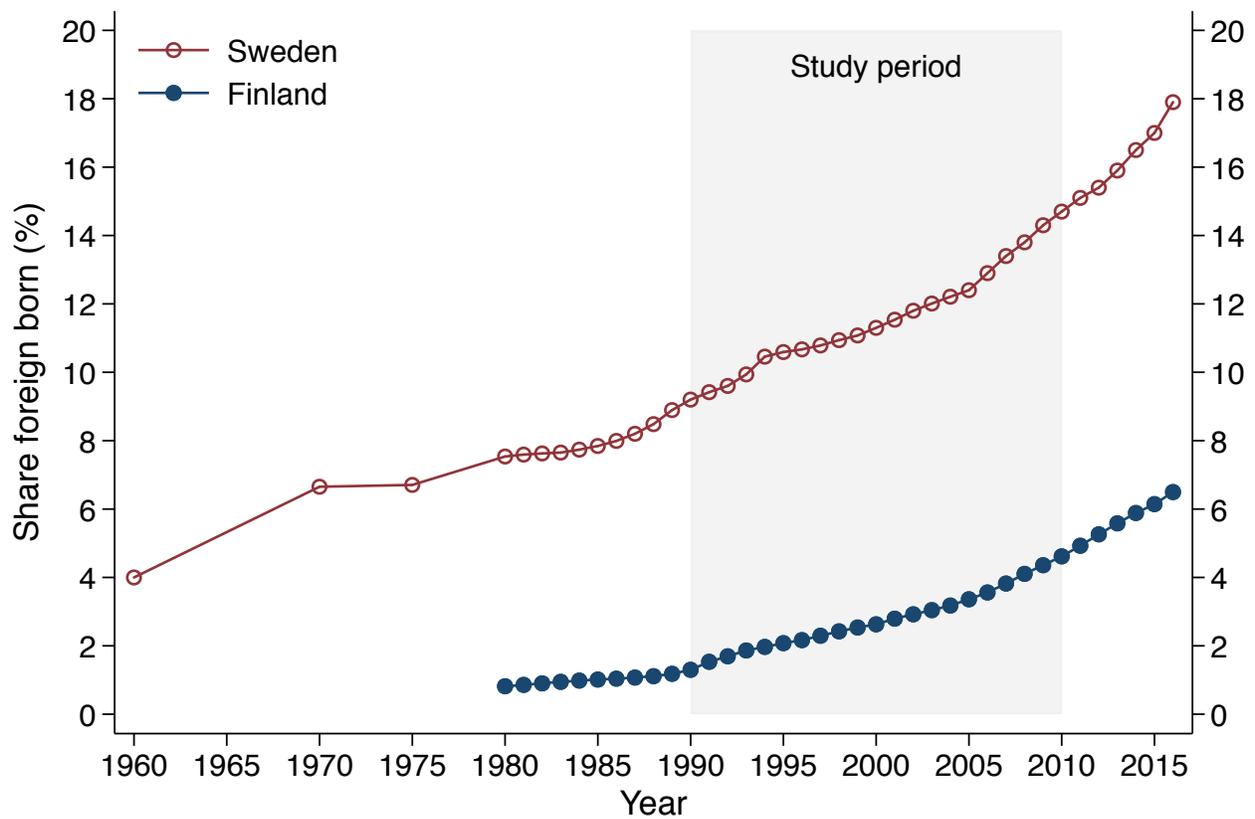
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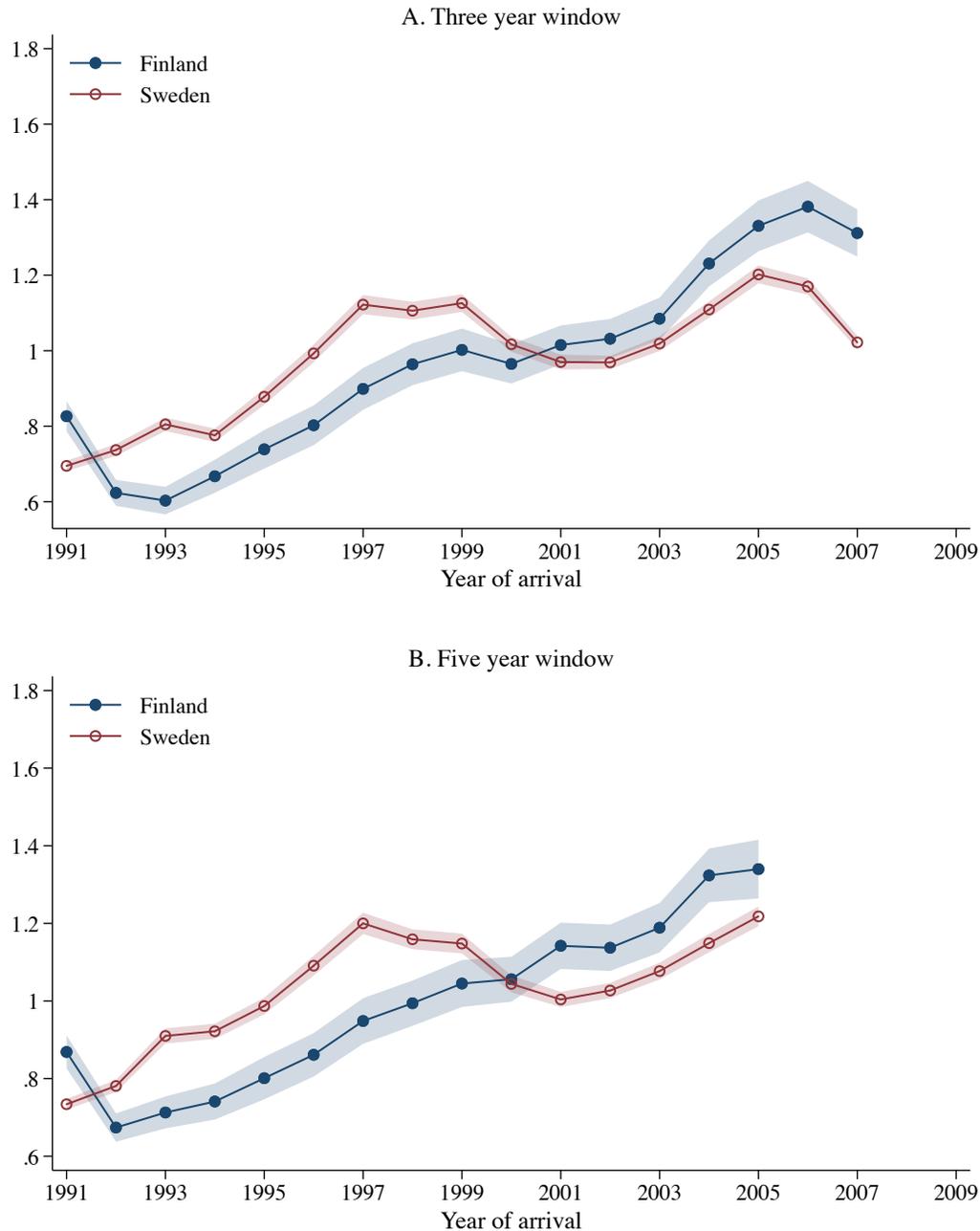
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Figure A1: Share of foreign-born population in Finland and Sweden, 1960–2016



