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Does Poverty among Immigrants Adapt to Country of Residence?¹

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Abstract

Turkish immigrants have been coming to Germany and Denmark in large numbers since the late 1960s, as guest workers before 1974, and as refugees or tied movers in later years. The two countries have different welfare state types: Denmark a social-democratic country and Germany a corporatist one. They also differ in labor market structure and institutions. In this paper, we study poverty among Turkish immigrants in these two host countries. First, we examine descriptive statistics on poverty in years 1984-2013 in the two countries and find that immigrants have much higher poverty rates compared to natives and poverty rates in Turkey remain in between the rates for natives and immigrants in both countries. Then, we estimate logistic regressions to determine the correlates of being poor. We perform Fairlie decompositions to estimate the share of the native-immigrants poverty difference that can be explained by observable characteristics and we find that the larger part (55-80%) of the difference is explained by market valuation of the characteristics and by unobservables. Finally, we decompose poverty by subgroups and find that certain subgroups (such as families with children and the elderly) are especially vulnerable in both host countries and that not much has changed in the two countries between 2008 and 2013 in terms of the vulnerability of these subgroups to poverty risk.

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1. Introduction

The focus in the present paper is on the economic position among immigrants from Turkey in two European countries, Denmark and Germany. Initially, immigration from Turkey consisted of guest workers, recruited actively first in Germany and later in Denmark. In both countries, the recession following the first oil price shock in 1973 resulted in a stop to further immigration of workers from Turkey. Those who were in the two countries had the option to stay. Later immigration has been in the form of family reunification and marriage. Currently, about 2.4 million people of Turkish origin live in Germany and about 60 thousand live in Denmark (Turkish Ministry of Labour and Social Security 2016). Our focus is on poverty and on the extent to which Turks in the two host countries differ in poverty incidence relative to the native populations in these countries and whether any convergence between immigrants and natives occurs over time.

Poverty alleviation has been a primary goal of modern welfare states. The host countries that we choose for the study offer two different environments to Turkish immigrants with respect to the welfare state type. According to Esping-Andersen's classification, Denmark has a social-democratic welfare regime, whereas Germany has a corporatist one (Esping-Andersen 1990). One aim of the present study is to examine whether these structural welfare state differences have different impacts in immigrant groups with the same country of origin.

Section 2 presents a brief survey of earlier contributions to the literature. Some of the characteristic differences between the social democratic or Scandinavian welfare state type and the corporatist or continental type are discussed further in Section 3 along with a brief survey of structural differences between Turkey and the two host countries with special emphasis on participation in the labor market among Turkish people in Turkey and immigrant groups and natives in the two host countries. In Section 4 we present the sources for the data making the comparative study possible consisting of a mix of surveys, in Germany and Turkey, and register based data for the whole population in Denmark. Section 5 reports descriptive evidence regarding poverty indicators for the 5 groups we study, i.e. Turks in Turkey, Turkish immigrants in Denmark and Germany along with the native population in the two host countries. The results from a number of estimations including covariates explaining one-year poverty risk are found in Section 6. Section 7 presents the results from two types of decomposition of poverty differences, i.e. a Fairlie decomposition aiming to explain to which extent the difference in poverty risk between immigrants and natives can be explained by differences in characteristics and a decomposition by subgroups.

Conclusions regarding the eventual degree of convergence between immigrant and native poverty rates is the topic in the final Section 8.

2. Literature

The economics literature that studies poverty among immigrants is small but growing. So far, only a few studies have investigated poverty in Europe with a special focus of comparing immigrant poverty to native poverty. Denmark and Germany have comparatively low poverty rates (Burniaux et al. 1998; Pedersen and Smith 2000). According to the OECD, Denmark has one of the lowest poverty rates in the OECD and the rate in Germany is not above average (OECD 2017). However, when immigrants in these countries are considered, especially those coming from middle and low-income countries outside the EU, poverty rates are much higher. Below, we summarize the findings of studies that have examined immigrant versus native poverty. The major part of these studies apply the same definition of relative poverty as the one used in the present study.

Two studies compare immigrant poverty in Denmark and Sweden using comparable micro data sets (Blume et al. 2005, 2007). Relying on the similarity of the two countries in terms of a number of labor market and welfare state characteristics, these studies focus on how immigrant poverty can be linked to differences in arrival rates, years of residence, countries of origin and cyclical situation at time of arrival in the host country. Blume et al. (2005) report that the difference in poverty rates between natives and immigrants widened in both countries, reflecting increasing poverty rates among immigrants from less-developed countries. Blume et al. (2007) conduct multivariate analyses and report significantly higher poverty rates for those aged below 30, for women, for people living in families with many children, and for single adults living with one or more child(ren). Although overall immigrant poverty rates are higher in Denmark compared to the rates in Sweden, restricting the attention to comparable immigrant groups, such as Turks, yields similar poverty rates across the two countries. A study on Sweden analyzes poverty risk and persistence, comparing immigrants to natives. The study is based on a 3 percent representative sample of the population with panel properties followed for the years 1991–2001. Immigrant households (and especially refugee immigrants) are found to have both low poverty exit probabilities and high poverty entry probabilities compared with native Swedes (Hansen and Wahlberg 2009).

Another study based on population wide register data compares immigrant poverty in Denmark, Norway and Sweden in 1993-2001, but focuses on children only (Galloway et al. 2015).

It finds that the poverty rate for native children is less than 10 percent in all three countries and in all years, but the rates for immigrant children with an origin in middle and low-income countries (such as Turkey) vary between 38 percent and 58 percent. It also finds that in Denmark the incidence of immigrant child poverty is higher than it is in the other two countries.

A major factor that affects immigrant poverty is their labor force participation in the host country compared to natives. One recent study confirms the importance of this for poverty at old age (Jakobsen and Pedersen 2017). It finds that in Denmark, immigrants (or refugees) from low income countries (such as Turkey) are in risk of even higher poverty when they become 60-74 years old, because of having accumulated less than full tenure in the labor market or a too short duration of residence in the country to obtain the full amount of disability or state pension, or both.

An analysis including 8 EU countries uses data from the European Community Household Panel (ECHP) for the years 1994–1998 (Büchel and Frick 2005). Looking at market income for all immigrants relative to natives, they find very low values for Denmark and Germany, whereas the relative position for all immigrants in the other 6 countries are at or above the level for natives. Looking at total post-government income, Denmark and Germany are not outliers to the same degree, but still below the other included countries. However, samples are very small for immigrants in the ECHP.

