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Labour market entry of non-labour migrants–Swedish evidence[a]

by

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August 29, 2017

Abstract

We describe the short- and long-term patterns of labour market entry and integration among Non-Western, predominantly non-labour, immigrants to Sweden. Our main sample considers the 1990-2014 period. The patterns of time to first contact and labour market entry vary with business cycle conditions, country of origin and other background characteristics. But the main message is the remarkable stability of a relatively slow entry process and long-term outcomes below those of the average worker. The number of jobs before the "first real job" (entry) is limited and the first employer contact is for many a port to a more stable position. First jobs are comparatively often found in small, low-wage firms, which over time have become increasingly present in service industries. Our discussion of policy experiences suggests several margins and factors affecting the labour market outcomes of recent migrants, but also indicates that no single reform or measure is likely to in itself radically change the patterns.

Keywords: Immigration, labour market entry, integration policy
JEL-codes: J61, J68.

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1 Introduction

Refugee immigration to Sweden has been sizeable for a long time and reached an all times high in 2015 in terms of the number of asylum seekers. The numbers of granted residence permits for refugees have also been high in later years and can be expected to increase in the next few years due to the surge in asylum seekers (see Figure 1). It can furthermore be noted that the number of asylum seeking children was around 70 000 (of which roughly half arrived without their parents) in 2015.

All in all, the numbers of asylum seekers and refugee immigrants are large enough to imply that successful integration will be important not only for the immigrants but also for native Swedes and previous migrants. The recent numbers are also significant in the sense that they imply challenges to a large number of Swedish institutions in the short run. This is obviously true for refugee reception institutions, but also for schools and for the housing market. However, if the integration process should prove to be successful, this would alleviate future labour market problems associated with an aging population and contribute to better long-run public finances. And an unsuccessful integration would instead make such long-run challenges tougher. Hence, there is no doubt that integration will be a key issue in Sweden in the years to come.

In this paper we present integration patterns for earlier cohorts of immigrants to shed light on what we should expect given earlier experiences. Naturally, labour market and political institutions change, and the size and composition (e.g., with respect to age, education, and birth country) of immigration vary. This could decrease the information value of historical patterns for predicting future ones, but it is arguably the best foundation available. Also, with the rich data and long observation period at hand, we are able to look at heterogeneity in many dimensions.

We study the first contacts with the labour market and the process of reaching a more stable employment and earnings position. We also describe in which industries and firms entry occurs, and study the number of jobs and employers met from the first contact until becoming established. The main population under study is immigrants arriving in the 1990–2014 period, from refugee sending countries. We also analyse earnings development and long-term indicators on economic marginalisation for selected region-specific (earlier) cohorts containing substantial inflows of refugees. The

paper also contains a description and discussion of policies, reforms and institutions relevant for the labour market prospects of newly arrived migrants.

2 Refugee migration to Sweden in the post-war period[1]

Sweden's history as a significant net immigration receiver begins after World War II. In the 1930 census, only 1 percent of the population was foreign-born, climbing to 7 percent in 1970 and further to 17 percent at the end of 2015.

During and after the war, a substantial number of refugees from neighbouring countries sought shelter in Sweden (which lifted some restrictions against refugee migration during the war). Some arrived from Norway, Denmark and the Baltic countries, whereas others came from concentration camps in continental Europe. These individuals to a high degree returned to their countries of origin or moved to a third country in the late 1940s, but significant proportions also remained in Sweden.

In the 1950s and 1960s labour migration dominated the inflows. Most migrants came from the Nordic countries, especially Finland, where the number of individuals living in Sweden increased by close to 200,000 from 1951–1970. But the period also saw some immigration following political turmoil, e.g. in Hungary (1956), Greece (1967) and Czechoslovakia (1968). The regulations for non-Nordic labour migration became stricter from 1967 and even more so in the early 1970s. A gradual shift then occurred toward refugee and family-related immigration. The 1970s and early 1980s saw politically motivated immigration from e.g. Chile, Turkey, Lebanon, Vietnam, and Poland.

During the 1980s, the number of asylum applicants and residence permits granted on humanitarian grounds increased (see Figure 1). Iran, Ethiopia and Chile were significant source countries. In 1989, close to 25,000 individuals immigrated, partly as a result of a new praxis shortening waiting times and preferential treatment of those whose applications had been pending for a long time. As a result, the number of asylum applications rose, which in turn contributed to a tightening of the regulations later the same year. For a couple of years, refugee immigration was somewhat lower, before the Balkan wars caused an unprecedented number of people to go to Sweden for

[1] We use the term refugees also for asylees and humanitarian residence permit categories. The presentation largely builds on Nilsson (2004) and on official figures from Statistics Sweden and the Swedish Migration Board. See also http://www.motallaodds.org/factualweb/se/2.3/articles/1930_talet.html

humanitarian reasons. In the summer of 1993, visa requirements for citizens from Bosnia-Herzegovina and (F.Y.R) Macedonia were enacted to reduce the number of asylum seekers. In 1993–1994 over 80,000 refugees were granted residence in Sweden, whereof 66,000 from former Yugoslavia. Another 20,000 came in these two years as family reunification migrants to previous refugees. As can be seen in Figure 1, this was also a time when falling and negative GDP growth was accompanied/followed by sharply rising unemployment. Another message from the figure is that there is a lot of variation in economic conditions also in later years, meaning that the cohorts we study have faced varying prospects at arrival.

Throughout the 1990s, there was also a substantial and persistent inflow of people from Iraq, and (particularly in the early part of the decade) Somali refugees also became a significant refugee group. Iraqis continued to come in the 2000s, with peaks in the 2006–2007 period. Somali refugee migration increased at the same time, but with a somewhat later peak. Even though the presentation here mentions only a few countries, it is important to note that there is a wide distribution of citizenships among asylum seekers to Sweden. While it may dominate the inflow in one or two consecutive years, no single group has done so seen over a longer time period.

With some variation, the trend has been toward steadily growing overall immigration since the mid 1980s, reaching more than 100,000 residence permits per year from 2012. Refugees and their families have constituted on average 25–30 percent of this figure since the year 2000, but growing in recent years. Since 2000, women have made up 30–40 percent of the asylum seekers annually. Children constituted about one quarter of the applicants before the number of unaccompanied minors grew from about 2 to 8 percent from 2008.

Much due to the war in Syria and other conflicts in the region, the total number of asylum seekers increased annually from 2011 to 2014. In 2015, projections in the first part of the year signalled that the number of applications would fall below that of 2014. But in late summer things changed and the inflows increased rapidly, reaching 8,000-10,000 applications weekly in October and November. The Swedish government took dramatic steps, which combined with changes outside Sweden sharply decreased the number of people seeking asylum in Sweden. Many decisions are still pending, so the total impact of the 2014–2015 asylum applications on refugee immigration is still to be

seen. In 2016, a total of 67,000 individuals were granted asylum. As of January 2017, 122,000 people were registered in the Migration Board's reception system.

This short description again illustrates that refugee migration is much driven by external dramatic events, but occurs also in interplay with legal frameworks, where developments proceed and follow interchangeably. While the legal distinction between e.g. refugees and labour migrants is typically clear-cut, an individual migrant's decision may well be affected by several factors of different types (e.g. social and economic hardship in combination with political oppression). The legal frameworks affecting migration is also likely to play an important role, and one can expect people to follow the route that is more open and feasible.

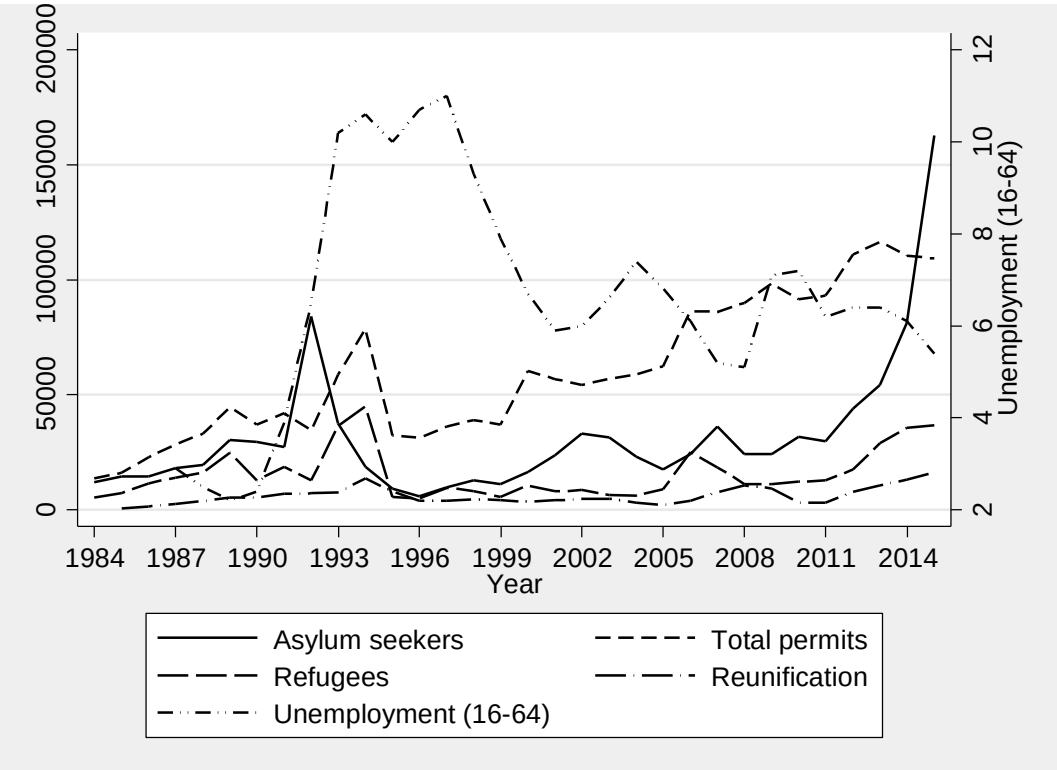

Figure 1: Asylum seekers, residence permits, and unemployment 1984–2015

Source: The Swedish Migration Board, Statistics Sweden (Labour Force Surveys).

3 Some data issues and definitions

In this study, we are interested in immigration to Sweden that is not driven by persons from other countries finding jobs who subsequently decide to move to Sweden (immigration for labour market reasons). While integration issues can certainly be important in relation to labour market driven immigration, it may be argued that the

most interesting issues regarding labour migrants relate to their impact on natives through an increased labour supply in certain segments of the labour market, and to the overall economy. We do not deal with such issues in this study. Instead, we focus on the labour market integration of immigrants who arrive either as refugees or as relatives of refugees (recent or past). For these immigrants, labour market integration is a key issue. Hence, we look at different measures of labour market integration of non-labour immigrants and how these measures evolve over time.

We do not have any direct information on type of residence permit. Instead we use birth country (or birth region) to define the population of interest. We consider mainly individuals from non-European countries outside the OECD except for the period of wars in former Yugoslavia as refugees or related to refugees; see the appendix for details. Since we use a long time period there will be cases where the characteristics of the migration change over time; any inclusion/exclusion is thus an approximation.

Our main sample consists of first time immigrants born in the countries listed in Table A1, age 20-50 at immigration in the years 1990–2014, followed from receipt of residence permit[2] (i.e. the formal time of immigration), at most to age 65. In section 6 we use a different sample, consisting of selected region of origin/year of arrival groups, intended to capture specific refugee inflows followed over an even longer period of time (these individuals may have immigrated before 1990 and are not always followed from immigration).

The baseline sample includes more than 500,000 individuals (see Table A2), the mean age at immigration is 31 and men and women are equally represented. Looking at all cohorts in a 2014 cross-section we see that the level of education varies across cohorts and origin groups, but that about one third has acquired tertiary education (prior to or after immigration). Information on education is missing for a substantial fraction of the different samples, indicating that some caution is warranted due to potential measurement error also for those where we have information.

Both our samples contain a significant share of family reunification migrants. We believe that the economic integration of this broader immigrant group is relevant for our

[2] We do not observe people when they apply for asylum (arrive in Sweden); immigration occurs (by definition) if/when the residence permit is granted and then observation begins. As the process of getting a residence permit tends to be lengthy, we systematically underestimate the durations of immigrants' actual stay in Sweden. However, our definition of immigration corresponds to the formal one, which also defines much of the support available to the newly arrived.

purposes, and given that the regulations and conditions for family migration has varied over time, we arguably avoid some sample composition issues by including a broader group. What could be worrying is that the sample will also contain some labour and education migrants. A comparison with official immigration statistics does however suggest that immigration from the countries included in the analysis is strongly dominated by refugees and reunification with former humanitarian migrants. The correlation in inflows by region-of-origin/year-of-immigration in our sample and the overall statistics is in the order of 0.9; thus our sample closely mirrors humanitarian and reunification migration from the included source countries.[3]

We consider labour market integration as a process potentially involving many steps. To describe this process, we walk through it step by step to see how they are taken by different groups of immigrants and whether the outcomes change over time. We start with the first contacts with the labour market: how long does it take before an individual reports positive earnings (no matter how small, this is defined as the first job) or we can observe indications on the first attempt to look for jobs by registering at the Public Employment Service (PES)?