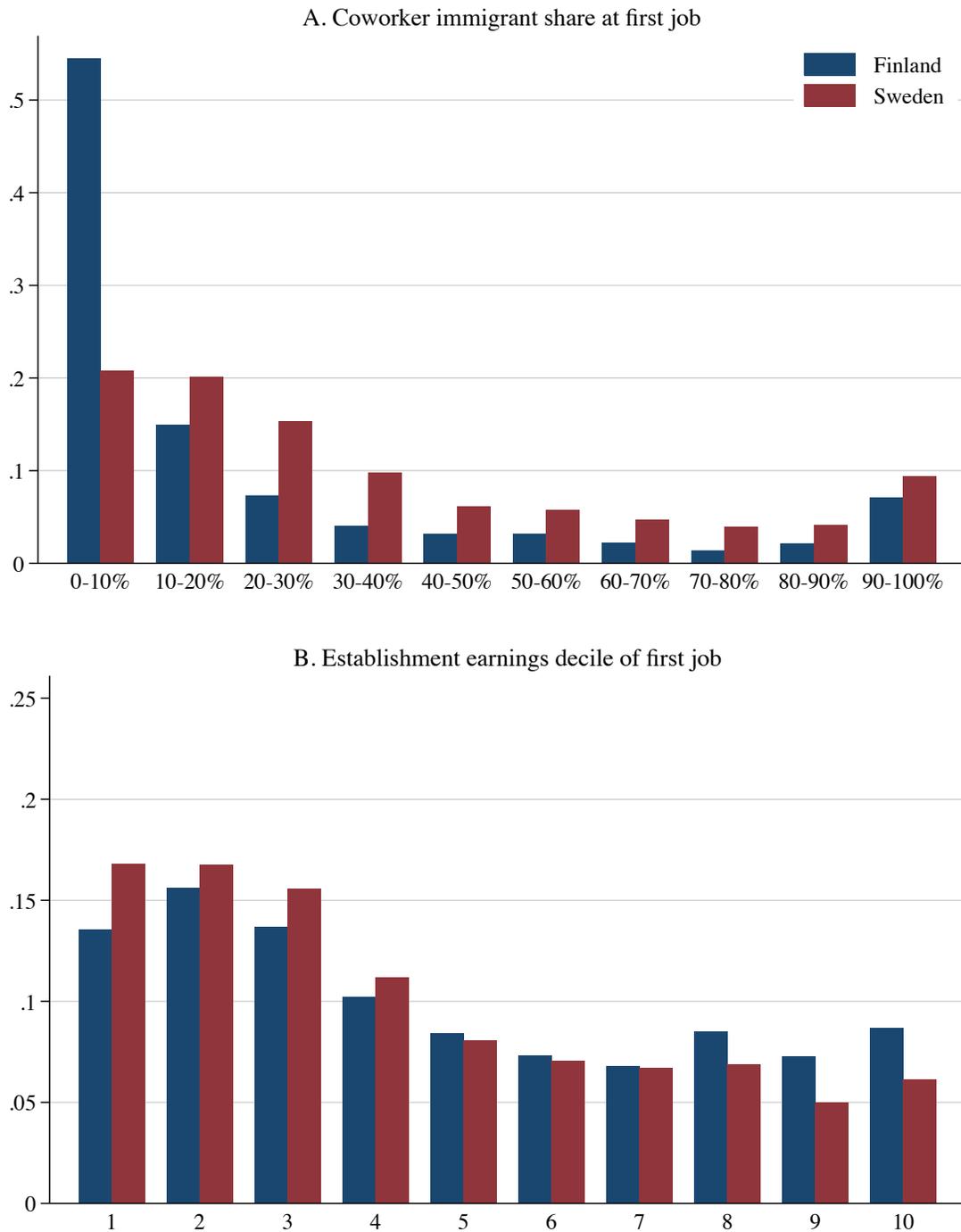
Sources: Statistics Finland, Statistics Sweden.