Two reports analyze poverty among immigrants relative to natives in most EU countries based on EU-SILC survey data for 2004 and 2007 (Lelkes 2007; Lelkes and Zólyomi 2011). Comparing results for Denmark and Germany, Lelkes and Zólyomi (2011) find a higher poverty risk for non-EU immigrants in Denmark, but a lower risk for natives. Consequently, they find a higher immigrant-native poverty gap in Denmark. Muñoz de Bustillo and Antón (2010) use EU-SILC data to focus on immigrant-native poverty differences in three “new” immigration countries, i.e. Greece, Ireland and Spain – at least before the Great Recession in 2008. For 2006 they find significantly higher immigrant poverty in all three countries, but quite big differences looking at the immigrant-native gap in poverty. Kesler (2015) examines immigrant poverty across three institutionally distinct European states: Germany, Sweden, and the United Kingdom. Focusing on 33 immigrant groups and controlling for sending country in addition to human capital and family characteristics, the analysis explores host country variation in (1) immigrant/native-born poverty gaps and (2) the underlying poverty levels at which these gaps occur. Findings reveal the largest poverty gaps in Sweden and demonstrate that this is due to immigrants’ comparatively low level of labor market participation. However, underlying poverty levels are also lowest in Sweden because of a two-

pronged policy strategy of promoting work particularly among married women, immigrant and native-born alike, and reducing poverty through different forms of income support. Thus, immigrants in Sweden live at lower levels of poverty than their immigrant counterparts in Germany and the UK, despite facing higher levels of poverty relative to native-born Swedes. The conclusion considers implications of poverty gaps and poverty levels, especially for the children of immigrants. Bárcena-Martín and Pérez-Moreno (2017) analyze EU-SILC data for EU 28 and Iceland and Norway for 2007 and 2012. They find immigrants are exposed to higher poverty risk than natives, but the immigrant-native gap varies across countries beyond what can be explained by household-level effects. Sample sizes are however small. For instance, for Denmark in 2012 the total number of non-mixed immigrants – i.e. where both adults in the family are immigrants – is 133, made up of both EU and non-EU immigrants. The corresponding number for Germany is 347 persons.

3. Background: Turkish Immigrants in two European welfare states.

Turkish immigration to Europe began after World War II, but the country began to export labor to Western Europe on a significant scale only after an official agreement was negotiated with the Federal Republic of Germany in 1961 (Fassmann and İçduygu 2013; Abadan-Unat 2011). The First Five-year Development Plan (1962–1967) of Turkey delineated ‘export of surplus labor’ as an ingredient of development policy with the concerns of prospective flows of remittances and reduction of unemployment. A social security agreement was signed with Denmark in 1970 (Abadan-Unat 2011). When the first guest worker agreement was signed between Turkey and Germany in 1961, there were 6.700 Turks in Germany corresponding to 1% of the foreign population. The bilateral agreement of Turkey with Germany, and later with other European countries, were in fact built on the principle of rotation. Workers sent abroad would be trained for a year, during which they would gain knowledge and expertise. The expectation was that they would return to Turkey to make their expertise available to the development of the country. However, from the beginning, ‘guest workers’ showed an inclination to stay longer. This inclination inevitably changed the ethnic and religious composition of the host countries. Migration peaked during the years 1971-1973, when more than half a million Turkish workers arrived in Europe. Germany received great numbers of Turkish workers between 1961 and 1973 and became the country that had the largest number of Turkish immigrants in Europe, with more than 600 thousand workers in 1973 (Abadan-Unat 2011).

In response to the recession following the first oil price shock, both Germany and Denmark ended the guest worker program in 1973. The German government offered financial incentives to the workers for returning to Turkey. Taking advantage of the offer, about 150,000 workers returned to Turkey. This was however a relatively small number compared with the stock of immigrants. Other countries such as France, Belgium and the Netherlands followed Germany and Denmark in 1974 by ending guest worker agreements (Abadan-Unat 2011). The termination of the guest worker program made it obvious to the labor migrants of the 1960s that leaving the host country would mean never returning. Those who wanted to stay decided to switch from a temporary and short-term migration to a more long-lasting settlement. The first groups of immigrants who arrived during 1961-1973 mainly consisted of male workers. In the following years, female population increased through family reunification and, later, family formation when the children of the first-generation immigrants married a spouse coming from Turkey. As a consequence, the male-female ratios among Turkish immigrants reached a balance in European countries (Manco 2007).

Beginning with the 1980s, the number of officially registered asylum seekers from Turkey in Western European countries tripled (from 15,000 in the early 1980s to 45,000 in the early 1990s). The outbreak of the 'Kurdish conflict' in Turkey and the inability to solve the conflict was a reason behind the growing number of asylum seekers. The 1990s were characterized by a considerable slowdown in emigration and asylum flows from Turkey to Europe. This decline is partly due to the restrictive immigration policies of the European receiving countries and, in addition, to the positive economic, social and political developments in Turkey itself. Meanwhile, the fall of the Iron Curtain was accompanied by opening a large reservoir of qualified but unemployed or underemployed workers from Poland, Romania, Hungary and other former communist countries who became the first choice for recruitment in Western Europe. Today, the inflow of Turkish citizens is decreasing, the net migration nearly zero or negative and the stock of the Turkish immigrant community declining (Fassmann and İcduygu 2013). People with Turkish origin or background are however still the biggest non-EU group in both Germany and Denmark.

One final noteworthy feature of Turkish immigrants in Europe is the geographic concentration of their origins. For example, it is known that about 60% of Denmark's Turkish immigrants come from the Kurdish areas of southeast Anatolia. Turkish immigrants tend to concentrate in particular locations. For example, half of Denmark's Turks live in the Copenhagen area. In Germany, of the 2.014 million Turks, 35% are settled in North Rhineland-Westphalia. The city of Berlin, with its 136,400 Turks, hosts all by itself close to 5% of the Turkish immigrants in Europe (Manco 2007).

Such geographic concentration along with the commonness of family reunification and family formation as reasons for immigration suggest that network effects are as important as economic considerations in the decision to migrate.

The two host countries in our study differs in a number of structural aspects of their welfare states. In Germany programs are mostly of insurance type with contributions as the dominant source of financing. Another fundamental characteristic is that benefits typically are related to individual earnings histories. In Denmark, programs are dominantly financed from general tax revenues with flat rate benefits in many programs.