We then look at how long it takes to labour market entry, defined here as having "the first real job", which in our setup is the first year that a person has annual earnings in excess of half the median annual earnings of a 45 year-old.[4] Hence, we sum up the labour earnings during a given year. This means that an individual may have more than one job the year (s)he gets established. As we look at the way into the labour market, this is natural. The threshold is chosen high enough to rule out short temporary jobs, but low enough to allow for low-paid full-time jobs during a substantial part of the year.

Furthermore, we characterise both the first jobs and the entry jobs in terms of industries, firm sizes, and whether firms are high-paying or low-paying ones. We also look at integration in terms of the development of the position in percentile ranked income distributions over time since immigration.

Finally, we use register data to look at some complementary outcomes which primarily reflect integration problems: social assistance take-up, employment and earnings in the long-term. In this part of the analysis, we focus on the alternative sample

[3] Details available upon request. Due to data availability the comparisons are done for the 2004-2014 period. Most likely, issues caused by other forms of immigration are even smaller in previous cohorts.

[4] This is the definition used by Erikson et al. (2007). The earnings threshold roughly corresponds to six monthly wages for a full-time janitor in the local public sector.

with specific region-of-origin/year-of-arrival categories, which constituted significant refugee inflows from varying parts of the world.

4 Labour market integration: How long does it take?

In this section, we present evidence on how long time the different steps during the labour market entry process take.

4.1 First labour market contacts

A natural indicator on the first contact with the labour market is the receipt of the first earnings. The left panel of Figure 2 displays the fraction of different immigrant cohorts (1992–2014) having had their first earnings 1, 3, 5, 10 and 15 years after immigration. For a given cohort, the different lines present the cumulated experience (since they display the fraction with positive earnings on at least one point, they can never cross). A number of features are worth mentioning. First, the importance of business cycle conditions is clearly visible in the low shares having a first contact within 1 and 3 years after immigration for cohorts arriving in the early 1990s. A similar indication is the drop for immigrants entering around the financial crisis of 2009. Second, the share rises continuously with the duration of the stay in Sweden and reaches around 90 per cent after 10 to 15 years. Third, after the year 2000 there is no clear trend across the immigration cohorts in the timing of the first earnings, especially looking at shares for those who have had their residence permits for at least five years. This suggests that the timing of the first contact is not very sensitive to, e.g., the number of residence permits granted (see Figure 1) or “normal” changes in business cycle conditions.

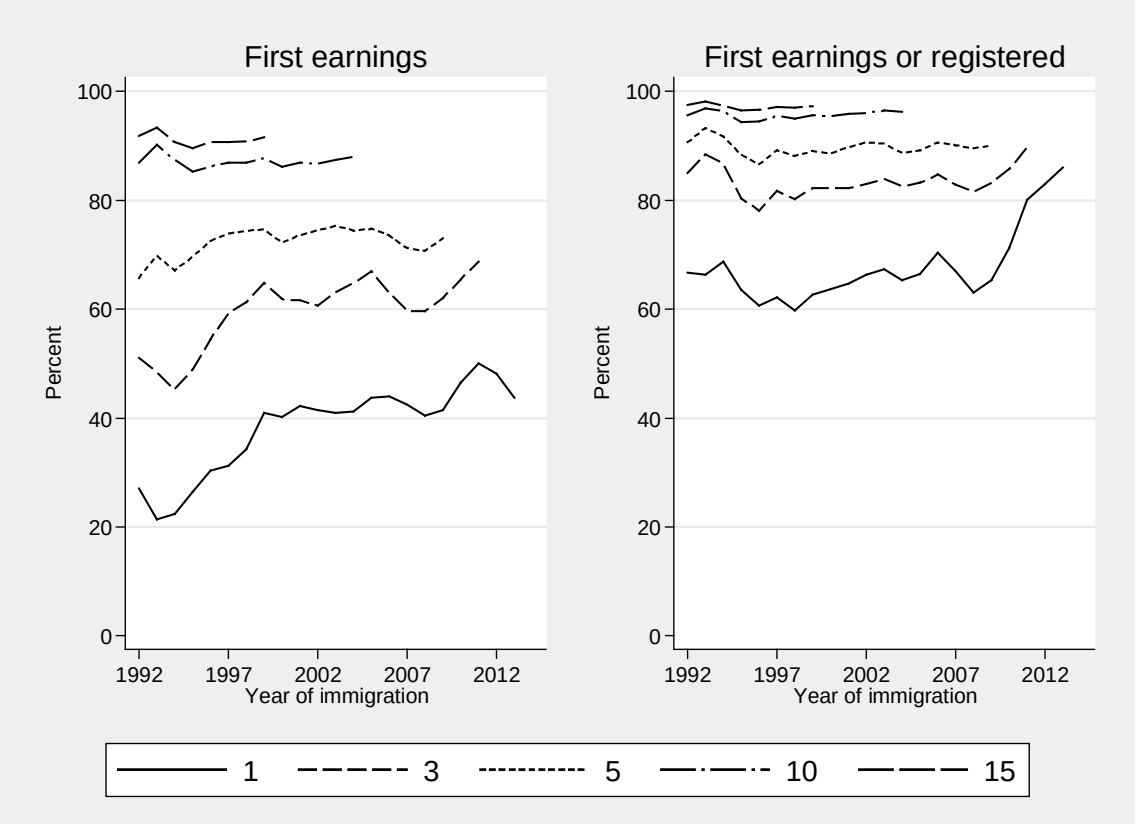

Figure 2: Fraction having had positive earnings and/or having registered with the PES, at different number of years since immigration (1, 3, 5, 10 and 15), by cohort

A drawback with first earnings is that it captures success, not necessarily labour force participation. To get a more complete measure of the first contacts with the labour market, the right-hand panel of Figure 2 shows the share of migrants who have had their first earnings and/or registered with the PES at some point in time. A common first step into the Swedish labour market is to register as a job seeker at the PES, and the combined measure clearly give higher values than for earnings only. In the 1990s and early 2000s, the fraction having registered or receiving earnings in the first year after immigration was around 60-70 percent. Particularly from 2011 (Dec 2010), when the responsibility for refugee reception and integration was transferred from the municipalities to the PES, we see increasing fractions of immigrants with early contacts with the PES.

In sum, the figures suggest that a majority of the immigrants take some form of step toward the labour market relatively soon after immigration, but that successful labour market contacts may take longer. This is something we will address further below, when we look at labour market entry.

4.2 Labour market entry—the "first real job"

Figure 3 shows the same type of information as Figure 2, but with a higher threshold requiring earnings of at least half the medium earnings of a 45-year-old. It is evident from the figure that labour market entry is a time-consuming process – it takes more than five years for half a cohort of immigrants to enter the labour market. However, after 15 years around 80 per cent in the cohorts have completed the labour market entry. As for the first contacts, business cycle conditions matter. If anything, they seem to matter more for entry than for the first contact.[5] There is no indication that the process has deteriorated over time; in the longer perspective the opposite seems to be the case. The dip in the 1-year curve after 2011 could be a negative signal. But PES statistics on the fraction of refugees and reunification migrants in education or work 90 days after completing the introduction program continue to show small increases up to and including 2016.[6] Combining the information in Figure 3 with the information in Figure 1, it is hard to see a systematic relationship between the number of immigrants in a cohort and labour market success, as measured by time to labour market entry.

A relevant question is of course whether what we label "entry" is temporary or permanent. An indication is given by a comparison of long-term patterns conditional on previous entry. Looking at those who met the earnings criterion in at least one year within the first three, about two-thirds meet the criterion in any given later year. In other words, entry is clearly linked to future prospects, but there is also a substantial fraction that go back to lower earnings. [7]

The progress of different cohorts can in Figure 3 be traced through comparison of the curves for different years. Our graphs facilitate comparison across cohorts but deviates from traditional ways of presenting e.g. employment and earnings assimilation (cf. section 6 below). If we instead compute weighted standardized employment differences by years since migration along the lines of Sarvimäki (2017), we find a well-known assimilation pattern for the average migrant in the 1990–2014 cohorts; see Figure A1. The initial differential is in the order of 70 percentage points, then falls rapidly to 42

[5] This suggests that scarring might be more significant for searching, getting and keeping "real" jobs than for more occasional labour earnings.

[6] See https://www.arbetsformedlingen.se/download/18.546b84d6158f5ee0776d39d3/1484315786121/tabellbilaga-statistik-etableringsuppdraget.pdf, accessed January 16, 2017.

[7] If involuntary job loss is more common among immigrants than among natives, this may mean different kinds of job mobility among immigrants than among natives, probably implying less upward wage mobility among immigrants (see Barth et al., 2012, for an empirical analysis of the Norwegian labour market along such lines). Such an empirical analysis of job stability is, however, beyond the scope of this paper.

percent after five years and 27 percent after ten years. The difference then levels off, but remains at about 20 percentage points also after 20 years. The employment gap is larger for women than for men, especially 5–10 years after immigration.[8]

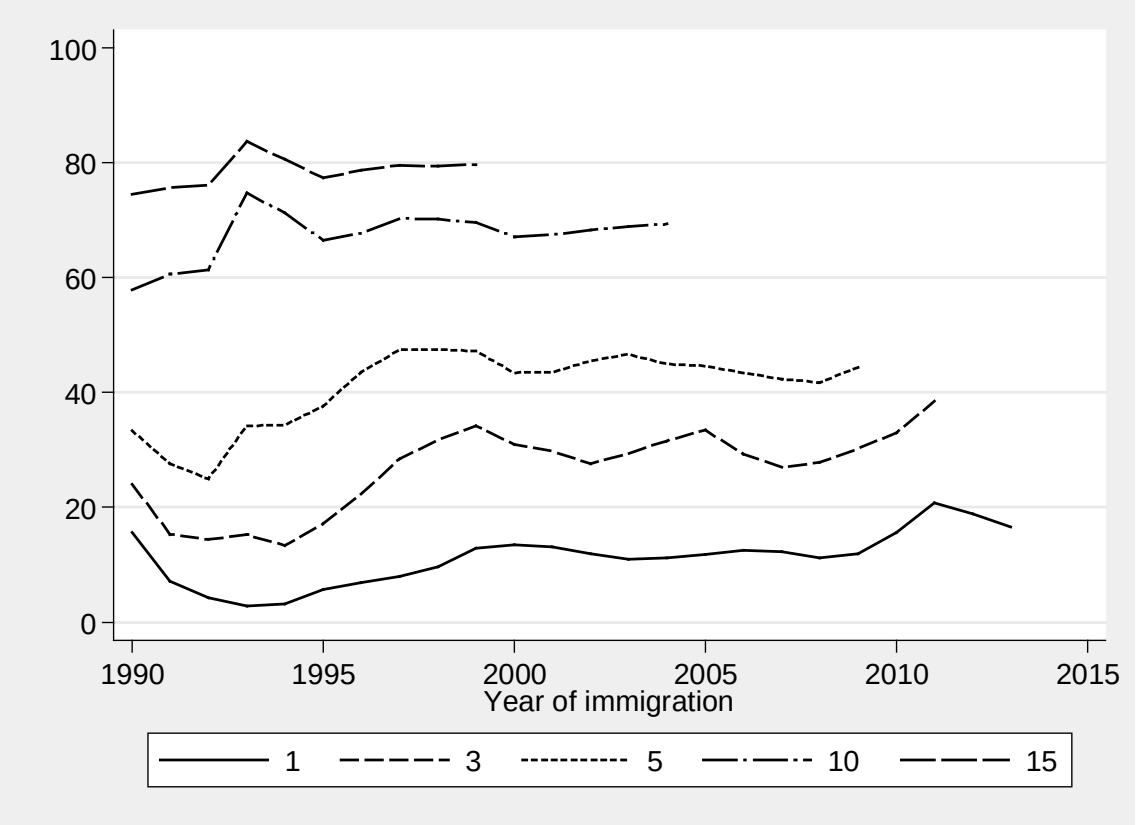

Figure 3: Fraction of immigrants who have entered the labour market at different numbers of years since immigration (1, 3, 5, 10 and 15), by cohort.