Figure A2: Robustness checks for time to first job arrival year fixed-effects



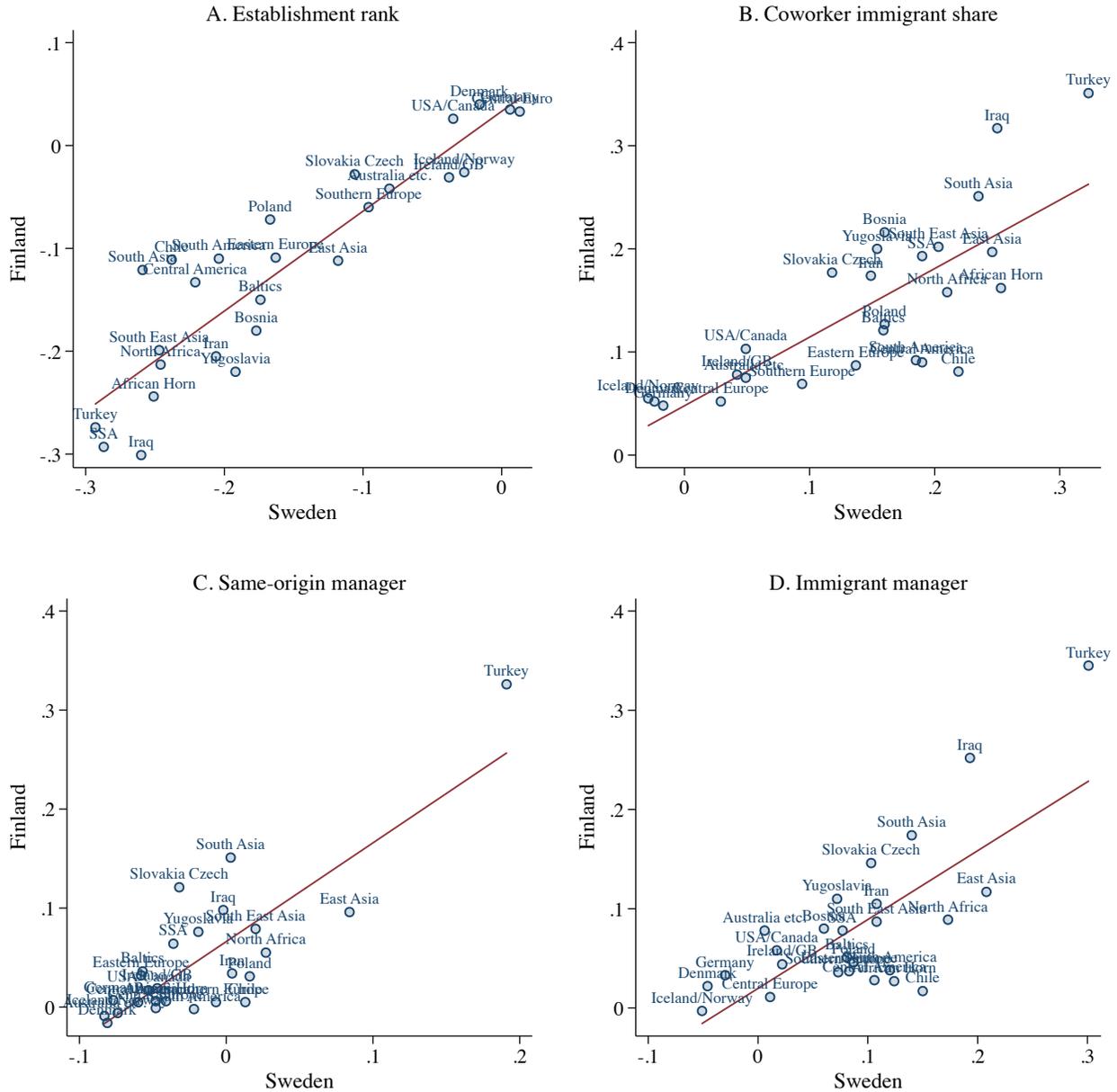
Note: This examines the robustness of year of arrival fixed-effects reported in panel B of Figure 3. The top panel presents hazard ratios for year of arrival fixed-effects from proportional-hazard models of time until entry to first establishment using data on only the first three years in the host country for those arriving in 1990–2007. The bottom panel repeats the analysis using a five year window and arrival cohorts 1990–2005. All regression also controls for region of origin and other observed characteristics measured at arrival. See footnote 12 for discussion.