In Germany, unemployment insurance, Old age pension and Early retirement pension are based on contributions during years with employment. Benefits are as mentioned typically earnings related and therefore contribute to an expected difference in poverty risk between immigrants and natives. Full Old age pension and Early retirement pension are based on respectively 45 and 35 years of employment. Over time the insider-outsider characteristics in the programs have been reinforced by tightening of rules, cutbacks and savings, cf. Büchel and Frick (2005). Finally, child benefits are progressive in the number of children in the family (Clasen (2005)). Considering the typical differences in the number of children in the family among natives and immigrants this might contribute to narrow a poverty difference between the two groups.

Denmark is – in principle – an example of the universalistic welfare state with the same rights and obligations for everybody with residence in the country. However, eligibility rules make entry to programs and coverage different between natives and immigrants. Eligibility for unemployment insurance benefits is determined by membership of an unemployment insurance fund and a sufficient employment history. Most of insured unemployed individuals receiving unemployment benefits get a flat – maximum – benefit level, i.e. not earnings related. Old age pension and disability pension are universal, but eligibility and benefit levels depend on number of years of residence. Early retirement programs and labor market pension depend on employment experience. For many immigrant groups labor force participation is lower than among natives which contribute to create a higher poverty share for these groups. Welfare benefits are in principle dependent on residence. However, in recent years there has been several policy changes reducing benefits for newly arrived persons with the purpose of creating stronger incentives to get a job. A difference in this respect between Denmark and Germany is the significantly higher floor in the wage distribution in Denmark. Denmark has no official or legal minimum wage, but collective agreements establish a fairly high minimum wage level for which an immigrant must qualify for entry to the job market on

ordinary terms. Finally, Denmark in contrast to Germany has child benefits that are proportional to the number of children in the family.

Germany and Denmark differ regarding their welfare state type, labor market structure and institutions. Thus, our study enables us to compare the effects of different welfare states, labor markets and institutions on the adaptation to the characteristics of poverty risk in the two host countries. Earlier studies in the economics literature have looked at either all immigrant groups in a country or countries (Deding et al. 2010)), on a particular group of immigrants such as immigrant children (Galloway et al. 2015) or elderly immigrants (Jakobsen and Pedersen 2017). We contribute to the literature by focusing only on Turkish immigrants in Germany and Denmark and compare them in terms of poverty across the two host countries to natives and to Turks in Turkey. The main question in this paper is whether Turkish immigrants adapt to host countries and whether immigrant poverty rates converge to the rates for natives, or whether they stay like the rates in the source country, Turkey. In the next section we describe the data and methods being used.

4. Data, Method, and Descriptive Statistics

Data

This study uses nationally representative survey data from Turkey and Germany, and administrative register data from Denmark. For all three countries, the datasets that we use are the best available sources for household income.

The Turkish data are collected by the Turkish Statistical Institute (TURKSTAT) via the Survey of Income and Living Conditions (SILC). The questionnaire of the Turkish SILC was designed to provide target variables requested by European Union Statistical Office (EUROSTAT) for obtaining detailed information about income, poverty, social exclusion, and living conditions. Since 2006, the data have the structure of four-year rotating and overlapping panels (2006-2009 and 2010-2013). The selected households are interviewed for four consecutive years. Each year, about a quarter of the households are dropped from the sample and replaced by new households. Surveys are conducted face to face, using the computer assisted personal interview (CAPI) technique. Following data entry, income data collected by the survey are compared against administrative income, tax, and social security data, which are obtained based on the person's National Identification Number.

The German data come from the German Socio-Economic Panel (GSOEP), a big and unique survey-based panel dataset, which oversamples immigrants. We use data from the years 1984-2013.

In 1984, guest worker families from Turkey were over-sampled. Between 1984 and 1994, new immigrants were included only if they moved into one of the pre-sampled households. In 1994 and later, new samples of immigrants were added to the GSOEP. Therefore, the immigrant population is better represented after 1994 than in years 1984-1994. In 1990, the Eastern states of Germany were added to the GSOEP; however, for consistency we only consider the Western part of Germany. Throughout the analysis, we apply the survey sample weights. The GSOEP data are collected under a survey rule censoring the disposable income within the 0-5 million Euros. (More detailed description of the GSOEP is available from (Burkhauser, Kreyenfeld, and Wagner 1997).) One problem with the GSOEP data is that, although the data have panel structure, the rate of annual attrition is quite high, which makes it difficult to study long-term poverty or poverty transitions.

The Danish data are panel data based on comprehensive administrative registers, compiled by Statistics Denmark, that cover the whole population of natives and immigrants. Since the dataset covers the entire population, statistics such as standard errors or Z-values are in fact irrelevant. Data from such administrative registers have been used extensively in economic research (Roed and Raaum 2003; Pedersen 2011; Galloway et al. 2015) and are generally considered to be of very high quality. Individual data from several registers are merged using a unique person identifier. In the Danish data, disposable income figures are affected by administrative or tax law rules that result in a few people having deductions from earlier years that appear in the current year, thereby leading to a number of observations (about 1-2% of all) with non-positive disposable incomes.

In the GSOEP and Danish register data, three types of individuals can be identified: natives, immigrants, and descendants of immigrants. In the German data, those who are foreign born are defined as immigrants. Those born in Germany with German citizenship are defined as native Germans and those born in Germany with foreign citizenship are defined as descendants of immigrants. In the Danish data, immigrants are individuals who are foreign born and whose parents are foreign-born or have a foreign citizenship. Descendants of immigrants are defined as those who were born in Denmark, and whose parents are foreign-born or have a foreign citizenship. Native Danes are those who have at least one parent with Danish citizenship and who were born in Denmark. As in Deding et al. (2010), in this paper the group of immigrants also includes individuals who have obtained citizenship in the two host countries.

In the Danish data, individuals belong to one of the three main types of households: singles; married or cohabitating couples; or children younger than 18 years not living with their parents. Children living with their parents are included in the parents' household regardless of age, unless

the children themselves are married, cohabiting or have their own children (in which case they are defined as a new household). In the German data, a household can include spouses, life-partners, children, foster children, siblings, parents, in-laws, grandchildren, other relatives, and unrelated persons.