4.3 Differences between source countries and groups of immigrants

The averages presented in sections 4.1 and 4.2 hide some differences between different source countries and groups of immigrants. First, country of origin seems to be potentially important both for the time to the first job and to labour market entry. We illustrate this in Figure 4, which compares immigrants from former Yugoslavia with immigrants from Iraq. The differences are striking, both regarding the first contact and, especially, labour market entry with integration running much smoother for immigrants from former Yugoslavia than from Iraq. The choice of these two groups is for illustrative purposes; there are similar differences between other groups and it is a common finding that country of origin in a statistical sense explains much of the

[8] Statistics on employment by years since migration for the 1997–1999 refugee cohorts presented in OECD (2016) fall close to our results. OECD reports an employment rate of 50 (40) percent for refugee men (women) after 5 years, and after 10 years it is somewhat above (at) 60 percent.

differences seen in the labour market among recent migrants (see also the regressions presented below). This suggests that country of origin may be important in the integration process.

Given that many recent refugees come from Syria and Afghanistan, it may be of particular relevance to look at the later cohorts for people from this region. The long-term positive trend for Iraqis is also found for other countries in the Middle East but in the very last years of observation there is a dip e.g. among Syrians. One interpretation could be that the Swedish labour market has probably not become less accessible for these groups of migrants, but cohorts dominated by war refugees may be expected to have a slower transition into employment than their countrymen arriving under different circumstances.

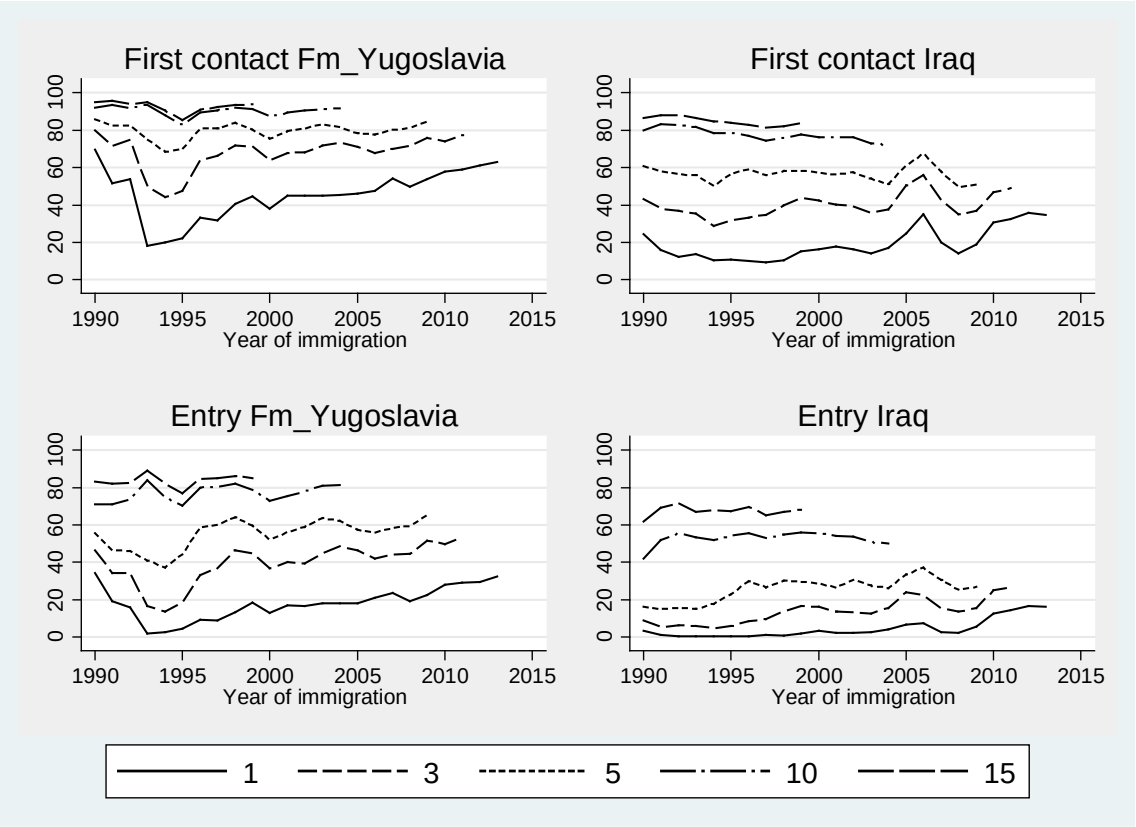

Figure 4: First contacts and entry, immigrants from Iraq and former Yugoslavia at different years since immigration (1, 3, 5, 10 and 15), by cohort.

We have also computed labour market entry patterns for other subgroups of the studied immigrant cohorts. We summarise the results of these computations here. Looking at age at the time of immigration, it seems that young persons (age 20–29) enter the labour market somewhat faster than the average (age 20–50), but the differences are relatively

modest, both regarding first contacts an entry. Gender differences follow an expected pattern: men on average have a shorter time to their first contact with an employer, and also have substantially shorter times to entry. And for most cohorts and time spans since immigration, the share of men who have entered the labour market exceeds the female share by 10-20 percentage points (Figure 5). Finally, labour market entry is faster the higher the level of educational attainment. This is especially true when comparing immigrants with at most compulsory education with those having completed upper secondary education. All in all, this suggests that across-group differences typically seen in the overall workforce are also found for recent migrants.

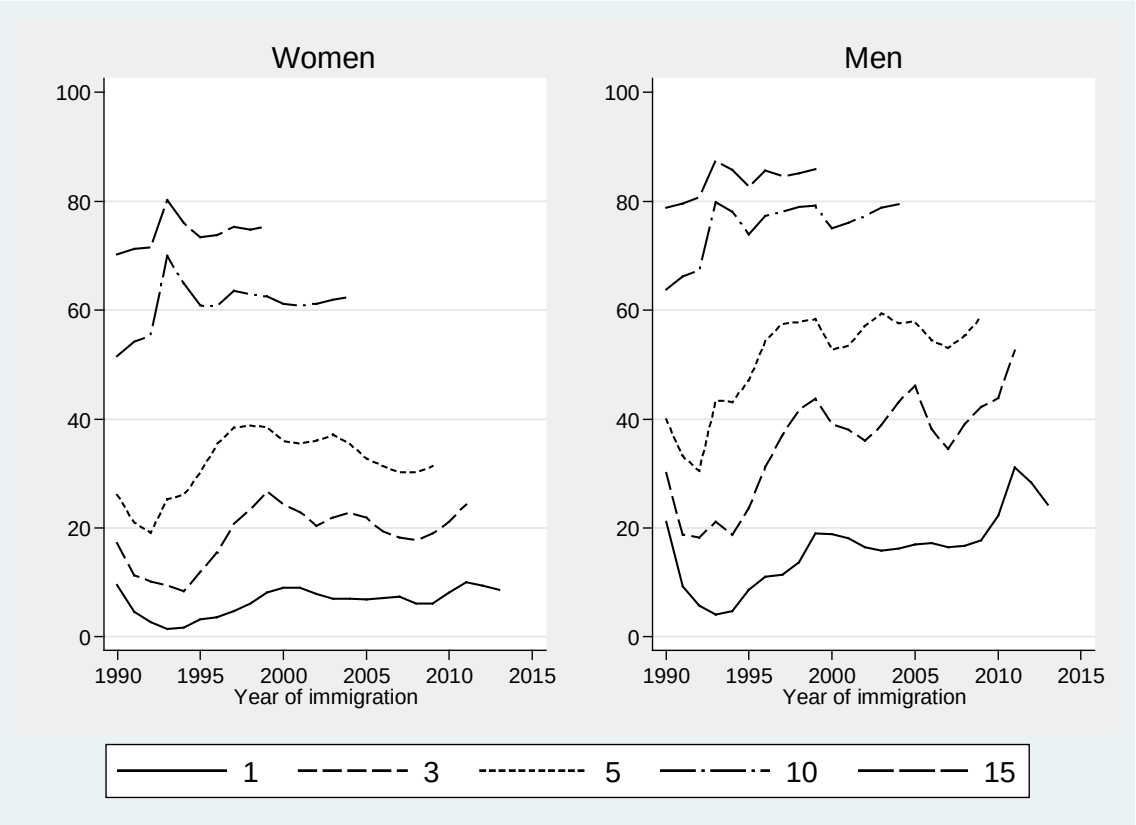

Figure 5: Fraction of immigrants who have entered the labour market at different years since migration, women and men by cohort.

4.4 Durations and employers on the way to entry

Table 1 shows average times to first jobs, labour market entries and durations between first jobs and entry for different cohorts. The left (right) columns present figures for people entering the labour market within 5 (10) years after immigration. The reason for analyzing conditional samples is to get comparability across cohorts. For this reason we cannot display results for cohorts after 2009 (2004).

The average time elapsed between residence permit and the first contact varies over the years. Most clearly it increased sharply during the economic crisis of the 1990s, and then saw a falling trend before levelling out around 2005. For the 5-year sample, the time elapsed between first contact and entry is very stable across cohorts, again signalling that the first contact is an important step toward a more stable position in the labour market. In the 10-year sample all durations become longer as expected, but most of the results are similar.[9]

Table 1 also reports the fraction of cases where the first contact occurs in the same firm as labour market entry. This fraction is quite high and stable across cohorts. In the 5-year sample figures are 60–65 percent; for the 10-year sample where people on average took longer to enter the Swedish labour market, it is still in the order of 50–60 percent. If one counts the number of employers involved from first contact to entry (not in the table), the average is between 3.7 and 4.2 throughout the observation period. The median number of jobs held is 3 for all years.[10] Thus, immigrants do not tend to have very large numbers of jobs on their way into the Swedish labour market, neither in absolute nor relative to other groups. This again confirms the importance of the first employer in providing a way forward.

[9] The average measures give large weights to long durations. The median is less sensitive to extremes. Looking at medians (not reported in Table 1), median durations are much shorter and generally longer for the time to the first job than the time interval between the first job and entry.Typical values for the medians imply that 50 per cent of the immigrants have had some contact within 2 years and that 50 per cent spend at most a year between the first job and labour market entry.

[10] The figures are conditional on entry within 8 years after immigration. Relaxing this assumption gives an average (median) around 5 (4) for the early cohorts (with a long follow-up period). As a comparison, we can notice that Engdahl and Forslund (2016) showed that youth between 20 and 30 years of age on average had roughly 1.5 (not necessarily unique) jobs per year.

Table 1: Average times between immigration, first labour market contact, and labour market entry; fraction where workplaces of first contact and entry coincide

Immigration year	Time (years) between immigration and first contact, given entry within 5 years	Time (years) between immigration and entry, given entry within 5 years	Time (years) between first contact and entry, given entry within 5 years	First contact and entry in same firm, given entry within 5 years (percent)	Time (years) between immigration and first contact, given entry within 10 years	Time (years) between immigration and entry, given entry within 10 years	Time (years) between first contact and entry, given entry within 10 years	First contact and entry in same firm, given entry within 10 years (percent)
1990	0.8	2.1	1.3	65	1.8	4.5	2.7	51
1991	1.5	2.9	1.4	61	2.7	5.6	2.9	45
1992	1.6	3.0	1.4	59	3.0	5.8	2.8	45
1993	2.2	3.5	1.3	63	3.3	5.5	2.2	52
1994	2.2	3.6	1.4	62	3.3	5.5	2.2	52
1995	2.0	3.3	1.4	60	2.8	5.0	2.2	53
1996	1.8	3.1	1.4	59	2.5	4.5	2.1	52
1997	1.7	3.0	1.3	61	2.4	4.4	2.0	55
1998	1.6	2.7	1.2	63	2.3	4.2	2.0	56
1999	1.3	2.5	1.2	65	2.0	4.0	2.0	57
2000	1.3	2.5	1.2	65	2.0	4.1	2.0	57
2001	1.2	2.5	1.2	65	2.0	4.1	2.1	56
2002	1.4	2.7	1.3	63	2.0	4.2	2.2	55
2003	1.3	2.7	1.4	60	2.0	4.2	2.2	53
2004	1.2	2.5	1.3	61	1.9	4.1	2.2	52
2005	1.1	2.4	1.3	60				
2006	1.1	2.5	1.4	59				
2007	1.1	2.6	1.4	60				
2008	1.1	2.5	1.4	61				
2009	1.2	2.5	1.3	62				

Note: For comparability over time, we censor the table. Our last observation is for 2014; hence we censor at 2010 and 2005.

4.5 Immigrants in the earnings distribution

A common way to measure economic integration of a group is to compare their wages or earnings to other groups (typically natives or the whole population). To avoid comparison problems due to possible changes in earnings inequality in the total distribution of earnings over time, we instead look at the position of different cohorts of immigrants in the percentile ranked earnings distributions from 1990 until 2014. We present evidence in Figure 6 on the earnings distribution conditional on having earnings as well as distributions including zero earners (jobless persons). The former is more informative for positions in the wage distribution, while the latter is more informative of income (in)equality between immigrants and natives. Both measures are, of course, related to economic integration.