Figure A3: Distribution of entry job characteristics



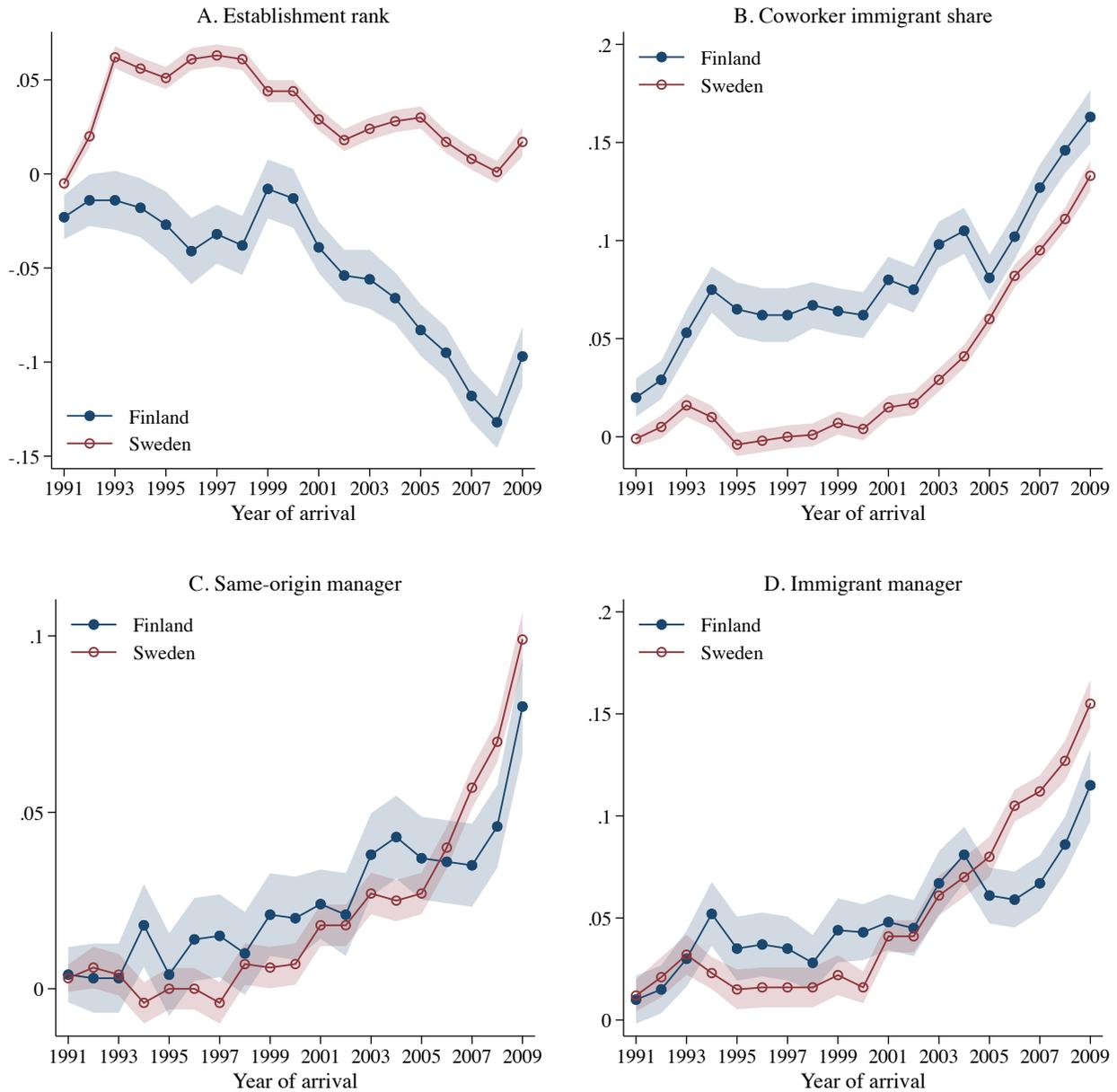
Note: This histogram shows the share of immigrant coworkers (Panel A) and the establishment earnings decile (Panel B) of immigrants' entry jobs.