Finally, we shall mention a fundamental selection problem in empirical studies in this area. The data unfortunately do not make it possible to control for two related problems, i.e. who emigrates and the choice of destination country conditional on emigration. The evidence on the strength of selection effect is mixed. One study uses the ratio of tax revenue to GDP in the destination country to assess whether there is selection of potential immigrants from poor countries to high tax pressure countries and those from rich countries to low tax pressure countries (Pedersen, Pytlikova, and Smith 2008). Based on a macro-level analysis of immigration flows between countries, the study finds that the selection effect is weaker than the network effect (proxied by the stock of immigrants in the destination country). A study with a focus on Turkish emigration to Germany, that does not pay attention to selection effect and that defines variables in a different manner than in Pedersen et al. (2008), found however that economic factors, such as unemployment rate and wage differentials, are more important determinants than social factors (Sorhun 2011).

Method

We examine and compare five groups: Natives in the three countries (Germany, Denmark, and Turkey) and Turkish immigrants in the two host countries, Germany and Denmark. Our income concept is household disposable income. We adopt the OECD definition of household disposable income, which has four income components: earnings (salary income from dependent employment), capital incomes (all private transfers, (rent, interest, dividends, net transfers from other households) plus self-employment income), social security transfers from public sources and taxes (Burniaux et al. 1998). Therefore, we include all types of income minus income taxes and mandatory contributions. Although the household is the economic unit, all analyses are based on individuals. In the Danish case, tax register information is the basis for income calculations, whereas in the Turkish and German data self-reported income is used.

Equivalent household disposable income is defined in the usual way by dividing total household disposable income by an equivalence scale. The scale that we adopt assigns a weight to each member of the household; a weight of 1 to the household head, 0.7 to all other individuals

older than 14 (except for the head) and 0.5 to all individuals 14 or younger (known as the “OECD scale”). Equivalent household disposable income is assigned to everyone in the household.

In each country and in each year, 60% of median equivalent household disposable income is set as the poverty threshold². According to this definition, all members of a household that lies below the poverty threshold are poor. This definition is based on annual incomes. Based on this definition, we generate descriptive statistics on annual (headcount) poverty rates for the years 1984-2013 for Germany and Denmark and 2006-2013 for Turkey. This gives us the opportunity to compare poverty rates across time and among the five groups that we defined above.

We estimate three poverty indices from the Foster, Greer and Thorbecke (1984) class, summarized as $FGT(\alpha)$: $FGT(0)$ is the headcount poverty rate; $FGT(1)$ is the average normalised poverty gap; $FGT(2)$ is the average squared normalized poverty gap. Greater values of α indicate more poverty aversion (or a higher sensitivity to large poverty gaps). We decompose poverty indices ($FGT(0)$, $FGT(1)$, and $FGT(2)$) by population subgroup, which helps us compare the population shares of these subgroups to their poverty shares. We estimate poverty indices and decompose poverty both for the final year of analysis (2013) and for the latest pre-recession year (2008) to observe the change.

Next, we estimate probit regressions to determine the correlates of poverty risk in the five groups. In these regressions, poverty status of individuals can be expressed as a function of their observable characteristics. With X representing the characteristics and $\hat{\beta}$ the coefficient estimates, the probit equation can be written as: $P = F(X\hat{\beta})$. Estimates of marginal effects from these regressions tell us the effect of a change in an explanatory variable on the probability of being poor.

Finally, we perform two types of decompositions: Fairlie decompositions and poverty decompositions. The Fairlie decomposition technique is an extension of the classical Oaxaca-Blinder decomposition technique (Fairlie and Robb 2007)³. Basically, the technique estimates the contributions of the control variables (or groups of control variables) in explaining the difference in poverty rates. As descriptive statistics show below, natives and immigrants differ in some observable characteristics (such as the number of children, or marital and education status). The decomposition shows us the extent to which the observable characteristics can explain the poverty

² In many Danish studies the poverty threshold is set at 50 % of median equivalent household disposable income. As we compare groups of people across 3 countries we apply the commonly used international definition of the poverty threshold of 60%.

³ The decompositions are performed using the ‘fairlie’ command in Stata.

difference between natives and immigrants. The difference in the poverty rate (FGT(0)) between natives and immigrants can be decomposed as follows:

$$\bar{P}_2 - \bar{P}_1 = \left[\sum_{i=1}^{N_1} \frac{F(X_{i,2}\hat{\beta}_1)}{N_1} - \sum_{i=1}^{N_2} \frac{F(X_{i,1}\hat{\beta}_1)}{N_2} \right] + \left[\sum_{i=1}^{N_1} \frac{F(X_{i,2}\hat{\beta}_2)}{N_1} - \sum_{i=1}^{N_2} \frac{F(X_{i,2}\hat{\beta}_1)}{N_2} \right], \quad (1)$$

where N_1 and N_2 are the numbers of observations in the two groups. In equation (1), the term in the first square brackets is the part due to differences in the distributions of observable characteristics and the term in the second square brackets is the part due to inter-group differences in the process that determines P . The second term also captures the portion of the difference in P due to differences in factors that are unobserved in the data, such as social or language skills. We are mainly interested in the first term, rendering the second term to a residual.

The decomposition in equation (1) relies on using $\hat{\beta}$ of group 1 as weights in the first term and the distributions of the characteristics in group 2 as weights in the second term. Alternatively, the coefficients of group 2 and the distributions in group 1 could have been used as weights. As a third alternative, the pooled coefficients $\hat{\beta}^*$ can be used (which are obtained from the logit regressions that pool observations from the two groups). Since there is no theoretical guidance on which coefficients to use in the first term, we follow the third alternative and therefore estimate the first term as:

$$\left[\sum_{i=1}^{N_1} \frac{F(X_{i,2}\hat{\beta}^*)}{N_1} - \sum_{i=1}^{N_2} \frac{F(X_{i,1}\hat{\beta}^*)}{N_2} \right]. \quad (2)$$

The second type of decomposition, poverty decomposition, tells us the poverty rates, poverty shares and poverty risks within some sub-groups and allow us to see the differences between natives and immigrants at the sub-group level⁴. Here, we define sub-groups according to certain characteristics (households with or without children, the number of children in the household, the number of employed adults in households with children, age and education of the household head). The poverty share and poverty risk of a sub-group are defined as follows:

Poverty share = Population share * FGT(0) in subgroup / overall FGT(0)

and

Poverty risk = Poverty share/ Population share.

⁴ The decompositions are performed using the ‘povdeco’ command in Stata.