The left hand-side graph of Figure 6 plots the development of the percentile ranked labour income of the average immigrant with positive income for the immigration cohorts arriving 1990, 1995, 2000, and 2010. There is no clear trend over time, although the 1990 cohort is consistently doing worse than the other cohorts. In this sense integration has been fairly similar since the mid 1990s.

The right hand-side graph of Figure 6 shows the development of the percentile ranked labour income of the average immigrant, including persons with zero incomes, for the same cohorts. Once again, there is no clear trend over time, and here also the 1990 cohort deviates from the others. In fact, the distance to the other cohorts is even larger when we include also the non-employed (with zero income). Previous research suggests that a contributing factor to the fate of the 1990 cohort is that the severe crisis in the Swedish labour market in the 1990s hurt the immigrants both in the short and in the longer run (see Åslund and Rooth, 2007).

We also see that after a rather long period (almost 20 years), the percentile ranked average immigrant labour income only reaches the 45th percentile in the income distribution of the Swedish working age population. Immigrants thus tend to end up in low-paying jobs, and are on average found in even lower income percentiles when we include the non-employed. Hence, in addition to earning relatively little while in employment, these migrants also hold jobs to a lesser extent than native Swedes. In other words, the earnings prospects of previous immigrant cohorts do not reach parity with the overall workforce. This is especially clear considering the fact that we have not adjusted for age profiles in this description. Even for those 20–29 at arrival, who would be expected to have a positive age-earnings profile for most of the follow-up period, the patterns are only marginally more positive than for the overall sample.[11]

[11] Notice that the slope of the percentile ranked income curves for the immigrants will reflect possible impacts both of age (experience) and years since migration. Most likely this results in a steeper profile than if an age correction was done. However, such a correction relies on potentially restrictive assumptions.

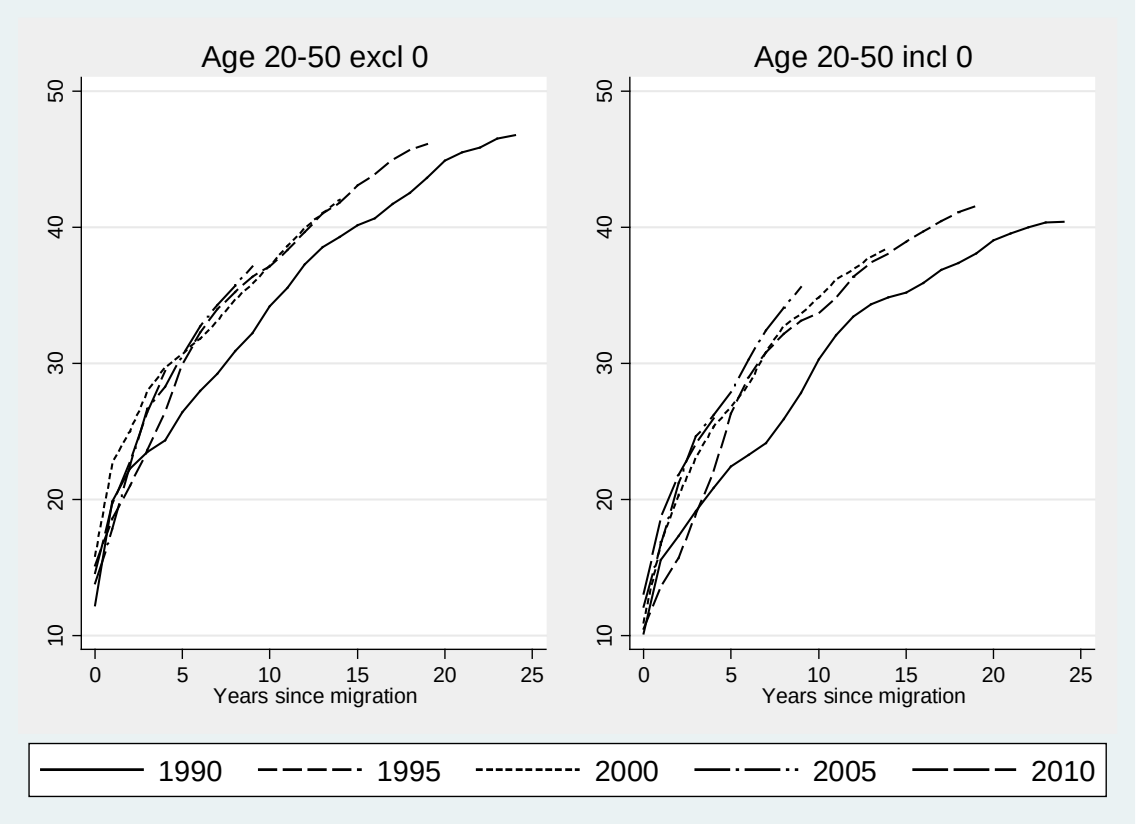

Figure 6: Average percentile ranked earnings (excluding and including those with zero earnings) by year of immigration and time spent in Sweden (ysm).

4.6 Multivariate relationships between individual characteristics and labour market outcomes

In the figures hitherto presented we have typically shown bivariate relationships between different outcomes and different background variables. However, the relationship between two variables (say gender and time to labour market entry) may reflect other factors than only gender, say education. In Table 2, we report the results of multivariate OLS regressions where we regress a number of labour market related outcomes on a number of background characteristics of immigrants. Note that these estimates are for a cross-section of the baseline sample observed in 2014, conditional on year of immigration (and thus time spent in Sweden) and age at arrival. The purpose of this table is to illustrate differences in outcomes between migrants with different characteristics.

Table 2: Multivariate relationships between individual characteristics and labour market outcomes, OLS regressions.

	Earnings 2014, SEK	Earnings > 1 price basic amount 2014	Social assist. take-up 2014	Social assist. 2014, SEK 100	Empl. Nov. 2014	Days reg. at the PES 2014	In PES register at least 10 days 2014
Woman	-57 809***	-.15***	.06***	8. 00***	-.14***	-2.04***	.02***
	(510)	(.001)	(.001)	(0.55)	(.001)	(0.43)	(.001)
South America	27 881***	.09***	-.09***	-28.03***	.08***	-25.49***	-.06***
	(1 426)	(.00)	(.003)	(1.54)	(.004)	(1.20)	(.004)
Horn of Africa	-47437***	-.13***	.26***	81.84***	-.14***	83.63***	.24***
	(982)	(.003)	(.002)	(1.06)	(.003)	(0.83)	(.003)
Arabic peninsula, North Africa	-41 290***	-.10***	.08***	20.74***	-.10***	57.70***	.16***
	(895)	(.003)	(.002)	(0.97)	(.003)	(0.76)	(.002)
South and central Africa	-3 387***	.02***	.02***	3.07	.01***	11.12***	.06***
	(1 286)	(.004)	(.003)	(1.39)	(.004)	(1.09)	(.003)
Iran	-2 739**	-.01*	.01	8.02***	-.01***	12.93***	.04***
	(1 162)	(.003)	(.003)	(1.26)	(.003)	(0.98)	(.003)
Iraq	-51 591***	-.15***	.17***	64.94***	-.15***	49.82***	.16***
	(833)	(.002)	(.002)	(0.90)	(.002)	(0.70)	(.003)
Turkey	-22 313***	-.01*	-.02***	-8.71***	-.01***	-.87	.01**
	(1 352)	(.004)	(.003)	(1.46)	(.004)	(1.14)	(.004)
South east Asia	-5 817***	.08***	-.10	-29.18***	.08***	-13.20***	-.03***
	(1 034)	(.003)	(.002)	(1.12)	(.003)	(0.87)	(.003)
Missing education info.	50 566***	.12***	-.16***	-0.89	.12***	-252.16***	-.74***
	(3 066)	(.009)	(.007)	(3.31)	(.009)	(2.59)	(.008)
Upper secondary education	7 275***	.09***	-.06***	4.39	.07***	39.91***	-.06***
	(2 513)	(.007)	(.006)	(2.72)	(.007)	(2.12)	(.007)
Tertiary education	16 936***	.05***	-.08***	3.35	.04***	76.15***	-.17***
	(2 147)	(.006)	(.005)	(2.32)	(.006)	(1.81)	(.006)
Mean dep. Variable	164 731	.47	.37	177.97	.47	139.09	.45
N	445 637	445 637	445 637	445 637	445 637	445 637	445 637

Notes: Reference categories are men, Former Yugoslavia (some categories excluded from the table), and compulsory education at time for immigration. Significance levels: * 10 %; ** 5 %; *** 1 %. Dummies for calendar year of immigration and age group at immigration also included in estimated models; estimates are not shown here. All covariates are measured at time of immigration.

Women have worse outcomes than men for all outcomes other than days registered at the PES. We have already shown that there are large differences in outcomes between immigrants from different regions. Our regressions show that this is not only driven by differences in education between migrants from different regions as witnessed by fairly large differences in the estimated associations between region dummies and the different outcomes also when controlling for differences in formal education. Educational attainment at arrival to Sweden is not well measured, and it is not entirely clear what the category "missing information" contains. It may be that people who enter the labour market smoothly have lower probabilities to have their education recorded; PES information is e.g. used to update register information on education.[12] Hence,

[12] At least 7.7 % in our sample have a higher registered level of educational attainment in year t+10 than in year t+2. 15.5 % have missing information in year t+2 but not in t+10. Whether this reflects that they have taken formal

comparisons between this category and the other levels of educational attainment are hard to interpret. Even though there may be measurement error in the education variable, most of estimates are in line with our expectations, meaning that having gone through only compulsory school is associated with worse outcomes than are higher levels of educational attainment.

5 Entry: Where?

5.1 Industries for first contacts and labour market entry

Persons who have decided to move to Sweden constitute a heterogeneous group and the composition in terms of observed characteristics changes over time. Hence, we should expect that the mix of sectors and jobs where immigrants enter into the Swedish labour market may have changed for reasons related to changes over time in the supply of different skills of immigrants. In addition, there may have been structural changes in the composition of jobs generating changes in skills demanded over time. All in all, it is not clear what we should expect regarding the industry composition of immigrant employment and its changes over time.

Figure 7 shows the distributions of industries for first contacts and entry jobs, by calendar year of contact/entry (regardless of immigrant cohort). Industries are in the respective graphs ordered on their total share for the four observation years. Business services, hotels and restaurants, manufacturing and health care are the largest suppliers of first contacts as well as entry jobs for immigrants. But looking at the bars within each category, we see some rather dramatic changes over time, where manufacturing has become substantially less important and service industries instead have grown in importance. This partly reflects changes in the overall distribution of employment across industries, but the development is much more pronounced for the inflow of workers than for the stock.

In Table 3 we highlight the difference between men and women in terms of sectors for the first jobs. We see that women are more represented in research and education and, especially, in health care. Men instead more often find their first jobs in manufacturing, hotels and restaurants, and transportation and storage, compared to

Swedish education or if it reflects that previously acquired education has been registered cannot be determined with the register information used in this study.

women. To some degree, these differences of course reflect overall gender segregation in the labour market. For both genders, business services constitute an important channel for the first contact. This category entails a broad range of activities requiring different levels of qualifications. A look within the category reveals that cleaning services is the by far biggest sub-category, making up 36 (48) percent of the total first contacts (entries) observed in the 1990-2014 period. All other sub-categories are much smaller; the runner-ups (direct commercial and staffing services) constitute about 5 percent of the first jobs and entries respectively. However, among the top categories we also find high-skill industries such as computer programming and other IT activities.