Figure A4: Region of origin fixed-effects and entry job characteristics



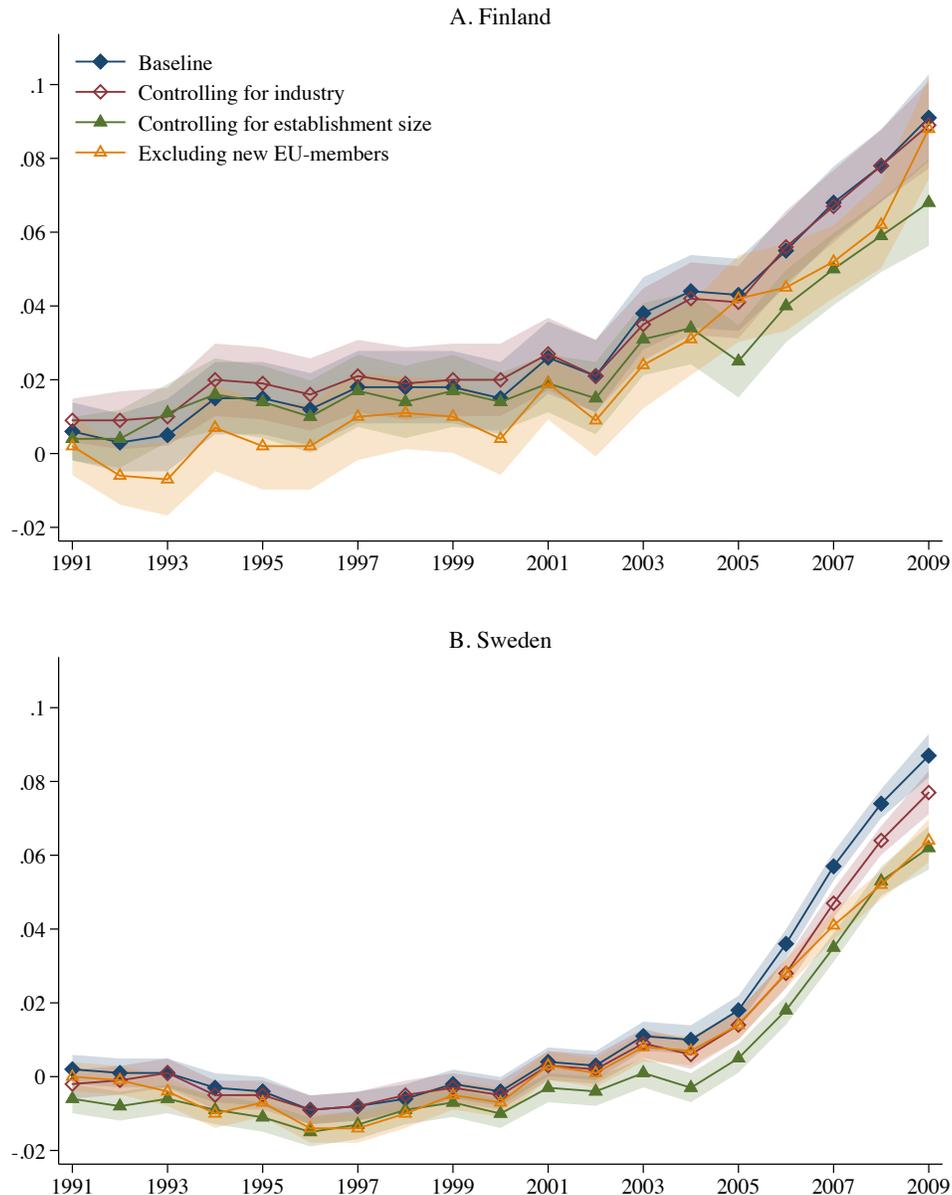
Note: This figure plots region of origin fixed-effects from separate regressions using the establishment rank (Panel A), coworker immigrant share (Panel B), same-origin manager (Panel C) and immigrant manager (Panel D) at entry jobs as outcome variable. The regressions also control for other observed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

Figure A5: 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.

Figure A6: Robustness checks for trends in coworker same-origin share at entry jobs



Note: This figure plots year of arrival fixed-effects 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 and region of origin fixed effects. The baseline specification reproduces the trends reported in Figure 4. The next two specifications condition on entry industry and establishment size. In the final specification, we exclude countries joining the EU in 2004.

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 .

Table A2: Region of origin in sample of establishment entrants

		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
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, Comoros, Congo, Côte 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: 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 A4: 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 etc. 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 A5: Entry job characteristics by arrival cohort