Descriptive Statistics

Tables 1 and 2 report some demographic and labor market characteristics of the five groups: Natives in the three countries (Germany, Denmark, and Turkey) and Turkish immigrants in the two host countries, Germany and Denmark. As can be seen in Table 1, on average, Turkey has a younger population and Turkish immigrants are younger than natives. Marriage is highly common in Turkey, which is reflected in the higher shares of married individuals among immigrants than among natives. The number of children per household is higher in Turkey than in the two host countries; furthermore, immigrants have a higher number of children per household than natives in the two countries. Labor force participation rate (LFPR) is lower in Turkey than it is in Germany and Denmark. Among the five groups, the gender gap in LFPR is the largest for Turks in Turkey, where only 31.76% of women are in the labor force. In Germany and Denmark, the gender gap in LFPR is larger for immigrants than for natives. The rates for immigrant women are about 17-18 percentage points lower than the rates for natives. The variation by age is shown in Figure 1 below.

Table 2 shows that in Turkey the majority of the 18-64-year-old population has completed only 5 or 8 years of education and, on average, women have lower educational achievement than men. About 14% of women are illiterate. A lower share of women has a high school or university degree than men. By contrast, in Germany and Denmark, a gender gap in education is not noticeable. What is noticeable is the education gap between natives and immigrants. In Germany, natives have about 2.5 more years of education, on average. In Denmark, most immigrants have completed only compulsory education. Compared to natives, a much lower share of immigrants has completed vocational, medium long or long theoretical education. It should be mentioned also that the statistical knowledge of the education from the immigrant's homeland is imperfect.

Table 1: Demographic and labor market characteristics of the five groups in 2013 (Sample restriction: Ages 18-64)

	Turkey	Germany		Denmark	
		Natives	Immigrants	Natives	Immigrants
Average age (in 18-64 age group)	42.09	42.49	39.23	41.54	36.08
Average age (across all ages)	35.75	44.43	38.36	40.55	30.92
% Male	47.57	48.55	51.42	49.42	50.76
% Married	78.48	50.71	66.29	46.85	62.72
Children (age<18) per household (Average)	1.22	0.49	1.09	0.66	1.04
Labor force participation rate (Men) %	76.43	89.39	84.78	81.48	72.85
Labor force participation rate (Women) %	31.76	80.82	63.71	78.48	60.17
N (Ages 18-64)	16507	15506	740	3296757	45639

Sources: Authors' calculations based on the Turkish SILC (weighted statistics (three-year weights 2010-2013)), German SOEP (weighted statistics), and Danish register data.

Table 2: Education statistics in the five groups in 2013 (Sample restriction: Ages 18-64)

		Men	Women		
Turkey (%)	Illiterate	2.24	13.83		
	Literate, no degree	3.05	8.31		
	Primary (5 years)	40.32	40.87		
	Secondary (8 years)	15.96	10.56		
	High school (11 years)	23.21	16.02		
	University or more	15.21	10.43		
	N	7834	8673		
		Natives		Immigrants	
		Men	Women	Men	Women
Germany	Years of Education	12.38	12.46	10.02	9.84
	N	6827	7759	355	319
Denmark (%)	Compulsory School (9 years)	25.07	21.56	56.62	52.13
	High school	15.41	15.09	15.11	15.02
	Vocational	38.25	30.98	20.24	21.22
	Medium long	12.03	24.00	5.71	9.65
	Long theoretical	9.25	8.36	2.31	1.98
	N	1614055	1657952	21021	20256

Notes: Highest completed level of education is reported for Turkey and Denmark. Danish High School category includes short further education.

Sources: Authors' calculations based on the Turkish SILC (weighted statistics (three-year weights 2010-2013)), German SOEP (weighted statistics), and Danish register data.