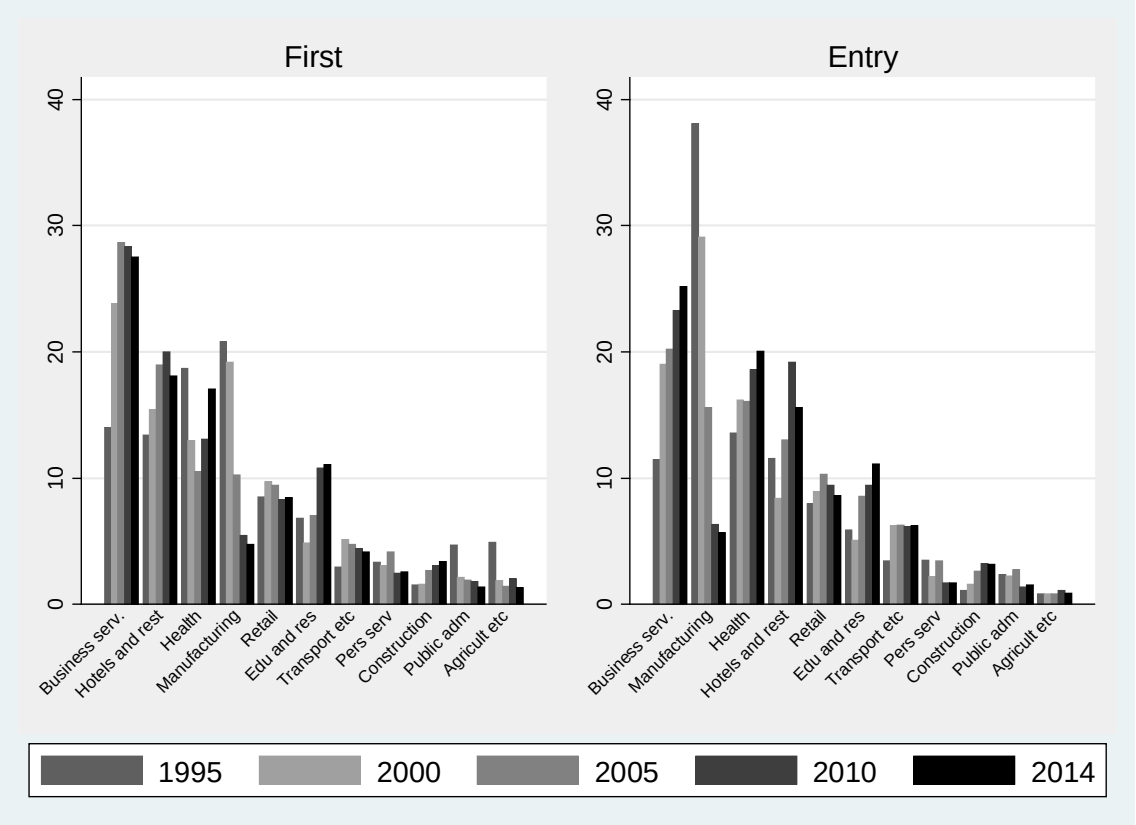

Figure 7 Distributions (per cent) of industries for first contacts and entry jobs, by calendar year of contact/entry.

Notes: Industries with less than 1 percent of entries excluded (Mining and Electricity).

Table 3: Distribution (per cent) of industries for entry jobs of immigrants 20–50 years old at immigration year, women and men.

Industry	Women average 1990–2014	Men average 1990–2014	Difference
Health care	24.4	6.9	17.5
Manufacturing	10.0	20.2	-10.2
Transportation and storage	2.0	8.9	-6.8
Research and education	10.8	4.4	6.4
Hotels and restaurants	8.2	15.2	-7.0
Wholesale and retail trade	6.2	9.2	-3.0
Construction	0.7	3.5	-2.8
Missing info	13.9	8.4	5.5
Business services	17.7	18.1	-0.4
Public administration	2.6	1.4	1.2
Agriculture, forestry and fishing	1.2	1.5	-0.3
Personal and cultural services	2.3	2.2	-0.0

5.2 Firm sizes and earnings levels

We now turn to briefly characterize the firms where immigrants find their first jobs. Figure 8 below shows the size distributions for the overall (i.e. all workers), first contacts, and entry jobs firms, in the years 2000 and 2014 respectively. Apart from single-person firms, immigrant first contact/entry jobs are disproportionately often found in smaller firms, with less than 20 employees. This pattern has become more accentuated over time, which is in line with e.g. hotels and restaurants becoming a more common port of entry to the Swedish labour market.[13]

[13] A 3000+ category has been omitted for visibility reasons. The category encompasses about 25 percent of the employed and includes a lot of local/regional public sector employment. It decreases its share somewhat over time.

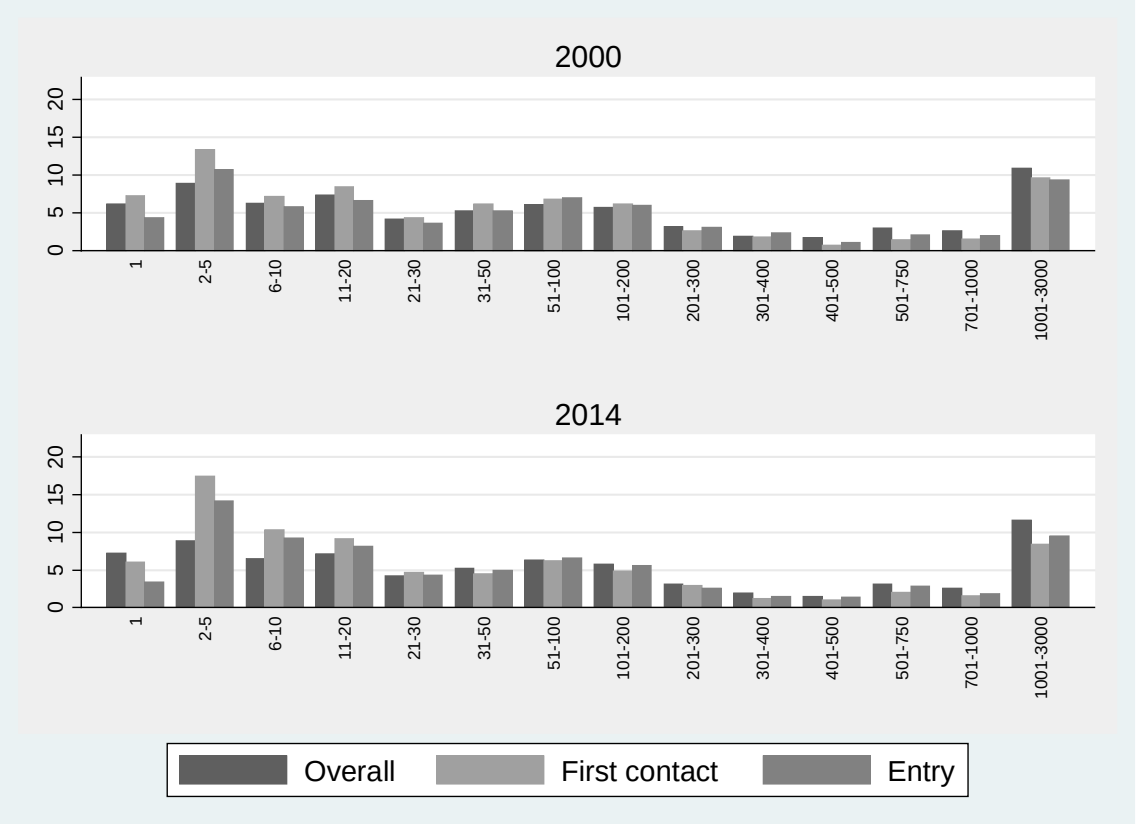

Figure 8: Employment distribution over firm sizes 2000 and 2014, total and for immigrants' first jobs.

Figure 9 displays cumulative distributions of the worker-weighted firm average earnings distribution for first contacts made in different years. For example, the graph shows that of the contacts made in 2005 and 2010, more than 50 percent were in firms below the 30th percentile of average firm earnings encountered by the overall workforce. In other words, these first jobs are often found in low-earner firms. This pattern has also been accentuated in later years; the later cohorts are above earlier ones at the lower part of the distribution. The mirror image is of course an underrepresentation in the upper part of the distribution: around 10 percent of the first contacts are with firms above the 70th percentile of the earnings distribution

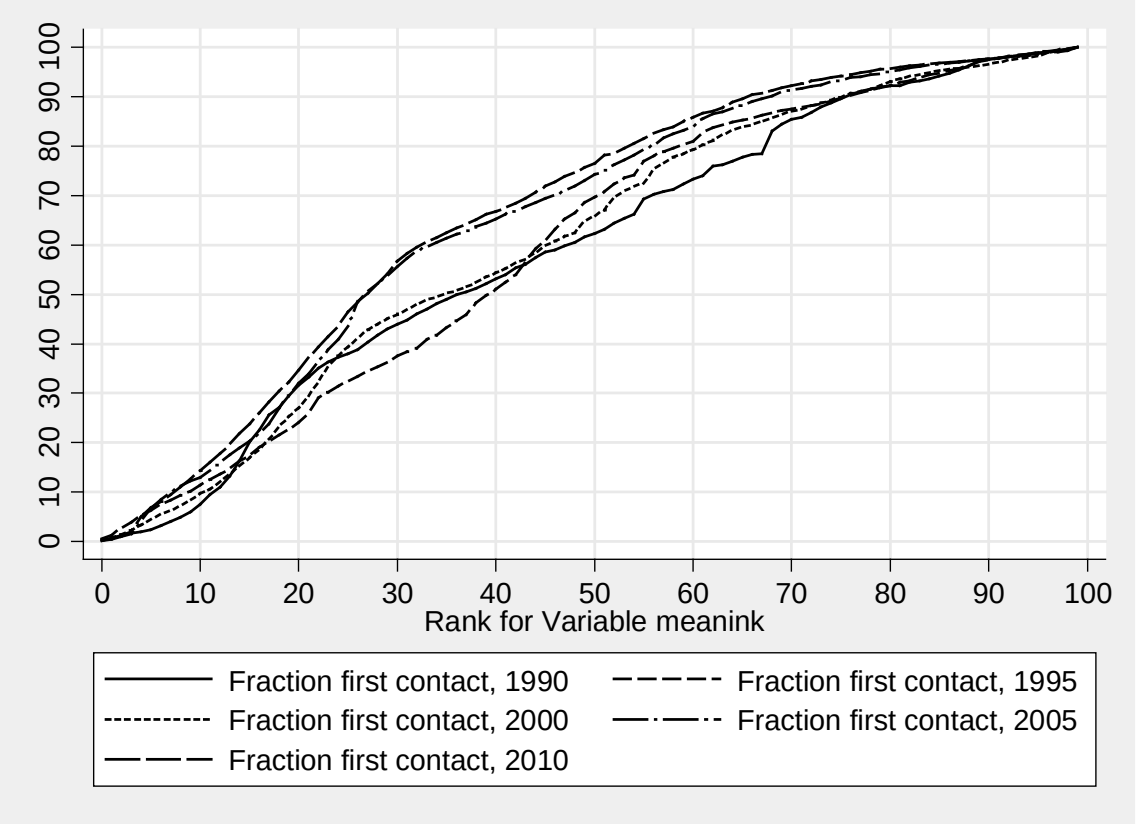

Figure 9 Cumulative distributions of first contacts in (worker-weighted) distribution of average firm earnings.

6 Outcomes in the long and very long run

6.1 Average outcomes during the first decade

So far, our analysis has to some extent focused on the first contacts and the process to a more stable position in the Swedish labour market. In this section we take a different perspective and study the cumulated position of migrants during the first years in Sweden. The four panels of Figure 10 documents time spent registered at the PES, social assistance receipt, time in NEET (Neither Employment Education or Training), and average earnings ranks in different cohorts. The lines show values for different percentiles of the outcome distribution for the first ten years in Sweden.

In the PES panel, we see that the median immigrant arriving in the early 1990s spent close to 40 percent of his/her first ten years in Sweden as registered with the PES. The median then falls rather substantially over cohorts, to a level under 20 percent. Higher up in the distribution there is a U-shaped pattern, where the decline is followed by an

increase in the later cohorts included: 10 percent of those arriving in the early 2000s spent at least 60 percent of their days as registered at the PES.

Social assistance and NEET exhibit similar patterns in the sense that there is a downward trend across cohorts for a large part of the overall distribution (at least for percentiles 25–75). This is positive in the sense that at least during this observation window, inactivity and welfare dependence during the first years in Sweden appears to have decreased over time. Of course, a less favourable interpretation is possible: also in the later cohorts 25 (50) percent spend at least 6 (3) out of 10 years in NEET. Relative to average NEET and welfare dependence rates in the overall population, the figures are high (as expected).