	1990-94		1995-99		2000-04		2005-09	
	Finland	Sweden	Finland	Sweden	Finland	Sweden	Finland	Sweden
<i>A: Own earnings</i>								
Annual earnings (1000 euros)	11.145	12.158	13.411	16.117	16.374	16.966	17.942	17.655
Annual earnings (rank)	0.240	0.278	0.264	0.331	0.306	0.328	0.329	0.305
In working population	0.350	0.358	0.363	0.409	0.392	0.405	0.404	0.391
Within-establishment earnings rank	0.342	0.378	0.356	0.397	0.380	0.399	0.404	0.409
<i>B: Coworker earnings</i>								
Annual earnings (1000 euros)	18.097	17.169	21.646	20.585	23.438	21.825	24.331	22.443
Annual earnings (rank of the establishment)	0.425	0.381	0.422	0.409	0.444	0.389	0.429	0.359
<i>C: Coworker immigrant share</i>								
Observed	0.108	0.291	0.150	0.319	0.201	0.346	0.308	0.446
Benchmark, uncond.	0.009	0.098	0.015	0.104	0.021	0.116	0.031	0.127
Benchmark, cond. on industry and LLM	0.016	0.127	0.024	0.142	0.033	0.153	0.053	0.170
<i>D: Manager immigrant share</i>								
Observed	0.068	0.206	0.094	0.247	0.133	0.282	0.181	0.374
Benchmark, uncond.	0.008	0.088	0.013	0.098	0.019	0.107	0.026	0.116
Benchmark, cond. on industry and LLM	0.013	0.122	0.021	0.143	0.030	0.159	0.043	0.179
<i>E: Coworker same-origin share</i>								
Observed	0.052	0.076	0.071	0.085	0.099	0.100	0.172	0.172
Benchmark, uncond.	0.001	0.005	0.002	0.005	0.003	0.005	0.004	0.005
Benchmark, cond. on industry and LLM	0.002	0.009	0.004	0.010	0.005	0.010	0.007	0.011
<i>F: Manager same-origin share</i>								
Observed	0.033	0.054	0.050	0.072	0.076	0.091	0.117	0.145
Benchmark, uncond.	0.001	0.004	0.002	0.005	0.002	0.005	0.003	0.005
Benchmark, cond. on industry and LLM	0.002	0.007	0.003	0.009	0.004	0.010	0.006	0.012
Observations	18,933	108,186	14,795	65,349	21,558	88,525	31,521	105,412

Note: This table presents the same entry jobs average characteristics as Table 2 by year of arrival. See Table 2 for the same averages over all cohorts.

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 <sup>2</sup>	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, A4 and A5.



Table A7: Entry job characteristics by gender

	Men		Women	
	Finland	Sweden	Finland	Sweden
<i>A: Own earnings</i>				
Annual earnings (1000 euros)	17.870	18.200	12.110	12.640
Annual earnings (rank)				
In working population	0.390	0.368	0.380	0.410
In population	0.300	0.291	0.280	0.330
Within-establishment earnings rank	0.410	0.430	0.340	0.360
<i>B: Coworker earnings</i>				
Annual earnings (1000 euros)	21.270	18.950	18.510	17.760
Annual earnings (rank of the establishment)	0.460	0.400	0.390	0.360
<i>C: Coworker immigrant share</i>				
Observed	0.243	0.371	0.171	0.335
Benchmark, uncond.	0.021	0.112	0.021	0.111
Benchmark, cond. on industry and LLM	0.036	0.149	0.034	0.147
<i>D: Manager immigrant share</i>				
Observed	0.135	0.128	0.081	0.092
Benchmark, uncond.	0.002	0.005	0.003	0.005
Benchmark, cond. on industry and LLM	0.004	0.010	0.005	0.010
<i>E: Coworker same-origin share</i>				
Observed	0.158	0.297	0.095	0.260
Benchmark, uncond.	0.018	0.103	0.018	0.103
Benchmark, cond. on industry and LLM	0.030	0.154	0.028	0.147
<i>F: Manager same-origin share</i>				
Observed	0.099	0.109	0.050	0.074
Benchmark, uncond.	0.002	0.004	0.003	0.005
Benchmark, cond. on industry and LLM	0.004	0.011	0.004	0.009
Observations	48,048	195,544	38,759	

Note: This table presents the same entry jobs average characteristics as Table 2 by gender. See Table 2 for the same averages over all cohorts.

Table A8: 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.	30,071	146,791	30,071	146,791	30,071	146,791	30,071	146,791	30,071	146,791
R <sup>2</sup>	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) for  $\gamma$  from regression equation  $y = \alpha + Z\gamma + X\beta + \mu_c + \mu_a$ , where  $y$  is the characteristic of the job five years after labor market entry,  $Z$  is a vector of characteristics of the first job (see table rows), and  $X$  is a vector of observable characteristics (gender, age, family status, LLM population composition and unemployment; see Table A3). Each column comes from a separate regression that also controls for size of entry establishment (9 categories), and region of origin and year of arrival fixed-effects.

Table A9: 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 <sup>2</sup>	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. 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 A3), size of entry establishment (9 categories), and region of origin and year of arrival fixed-effects.