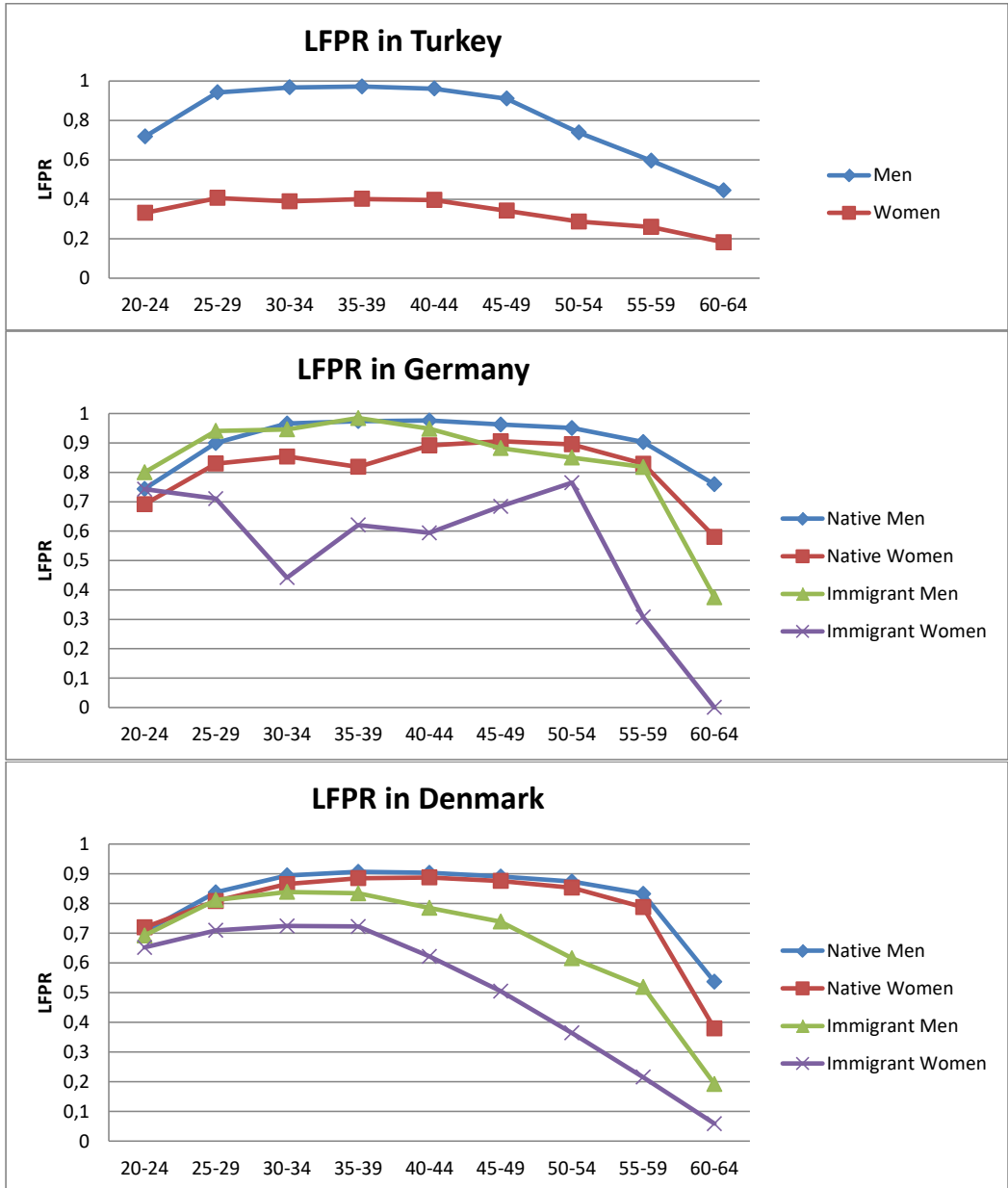


Figure 1: Labor force participation rates (LFPR) in Turkey, Germany, and Denmark, 2013, by gender and immigrants versus natives. Sources: Authors' calculations based on the Turkish SILC (weighted statistics (three-year weights 2010-2013)), German SOEP (weighted statistics), and Danish register data.

Figure 1 shows the hump-shaped age profiles of LFPR for men and women in the three countries in 2013. In Turkey, the profile turns downward at a relatively young age (after age 44), about 10 years earlier than the natives in Germany and Denmark. In Germany, the profiles of immigrant and native men look quite similar until age 45-49, after which the profile for immigrant men is clearly lower than the profile for native men. In Denmark, the profile for immigrant men is lower than the profile for native men at all ages. The profiles of immigrant women are located lower and decline faster than native women in the two host countries.

5. Poverty indicators

In this section, we compare poverty rates across the five groups and over time during the 1984-2013 period. Figure 2 presents one-year poverty rates for natives and Turkish immigrants in Germany and Denmark, along with the rates for Turks in Turkey. As can be seen in the figure, immigrants in both host countries have much higher headcount poverty rates than natives. Among natives, about 8-12% in Germany and 7-10% in Denmark are poor. A slight upward trend over time is visible in the poverty rates of natives in both countries from about the turn of the century.

Among immigrants, poverty rates in Germany have exceeded the rates for natives in all years. They fluctuated between 25% and 40% in the 1980s and 1990s. After 2000, they remained in the 30-42% range. In Denmark, immigrant poverty rates, which were around 7% in 1980s, rose to around 20% by 1990, around 30% by 2000, and around 35% by 2010. The poverty rates for Turks in Turkey were about 25% in the 2006-2013 period, somewhere in between the rates for natives and immigrants.

From the early 1990s poverty rates among immigrants from Turkey have been at about the same level in the two host countries, and consequently the gap towards natives has been at about the same level. The steep increase from the mid-1980s in Denmark is surprising. Part of the explanation of this, relative to the situation in Germany, might be that immigration to Denmark occurred later than in Germany and that the new 1983 law on foreigners made family reunification much easier. Initially, nearly all the immigrants were men, only later followed by women as tied movers, family reunification or marriage. From 1984 on, the women/men ratio among immigrants from Turkey in Denmark increases from about 0.6 to about 0.9 and stabilizes between 0.9 and 0.95 from the late 1990s (Statistics Denmark, Statistikbanken). This shift in the gender ratio may explain part of the strong increase in poverty rates in Denmark from 1984 while Germany may have gone through the same phase at an earlier time. Further, immigration from Turkey to Denmark was stationary during the 1990s followed by a decline to about half the level from the early 2000s. Because of this profile,

the average age among Turkish immigrants 18-80 years old shows a steep increase from 35.1 to 44.0 from 2000 to 2013; the share of the 65+ years old increases from 3.4 to 8.0 percent. As demonstrated in Jakobsen and Pedersen (2017) this has an upwards impact on the overall poverty rate.