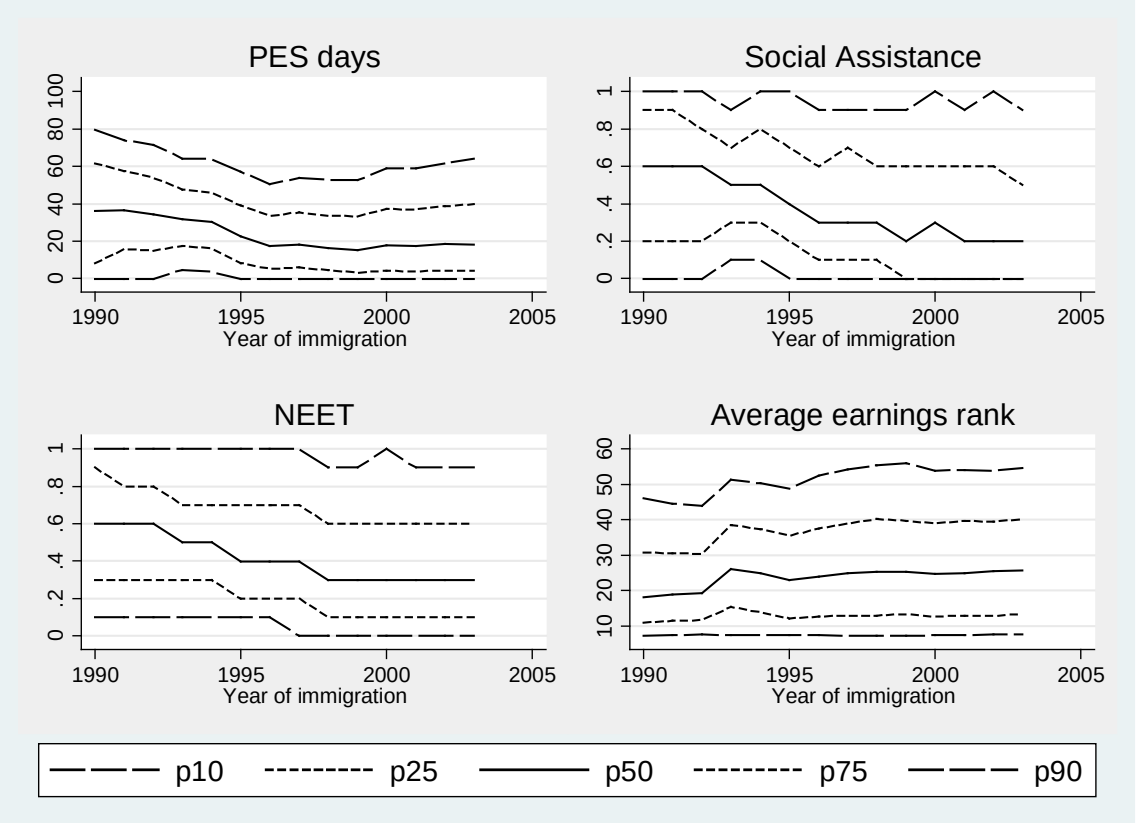

Figure 10 Distribution of outcomes in the first 10 years.

Note: Add definitions of variables.

The earnings statistics confirm the impression that the included groups of migrants are concentrated to the lower part of the distribution. There is a bit of a positive trend, but the median outcome for post-1995 cohorts is rather stabile just above the 25th percentile of the of the overall earnings distribution. The top-10-percent earners among migrants fall slightly over the median in the overall distribution. Average earnings during this 10-

year period of course reflect the entry process described above; many people spend a long time before the first contact with the labour market. If one instead considers the years 11-15 after immigration (not in the figure), the levels are higher. The median individual is found around the 40th percentile, and the top-10 percent have earnings above the 70th percentile.

There are also in these comparisons some notable gender differences. As expected from the entry description above, males are more often found higher up in the earnings distribution. The difference in the median is around 10 percentiles, and even higher for the earners at the 75th and 90th percentile. PES days also differ by gender, with more days on average for men (arguably reflecting higher levels of labour force participation). In line with this interpretation, NEET rates are higher among women.

6.2 Long-term outcomes for selected refugee/migrant groups

This section follows selected country-of-origin-period-of-arrival groups of migrants coming to Sweden before the mid 1990s. This serves two purposes: receiving a very long-term follow-up period and narrowing the sample to cases where unrest-triggered refugee-related migration strongly dominated the inflow. These criteria in combination with the requirement of having a large enough number of individuals in each group has led us to follow immigrant cohorts from Chile (1973–79), Vietnam (1979–81), Poland (1982–83), Iran (1984–89), the Horn of Africa (1987–94), and Bosnia and Herzegovina (1993–94); see Table A2 for details.

We present results for adjusted differences in employment and social assistance receipt and for adjusted relative earnings. This means that we compare the outcomes of the respective migrant groups to those of natives that are comparable in age and gender, and observed in the same calendar year. In other words, general effects of the business cycle, age profiles in economic outcomes or differences in gender composition do not affect the patterns.

Figure 11 displays adjusted immigrant-native employment differences by number of years since immigration for the respective refugee groups. The left-hand graph confirms the stability of the long-term outcomes in the sense that all groups reach a somewhat similar level and then remain there. There is no indication of a gradual deterioration

relative to same-aged natives.[14] The right-hand side graph limits the years-since-migration window to make clearer the long-term differences across groups. All groups exhibit a substantial disadvantage relative to natives, but there are also significant differences across migrant groups. Migrants from Bosnia and Herzegovina are especially rapid climbers, reaching their long-term level of relative employment in about 5 years after immigration. For migrants from Iran and the Horn of Africa we see that there is a gradual improvement over a (surprisingly) long period. It should be noted that the results are at a group level and do not necessarily reflect the expected development for a representative individual. Differences over time may be due to composition effects, e.g. related to selective out-migration (the less successful leave) or differences in age at migration (over time, each group will increasingly consist of people who were younger at arrival).[15]

Figure 12 conveys a similar message for relative earnings, although the patterns appear somewhat messy. In the long-term, the migrant groups included in this sample have annual earnings in the order of 65–80 percent to comparable natives. Note, though, that "comparable" here does not include education, which varies across groups (see Table A2).

[14] The drop among Chilean migrants at the very end of the observation period is due to very few remaining observations.
[15] Limiting the sample to those age 20–30 at immigration (as an attempt to minimize composition issues) gives the same broad picture as for the baseline 20–50 sample, even though outcomes are on average better.

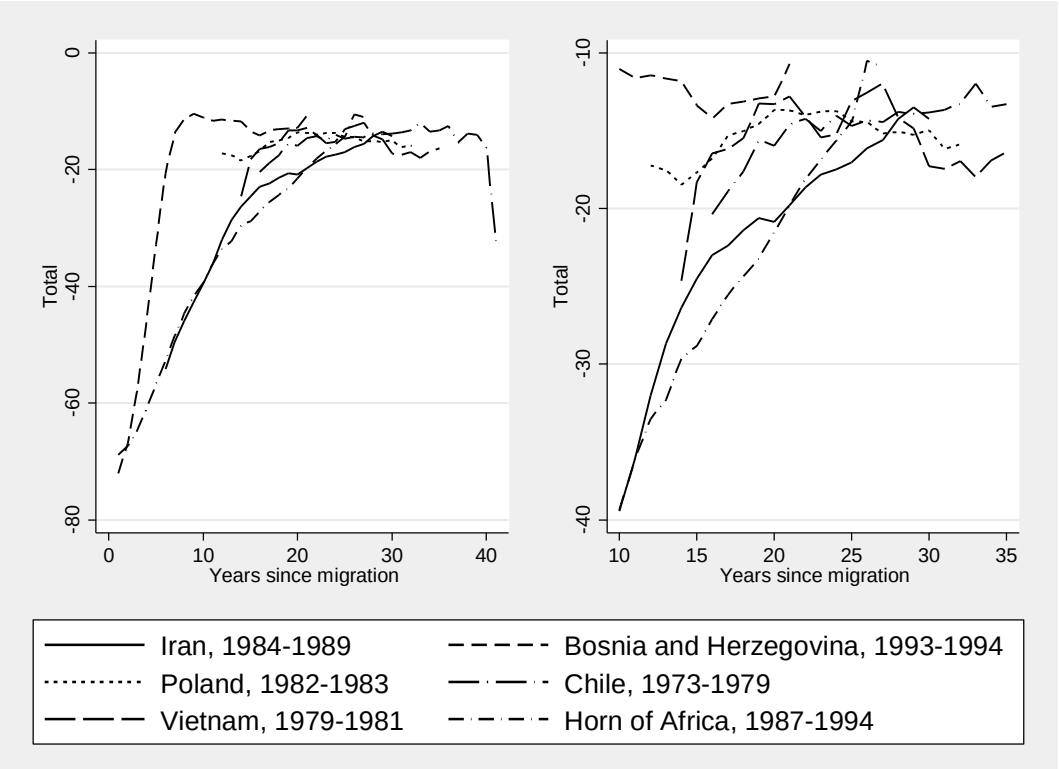

Figure 11: Adjusted employment differentials, immigrants from selected source regions and cohorts by years since immigration

Note: Age 20-50 at immigration, censored at age 65. The differences are adjusted by age (20–29; 30–49; 50–64), gender and calendar year.

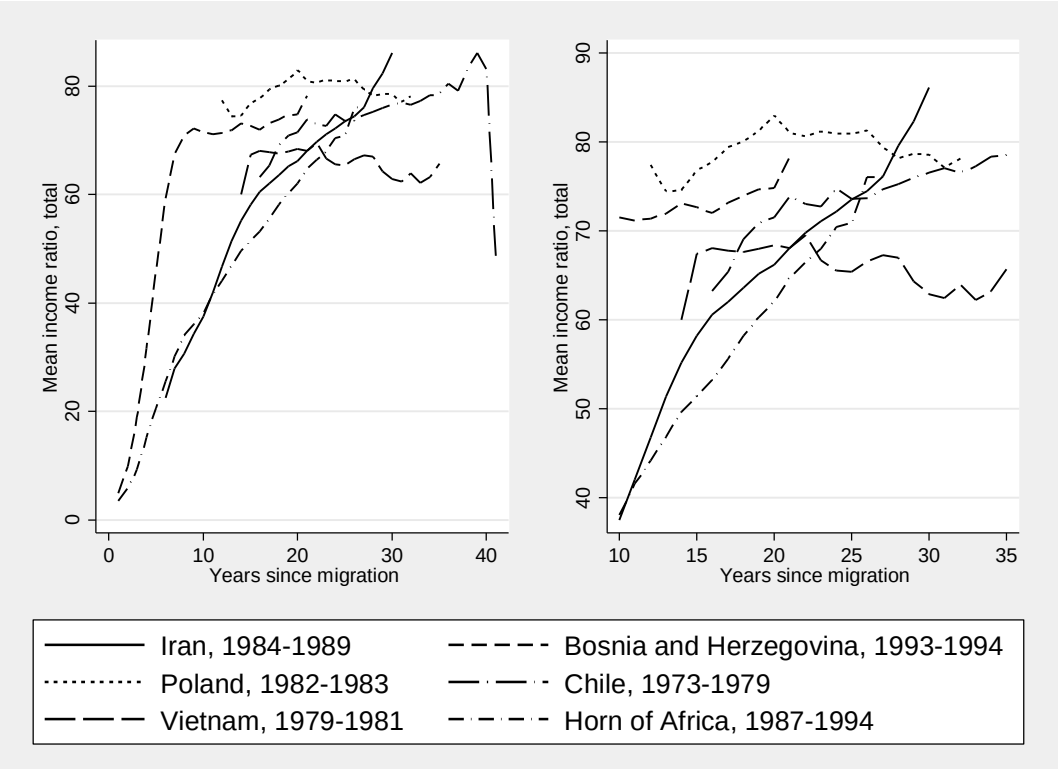

Figure 12: Adjusted relative earnings, immigrants from selected source regions and cohorts by years since immigration

Note: Age 20-50 at immigration, censored at age 65. The ratios are adjusted by age (20–29; 30–49; 50–64),, gender and calendar year.

Even though social assistance (at least) historically has been the only available part of the security net for many recently arrived immigrants, it can in a long-term perspective be considered an indicator of poverty or poor position. Most often, households that cannot rely on friends or relatives get income support in the form of social assistance from the municipalities. Figure 13 plots adjusted differences in social assistance take-up by years since immigration for immigrants from the regions we study. Immigrant households from Iran, the Horn of Africa and from Bosnia and Herzegovina all start their periods in Sweden with very high social assistance receipt. Relatively rapidly the numbers start falling, but also after 15–20 years there are substantial differences to native counterparts for some groups, most clearly so for immigrants from the Horn of Africa and Vietnam. In the very long run, however, take-up differences of all groups approach levels under 5 per cent.

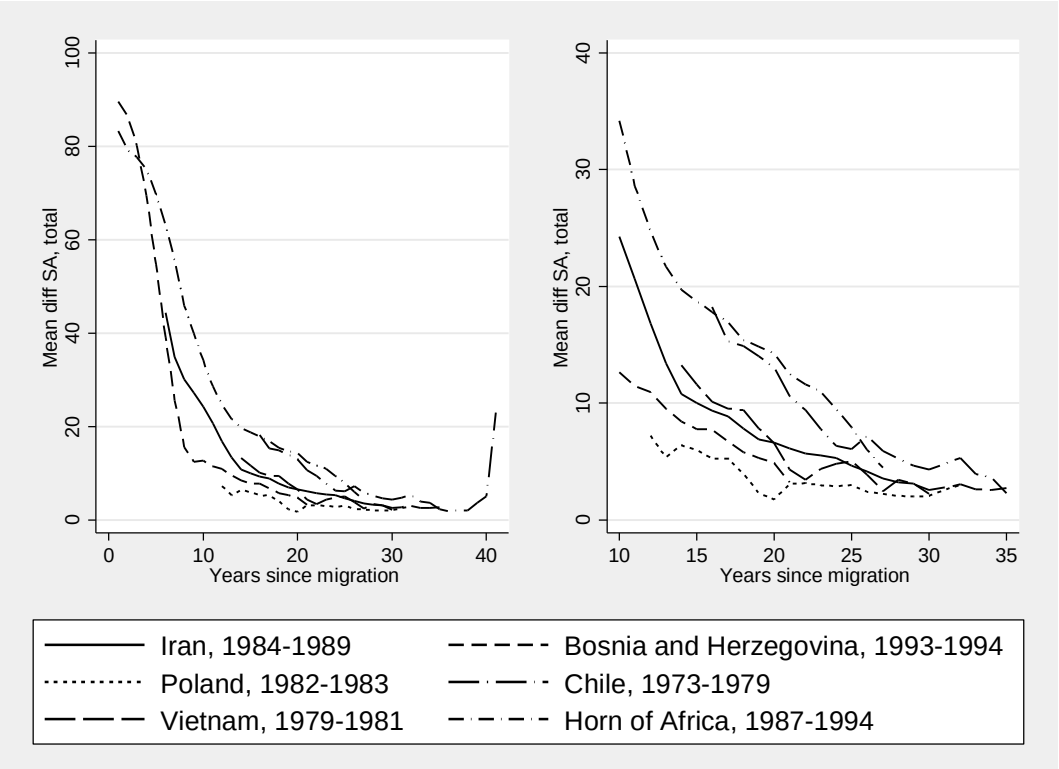

Figure 13 Adjusted differentials in SA receipt, immigrants from selected source regions and cohorts by years since immigration.

Note: Age 20-50 at immigration, censored at age 65. The differences are adjusted by age (20–29; 30–49; 50–64), gender and calendar year.

The long-term patterns for employment, social assistance and earnings hint on issues on labour force participation, retirement and use of social insurance that are important but beyond the scope of this paper. The negative trend in employment can partly be due to early retirement, but it is noteworthy that for some groups employment appears to peak after a relatively short time in Sweden. Given that social assistance receipt drops sharply and earnings continue to be relatively low, it would in future work be interesting to study if income is supported through other forms of benefits or pensions.

7 Policies, institutions and other factors of importance

Sweden has for a long time had policies concerning the reception and labour market integration of refugees. Some measures are targeted only at this group, whereas others can be seen as parts of general policies for the unemployed.[16] Despite these efforts, outcomes remain relatively poor as described and discussed above. But the specific

[16] See e.g. OECD (2016) for an overview.

knowledge on which factors and policies improve the chances of labour market integration remains limited also in an international perspective; see e.g. (Butschek and Walter 2013; Rinne 2012; Kogan 2016; European Parliament 2016; Martín et al 2016). Below we first mention central recent and ongoing policy efforts and then turn to discuss possible factors affecting the labour market prospects of recent migrants.

7.1 What happens and what is done?

Since December, 2010, when the responsibility of integration policies was moved from the municipalities to the PES, the hub of integration policies in Sweden is the two-year *introduction programme* at the PES for new recipients of residence permits. The introduction programme has been studied by Andersson Joona et al. (2016), finding a positive impact on employment and earnings. It may though be premature to draw firm conclusions regarding the labour market effects of this rather pervasive reform. Reports from e.g. the National Audit Office (Riksrevisionen, 2014) have documented problems in the implementation of certain aspects of the reform, and relatively slow outflows to work (which, however, has been the case for a long time, as seen above).

The large influx of asylum seekers has also triggered a number of new policies. One such policy is so called *fast tracks* to employment for newly arrived immigrants. These fast tracks aim at transferring refugees with relevant skills and experiences to occupations where employers face difficulties in finding the right competence. Information on the actual content of the different fast tracks[17] is scarce, and as yet very few refugees have actually entered them. What seems to be clear is that one fundamental ingredient is validation, and it is also clearly stated that the exact procedures are supposed to be specific to each track and that the social partners (employers and unions) should play an active role.

7.2 Effects of policies[18]

Policies for the integration of immigrants potentially work on a number of margins. One way to classify these margins is to distinguish between policies affecting supply, demand and matching, respectively. It goes without saying that policies often work

[17] Some of the existing fast tracks are for engineers with a number of different specialties, teachers, doctors, pharmacists and dentists.
[18] Much of the material presented here draws on the survey in Forslund and Åslund (2016).

through more than one margin, and that any classification scheme is bound to be somewhat arbitrary.

7.2.1 Labour supply

There are many potential policy margins to affect labour supply. *Validation* is an important tool to identify skills and lack of skills. Unfortunately, there are no studies available on the effects of the validation efforts that have been undertaken in Sweden. Different ways of *competence upgrading* are important for labour supply. The types of upgrading vary by the age and background of immigrants.

It is well known that a completed upper secondary education is important for young persons' labour market entry (see, for example, Engdahl and Forslund, 2016). Hence, one important policy margin is measures to *promote schooling success* among young immigrants. Results in Engdahl and Forslund (2016) suggest that this works reasonably well for youth entering Sweden at ages below the start of upper secondary education, whereas youth older than 16 years at arrival rarely finish upper secondary school (also counting adult education).

But education and training also concerns skill acquisition among older immigrants (probably preferably following validation). Appropriate skill acquisition varies between individuals. However, a common need for most is to learn the Swedish language.

Swedish for immigrants (sfi) has been a part of Swedish integration policies for a long time. There is ample evidence that mastering the host country's language contributes to a "better" job offer distribution (see Dustmann and Glitz 2011 for an overview). However, research on the effects of sfi is very limited. To be effective, sfi should be something immigrants participate in and which gives participants a good language skills. Historically, a large fraction of immigrants has not participated (Kennerberg and Sibbmark, 2005), and a significant fraction of the participants has not completed the programme (Statskontoret, 2009). Evaluations by the National Audit Office (Riksrevisionen, 2008) and Kennerberg and Åslund (2010) give no clear-cut conclusions, but possibly suggest that refugee immigrants have benefitted from the programme.

Vocational labour market training programmes organized by the PES (AMU) and *adult vocational training programmes* (Yrkesvux) as well as *adult education* organised

by the municipalities (Komvux) are three possible ways to upgrade the skills of immigrants.

Komvux has primarily been evaluated in connection with the so called knowledge lift in the 1990s. The results are ambiguous, and effects have not been estimated for immigrants separately. Yrkesvux has never been evaluated but Statskontoret (2012) showed that the Yrkesvux courses often are very similar to AMU courses. Evaluations of AMU may therefore be informative about the effects of Yrkesvux as well. de Luna et al. (2008) estimated the effects of AMU for a number of groups of participants, one of these groups being non-Nordic immigrants. The estimated effects for this group were positive and large; effects for non-Nordic immigrants were comparable with effects for persons with low education and larger than the estimated effects for any other group.

Work practice arranged by the PES could be another way to acquire skills or valuable networks to facilitate integration. The results in Forslund et al. (2013), however, indicate that the results for non-Nordic immigrants are about average and significantly inferior to vocational training programmes for the group.

There is only limited knowledge about the effects of *tertiary education*, including tertiary vocational education, on immigrants' labour market outcomes. Rooth and Åslund (2006) found that immigrants have returns to education taken in the source country and (especially) taken in Sweden. Katz and Österberg (2013) estimated lower returns to higher education for immigrants arriving to Sweden as kids compared to the returns for native Swedes. Lind and Westerberg (2015) found that immigrants experienced greater earnings gains after tertiary vocational education than other groups.

But adequate skills are not enough. There must be *proper incentives* for job search. There is a vast literature on incentive problems created by various social security systems, designed to replace income losses or alleviate poverty.[19] This may be especially important for immigrants: Andrén and Andrén (2013) found that state dependence (so that benefit reception creates future benefit reception) is higher among immigrants than among native Swedes.

A number of reforms designed to create incentives for labour supply have been undertaken in tax systems, unemployment insurance, sickness insurance and social assistance. However, the design of the reforms has made them difficult to evaluate and

[19] More generally, all systems that affect the net gains from working compared to non-working can be expected to have an impact on labour supply. The design of income tax systems is an obvious example.

there is basically no well identified evidence on how these reforms have affected the labour supply of immigrants. Nevertheless, most reforms have been designed to increase the gains from working most for low-income earners, so we would expect a positive impact on the labour supply of recently arrived immigrants. We do not, however, have any good ground for an opinion about the size of any such effects.

As part of the introduction programme, *introduction guides* were introduced in December 2010. The system entailed that optional activities could be offered newly arrived immigrants in the introduction programme. The aim was that the guide should give the newly arrived immigrants support to facilitate integration. The system does not seem to have worked well (Riksrevisionen, 2014; Sibbmark et al 2016) and has been abandoned.

7.2.2 The demand for immigrant labour

A standard explanation to the gradual increase in earnings and employment probabilities seen among immigrants to many countries is that the initial lack of country-specific human capital is removed through experience and learning in the host country. Human capital in a broad sense can be accumulated and will typically increase with the duration of the stay. Investments can be formal (e.g. acquiring supplementary education or language training) or more informal capturing softer factors (social codes, style of speech etc). But since this process takes time, there is an argument for measures trying to increase effective demand through lower hiring costs for the first years if one believes that productivity for a sufficiently large fraction of the group is so low that it falls short of existing minimum wages.

One policy option to level the playing field is to use *wage subsidies*. Targeted wage subsidies are, according to available evaluations, normally effective (Calmfors et al., 2004; Card et al., 2010; Forslund and Vikström, 2011; Liljeberg et al., 2012; Sjögren and Vikström, 2015). However, a very generous subsidy programme targeted at newly arrived immigrants has had a very low take-up, so using wage subsidies targeted at immigrants has not proved to be effective in this sense. It can be considered a riddle why employers have not been more interested in hiring people at, say, 20–40 percent of the regular wage. Explanations proposed in previous work include complicated systems and supplementary requirements, and an unwillingness to approach and depend on authorities (Riksrevisionen, 2015). But still, considering the cost reductions involved,

there seems to be room also for other explanations, such as poor matching, lack of contacts and discrimination (see discussion below).

An alternative but closely related route is of course to (somehow) lower regular wages. In a system like the Swedish one with collectively bargained entry and minimum wages, this is not a direct policy tool. Nevertheless, substantial efforts have been made to find solutions targeting e.g. recent migrants. Even though the basic mechanisms should be similar as for wage subsidies, unions appear more concerned that lower wages for some groups would create a downward pressure on the overall wage structure. There is some evidence that effects are spread to workers not directly affected (see e.g. Forslund et al., 2014; David et al. 2016; Lopresti and Mumford 2016), but it is hard to tell how big the effects of e.g. lower wages for migrants with less than three years of residence would be.

Given that there are concerns regarding negative consequences, it is highly relevant to quantify the expected gains: how large an impact on transitions to employment should one expect? There is a large literature on the employment effects of minimum wages. A vast majority of these studies refer to systems where minimum wages are determined by law (many studies refer to the U.S.). It is not evident that results from these studies are directly applicable to the Swedish context, where minimum wages are determined by collective agreements. One important difference, with a possible bearing on the interpretation of the results, is that legally determined minimum wages stipulate one common minimum wage for the whole economy, whereas collective agreements are struck at the sectoral level. One implication of this is that the "bite" of the minimum wage can be expected to be harder in Sweden than in countries with legally determined minimum wages, because a single minimum wage cannot be chosen too high if low-productivity jobs are to survive. If estimated effects depend on the bite of the minimum wage, which empirical evidence seems to suggest, then it is possible that many studies underestimate the effects of minimum wages in Sweden.

Our reading of the evidence is that lower minimum wages can be expected to be associated with higher employment, but that elasticities are moderate and, thus, that the effects also normally are moderate. The few studies there are of Swedish minimum wages (Forslund et al., 2014; Skedinger, 2006, 2011; Konjunkturinstitutet, 2010) often, but not unambiguously, suggest negative but moderate employment impacts of higher

minimum wages. All in all, a possible interpretation of these results is that the wage cost cuts necessary to by themselves give rise to any substantial employment impact for groups with a low productivity would be so large that they are unlikely to occur. However, this does not mean that lowering the wage costs for newly arrived immigrants would produce no impact at all. It should also be noted that certain possible effects of minimum-wage cuts are extremely hard to capture in empirical studies, namely effects like the opening-up of new low-wage sectors. To the extent that such effects do occur, existing studies would tend to underestimate the impact of minimum wages on employment.