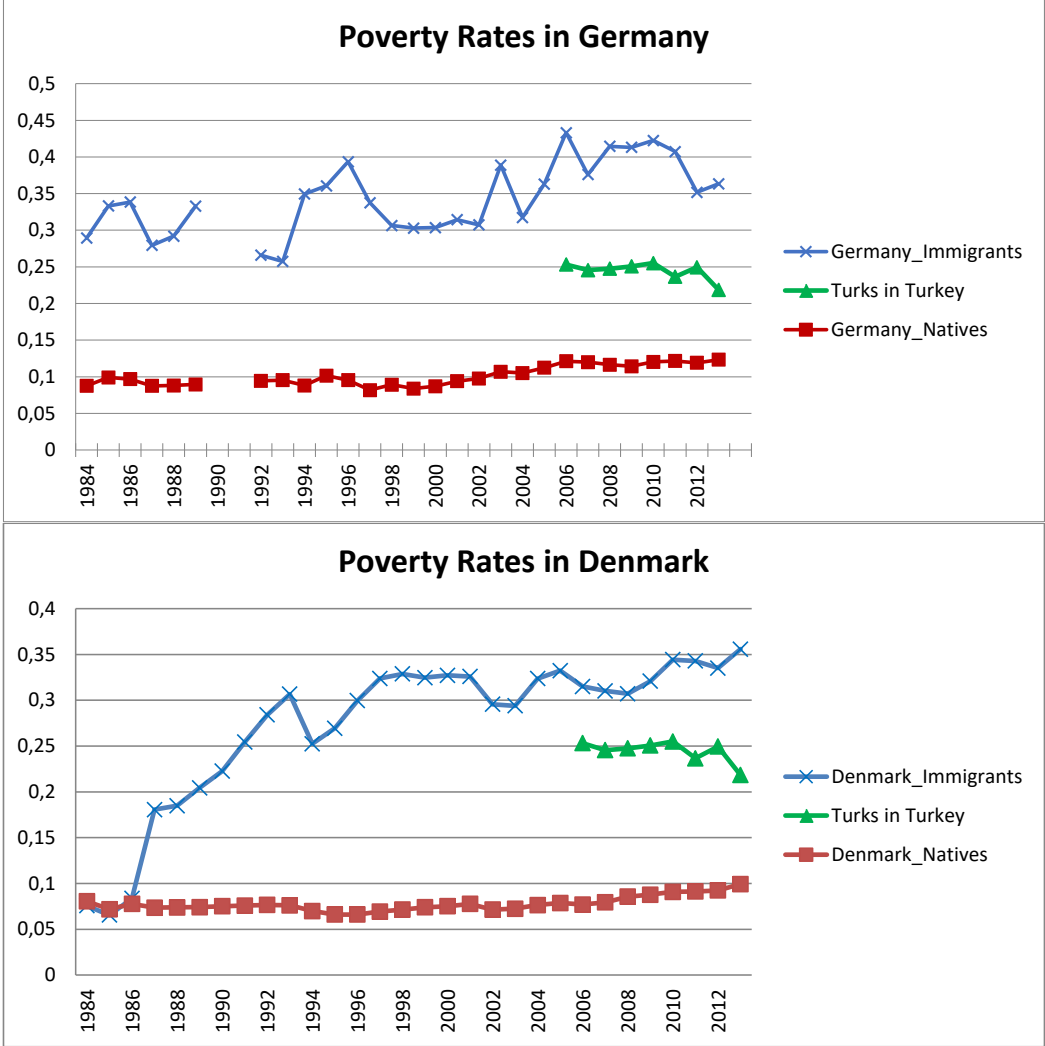


Figure 2: (Headcount) Poverty rates in Germany and Denmark, natives and Turkish immigrants, and Turks in Turkey, ages 18-64

Note: Years 1990 and 1991 are skipped in the German data because of problems with immigrant classification in the years of integration.

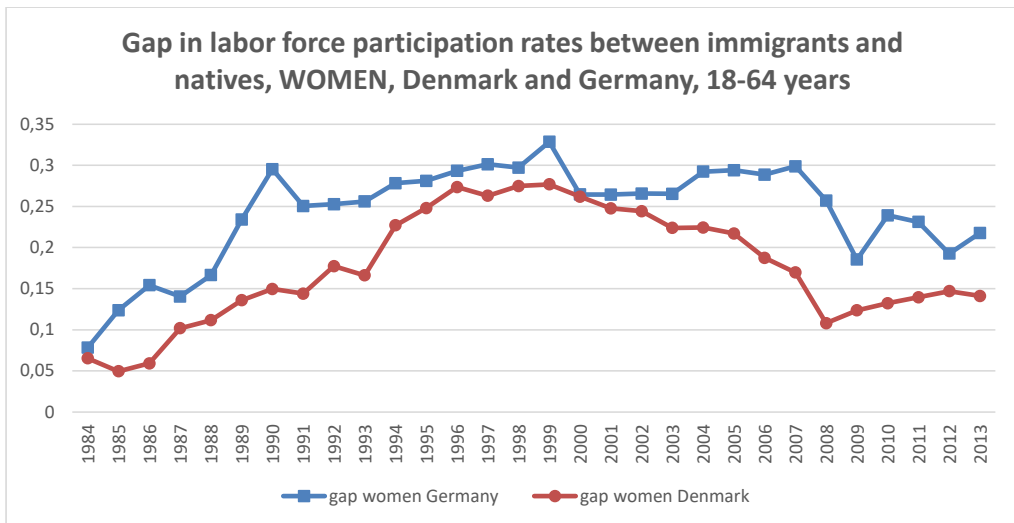
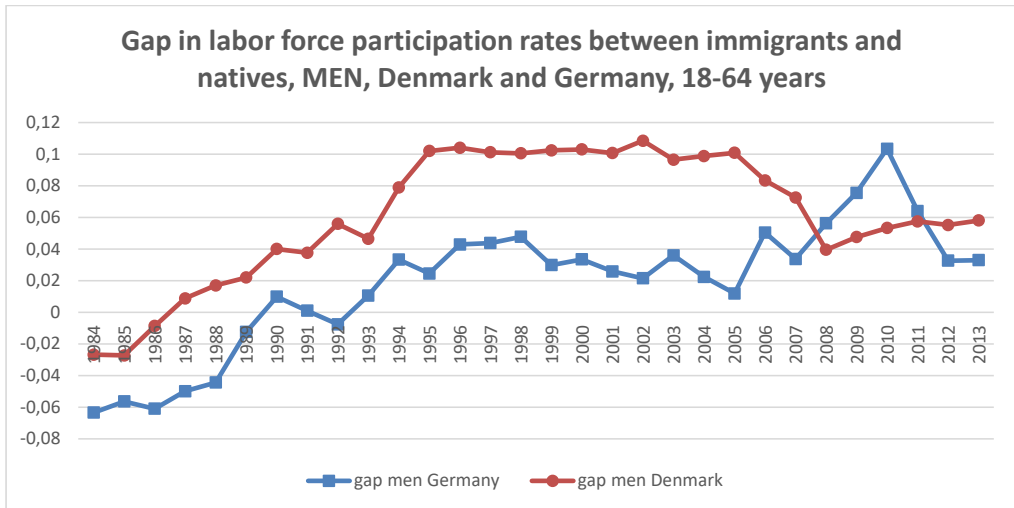


Figure 3. Gaps in labor force participation rates between immigrants from Turkey and natives, separately by gender, 18-64 years old, Denmark and Germany

While Figure 2 shows about the same gap between immigrants and natives in the two host countries, this is not the case when looking at the labor force participation rates - a concept that is closely related to poverty status - separately for women and men, as shown in Figure 3. For men, the initial job-related immigration is still evident in the mid-1980s where labor force participation is as high or higher among male immigrants than among natives. This shifts to a gap of about 10

percentage points in Denmark and 2-4 percentage points in Germany until the gaps end up at about the same level of 4-6% in 2013. Therefore, for men the native-immigrant gap in labor force participation rates was higher in Denmark than in Germany until 2007, after which we observe a rank reversal followed by a diminished gap by year 2013. For women the picture is the opposite: Throughout the period the gap is lower in Denmark than in Germany. As labor force participation for women is higher among natives in Denmark than in Germany for most of the period, the pattern in Figure 3 seems to reveal an adaptation among female immigrants from Turkey to the labor force participation among native women in the two host countries, i.e. a higher labor force participation in Denmark.