A possible reason for limited impacts of lower hiring costs is discrimination; i.e. employers are for some reason not indifferent between job seekers of varying characteristics at a given wage. Empirically, both trials using anonymous or internet based job applications (Edin and Lagerström, 2006; Eriksson and Lagerström, 2012; Åslund and Skans, 2012), so called correspondence studies (Carlsson and Rooth, 2007; Bursell, 2014) and a stated preference study (Eriksson et al., 2012) suggest that immigrants are discriminated against in the Swedish labour market.[20]

Discrimination is a complex and much debated concept, and we will not get into the theoretical details here (ranging from classical taste-based models to broader structural perspectives). Recent research has also pointed to the importance of implicit and unconscious attitudes as an explanation to discriminatory behaviour (Rooth, 2010). An important difference between a native and a recently immigrated person with the same competence is that employers probably are more uncertain about qualifications acquired abroad, even with well functioning validation. This means that there always is a risk for statistical discrimination against recently arrived immigrants, i.e. risk-averse employers prefer what they consider safe candidates. Empirically, it is very hard to separate the mechanisms from each other.

If uncertainty about qualifications is a factor of importance, employment protection legislation (EPL) could be a particular problem. In addition to generally protecting the jobs of the already employed and thus potentially impeding the entry for those without jobs, it may then also make employers less willing to hire "high-risk" individuals. One such group is arguably the newly arrived immigrants. Swedish employment protection

[20] Åslund, Hensvik and Skans (2014) also showed that the background of the manager has an impact on who is recruited – immigrant managers hire immigrants more often than do native managers.

is complex. First, there are very few obstacles for employers to use fixed-term contracts, including the use of temp agencies. Second, Swedish employers can freely downsize the workforce by appealing to redundancy. Third, on the other hand, by default downsizing should be executed by last in, first out (LIFO) rules for employees with open-ended contracts. Fourth, LIFO can be replaced by other arrangements according to collective agreements between unions and employers.

So how strict is Swedish employment protection? Looking at OECD characterisations, Swedish EPL is close to the OECD average. The most prominent feature according to OECD, however, is the very large difference between the rules for fixed-term and open-ended contracts. This reflects an assessment that EPL for open-ended contracts in Sweden is rather strict. A possible objection to this assessment is the fact that LIFO can be replaced by other arrangements by collective agreements. Probably this means that the strictness varies with the character of labour relations in different sectors and firms. Overall, in our judgement, it is likely that the integration of immigrants into the Swedish labour market is hampered somewhat by EPL, but EPL is not likely to be a major obstacle to labour market entry in Sweden.

7.2.3 Matching

Given workers with sufficient and attractive skills, and employers willing to hire, matching is another important margin affecting labour market outcomes, at the individual level as well in the aggregate.

A growing literature shows the importance of informal contacts and networks in the labor market (see e.g. Dustmann et al. 2016; Kramarz and Skans 2014).[21] There are good reasons to believe that recent migrants often lack at least some of the contacts that help in finding employment (e.g. Swedish employers). In this sense, there is argument for policy to bridge this gap; become/create the network for people with poor networks. There is evidence that such measures (typically in combination with subsidized employment) have had positive effects for immigrants in the Swedish labor market (Joona and Nekby 2012; Åslund and Johansson 2011; Liljeberg and Lundin 2010).

These evaluations all consider situations where the PES agents had much more time to build and maintain employer contacts. The treatment was quite intense in that the

[21] A closely related literature studies how peer exposure affects labour market outcomes among migrants; see e.g. Damm (2009, 2014) and Edin et al (2003).

agent only had a small number of clients in parallel, especially considering the workload of at least 100 job seekers for a typical case worker. The total number of job seekers involved was very limited compared to the number of recent migrants who have not yet found a foot in the Swedish labor market. One can of course question whether activities can be scaled up with maintained quality. But considering the substantial costs of people remaining on welfare benefits instead of working (and paying taxes), rather high costs could be defended if the treatment improves the long-term labor market position of the individual.

Given the patterns seen for recent migrants in the Swedish labor market, there are good reasons to believe that many people are never even considered for job opportunities that are there. In this sense, matching initiatives increasing the exposure between workers and potential employers seem reasonable.

8 Concluding remarks

The paper describes the short- and long-term labour market situations for non-Western, typically refugee-related, immigrants to Sweden during the last decades. Using rich data on individuals, firms and labour market outcomes, we have tried to characterize the first contacts with the labour market, the route to entry and the ensuing labour market position. Our main analysis considers people arriving in the 1990–2014 period, but we have also studied long-term indicators for selected groups of earlier migrants.

The most striking feature is perhaps the remarkable stability of the aggregated patterns. Business cycle variations encountered at arrival may affect progress in the early years, and there are substantial differences across countries of origin. But the overall picture is that the process of labour market integration has been very similar over a long period of time. Is this good or bad? Good, perhaps, in the light of the current situation with many people waiting for or having just received asylum; entry patterns do not seem to be strongly connected to variations in immigration levels. But, arguably, bad considering that the process is slow and success limited, at least in the short run. It takes a long time for people to find a place in the Swedish labour market, and even in the long run many migrants do not reach parity with native workers.

We have tried to go beyond updating the well-known patterns of employment and earnings integration/assimilation. To this end we have documented durations and

numbers of jobs involved in the entry process. Even though many people spend considerable times from the first contact to a more stable position, it seems that the first contact with an employer often serves as the door to the labour market. Immigrants do not exhibit particularly many employer contacts on their way to a job generating a more substantial annual income. Over time, service industries of different kinds have become a more important port of entry for migrants. We also see an increasing representation of immigrants in small and low-wage firms.

Are stable but poor outcomes unavoidable in the future? Our discussion of policy experiences identifies several margins, measures and institutions linked to the labour market integration of refugees and other migrants. But it is hard to point to one single factor that could change things in a major way. On the other hand, this is rarely the case with complex social challenges concerning a wide and very heterogeneous population. However, poor outcomes also mean potential to do better, and our data do contain examples of refugees arriving under less than beneficial circumstances, but progressing significantly.

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Appendix

Data and restrictions

We use data from the IFAU database for the years 1985-2014. The database compiles anonymised individual registers, mainly from Statistics Sweden but also from other sources (including the Public Employment Service). Our study population in the main analysis consists of all first time immigrants to Sweden 1990–2014, born in the countries listed in Table A1, age 20–50 at immigration. The restrictions on country of birth are intended to capture primarily refugee related immigration. We also require that the immigrant must stay in Sweden for at least two years after immigration.

Description of outcome variables.

Outcome variable	Description
Earnings	Annual income from work, including self-employment, SEK.
First contact/job	Ever had positive earnings
Entry	Ever had more than half the median earnings of 45 year-olds in a given year
Employment	Employed in November (Statistics Sweden's definition)
Earnings percentile	Percentile rank of earnings in overall earnings distribution age 20–64
Social assistance take up	Social assistance >0 in a given year
Social assistance receipt	Social assistance received in a given year (individualized, SEK)
Registered at PES	Registered in open unemployment or labor market programs
Days at PES	Number of days registered in I given year.
Workplace characteristics	In case of multiple employers in a given year, the one providing the highest earnings is defined as the workplace. An individual can thus not have more than one workplace each year.

Table A1: Countries included in the main analysis

Region	Countries included
Eastern Europe	Bosnia-Herzegovina, Former Yugoslavia (Croatia, Yugoslavia, Macedonia, Slovenia), Albania, Armenia, Azerbaijan, Bulgaria, Georgia, Kazakhstan, Moldova, Romania, Russia, Ukraine, Belarus
Latin America	Antigua and Baruda, the Bahamas, Barbados, Belize, Chile, Costa Rica, Cuba, Dominican Rep, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, St. Lucia, St. Vincent, St. Dig and Nevis and Anguil, Trinidad and Tobago, Argentina, Bolivia, Brazil, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela
Middle East	Lebanon, Syria, Morocco, Tunisia, Egypt, Algeria, Israel , the Gaza area, Palestine, Jordan, South Yemen, Yemen, the United Arab Emirates, Kuwait, Bahrain, Qatar, Saudi Arabia, Cyprus, Iran, Iraq, Turkey
Africa	Djibouti, Eritrea, Ethiopia, Somalia, Sudan, Libya, Angola, Egypt, Benin, Botswana, Burkina Faso, Burundi, Central African Republic, Comoros, Equatorial Guinea, Ivory Coast, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Cameroon, Cape Verde, Kenya, Congo, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Pr, Senegal, Seychelles, Sierra Leone, Swaziland, South Africa, Tanzania, Togo, Uganda, Zaire, Zambia, Zanzibar, Zimbabwe
Asia	Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Myanmar, the Philippines, Indonesia, Laos, Malay Federation, Singapore, Thailand, Vietnam, Afghanistan, Bangladesh, Bhutan, Brunei, India, Kampuchea, Maldives, Mongolia, Nepal, Oman, Pakistan, Sikkim, Sri Lanka

Table A2: Description of baseline and supplementary samples

		At immigration					2014
Sample	N	Mean age.	Men, share	N	Compulsory edu.	Upper sec. edu.	Tertiary edu.
Baseline sample							
Age 20-50 at immi., 1990-2014	571,313	31.0	50.3	488,187	21.8	25.1	32.6
Cohort 1990	14,811	30.4	52.8	10,932	23.3	28.2	21.8
Cohort 1995	10,773	31.1	44.6	8,664	21.0	33.4	24.6
Cohort 2000	14,127	31.0	45.4	11,558	21.4	25.3	33.7
Cohort 2005	19,023	30.3	49.3	14,902	19.4	24.4	32.3
Cohort 2010	34,866	30.2	53.1	30,335	22.4	19.4	37.9
Sample used in section 6							
Iran, 1984-1989	20,523	29.6	60.9	15,720	7.6	35.2	33.7
Bosnia and Herz., 1993-1994	22,908	32.8	51.6	20,775	13.3	50.7	26.0
Poland, 1982-1983	3,419	31.8	55.6	2,716	6.1	41.6	31.4
Chile, 1973-1979	3,002	27.9	56.6	1,931	10.2	31.3	22.6
Vietnam, 1979-1981	1,910	29.1	61.3	1,497	39.0	31.3	7.7
Horn of Africa, 1987-1994	11,114	31.4	48.0	7,734	19.0	34.9	14.7

Notes: Horn of Africa includes Djibouti, Eritrea, Ethiopia, Somalia, and Sudan. The category for Vietnam also includes other countries (Burma, Indonesia, Laos, Malaysia, the Philippines, Singapore and Thailand); immigration from these countries was very small in the years considered.

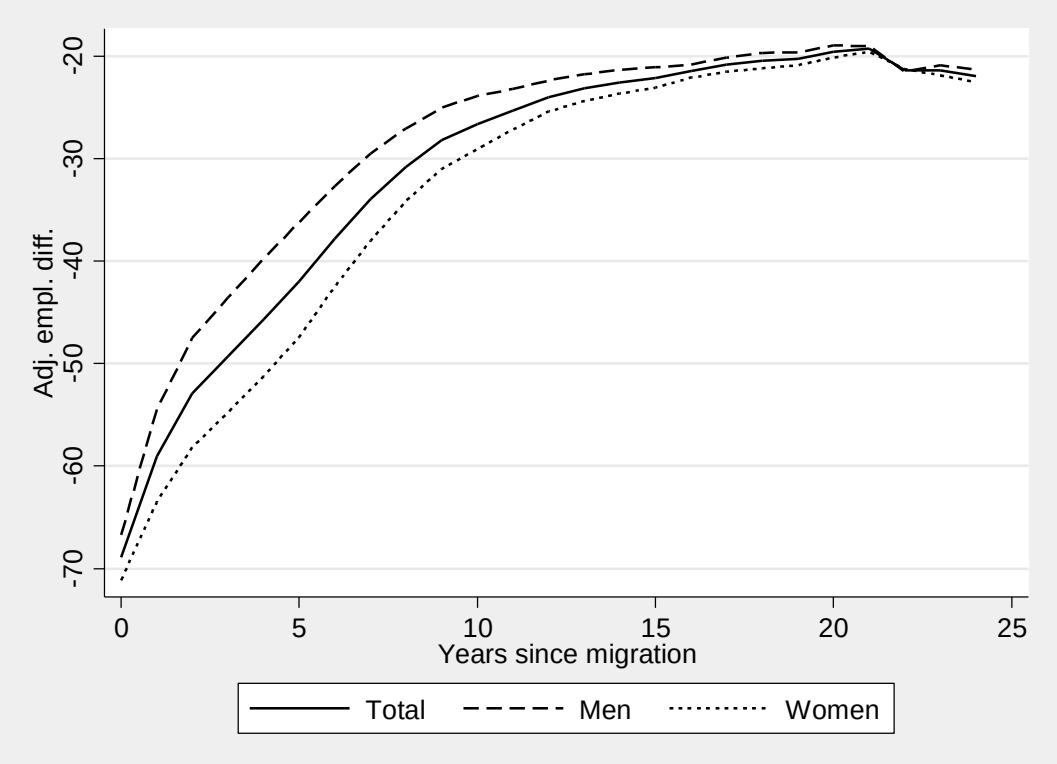

Figure A1: Adjusted (age, gender, calendar year) employment differentials, by years since migration

Notes: See Sarvimäki (2017) for a description of the calculations.