6. Estimation results, explanatory factors

Table 3 presents the estimates of marginal effects from the poverty risk regressions which are run on the five samples. The estimates show us how observable household characteristics affect the probability of being poor in 2013. Some common features are visible in all five sets of estimates.

First, having a higher number of children in the household increases the risk of being poor. The size of the effect differs across samples, ranging from only 0.5% up to 9.3%. In Denmark, an additional child increases the poverty risk by 9.3% among Danish immigrants, but it adds little to the poverty risk among Danish natives. Among Turks in Turkey, the effect is 7.6%, which is close to the estimate for immigrants in Denmark. In Germany, the estimate is smaller than the one in Turkey and little difference exists between the estimates for natives and immigrants. Part of the differences in the impact from the number of children may reflect that immigrant families on average have more children and that the German program for child benefits is progressive in the number of children (Clasen 2005), while the Danish program is proportional in the number of children.

Being married reduces the probability of being poor in all five samples, by about 3-8%. Comparing the two immigrant groups to Turks in Turkey, we see that the estimate for immigrants in Germany (-5.9%) is closer to the estimates for Turks in Turkey (-4.4%) than the one for immigrants in Denmark (-8.3%).

Being male increases the probability of being poor in Turkey (4.4%) and among immigrants in Denmark (3.8%). No statistically significant effect is found in Germany. Compared to being in the reference age category (18-25), a lower poverty risk is found for ages below 65 for all 5 groups. For the 65 years and older the poverty risk is significantly lower, except for older immigrants in

Denmark. Here, we find a significantly higher poverty risk in accordance with the findings in Jakobsen and Pedersen (2017).

Being in the labor force reduces the probability of being poor in all five samples, but the sizes of the estimates greatly differ, from about 3% (in Turkey) to 22-24% among immigrants in the two host countries. The estimates for the natives in the two countries vary from 7.7% to 10.8%. Evidently, labor market attachment is more important for being non-poor in the host countries than in Turkey. The large estimates (in absolute value) for immigrants signals the high poverty rates for those who do not participate in the labor market in the two host countries. Being well-educated is a powerful factor that reduces the probability of being poor in all five samples, but, once again, the sizes of the estimates greatly differ. Although the estimates are not directly comparable across countries because of the differences in the definitions of educational attainment, they are still comparable within countries. An important finding is that, in both host countries, having more years of education has a larger reducing effect on the poverty risk among immigrants than among natives. Finally, we notice that labor force participation and years of education are the only variables found to be significant for immigrants in Germany.

7. Decomposition of poverty differences

Next, Table 4 presents the results from a Fairlie decomposition for Germany and Denmark in 2013. The decompositions tell us what extent of the poverty difference between natives and immigrants can be explained by differences in the observed characteristics of the individuals. The results are based on full samples and rely on the full set of explanatory variables that we use in the poverty risk regressions (sex, age, marital status, the number of children in the household, education, and being in the labor force).

The table shows us, first, the difference between the predicted poverty rates of natives and immigrants, and the percent of the difference explained by the variables in the regressions. In Germany, the explanatory variables can explain 44.4% of the difference in poverty rates (-10,8 relative to -24.4%), which means that the remaining 55.6% is explained by the differences in the way the characteristics are linked to poverty and the differences in unobserved factors. In Denmark, observed characteristics can explain only 19.3% of the difference in poverty rates (-5.2 % relative to -27.1%). The tables also show us the contribution of each explanatory variable. In Germany, differences in educational attainment and in the number of children are the most important factors, which explain 66.57% and 53.18% of the difference, respectively. Differences in marital status and

being in the labor force act, in fact, to reduce the poverty difference between natives and immigrants, and not to increase it. These are not surprising, given the earlier findings that Turkish immigrants in Germany have similar LFPR (especially men) to natives and most of the immigrants are married; both factors are negatively correlated with being poor. In Denmark, as in Germany, differences in educational attainment and in the number of children are important. But, unlike in Germany, age is the most important factor in explaining the differences in poverty (with a share of 63.78%) and being in the labor force is also important (with a share of 18.81%).

Table 5 presents poverty decomposition statistics by immigrant status in the two host countries and in Turkey in 2013 (the final year of analysis) and in 2008 (the last year before the Great Recession). The poverty indices FGT(0), FGT(1), and FGT(2) confirm that poverty is more prevalent and more severe among Turkish immigrants than natives in both host countries.⁵

We observe some similar features of immigrants in the two host countries. In both countries the population share, and the poverty share of Turkish immigrants has been slightly increasing over time. However, dissimilarities are also seen: From 2008 to 2013, the poverty rate (FGT(0)) decreased among immigrants in Germany, whereas it increased among immigrants in Denmark (also see Figure 2) in accordance with the cyclical profiles in the host countries where the negative impact from the great recession was harder in Denmark, resulting in greater divergence in poverty rates between natives and immigrants in Denmark. Further, as mentioned above there has in recent years been several policy changes in Denmark reducing benefits for newly arrived people. In Turkey, poverty statistics are in between the natives and immigrants in the two countries, as shown previously in Figure 2.

⁵ A property of the FGT(2) index is that, compared to the FGT(1) index, it assigns a higher weight to incomes that are farther below the poverty threshold. In the Danish data, a very small number of incomes are negative due to administrative rules that allows deductions from earlier years to appear in the current year. To calculate FGT(2) for Denmark, we exclude negative incomes, thereby censoring incomes from below at zero, just as in the German data.

Table 3. Poverty Risk, Turkey, Germany, and Denmark, natives and immigrants from Turkey, 2013 (Marginal effects in probit regressions)

	Turks in Turkey		Germany, natives		Germany, immigrants		Denmark, natives		Denmark, immigrants	
	Marg. effect	Z value	Marg. effect	Z value	Marg. effect	Z value	Marg. effect	Z value	Marg. effect	Z value
No. of children	0.076	37.6	0.053	11.6	0.038	1.6	0.005	29.6	0.093	42.3
Married	-0.044	-5.8	-0.081	-10.9	-0.059	-0.8	-0.033	-105.4	-0.083	-14.9
Male	0.046	7.3	0.001	0.2	0.009	0.2	0.008	31.3	0.038	8.7
Age 25-34	-0.076	-6.7	0.015	1.1	0.025	0.3	-0.031	-76.7	-0.057	-8.2
Age 35-44	-0.098	-8.2	-0.042	-3.0	0.031	0.3	-0.069	-151.8	-0.062	-8.4
Age 45-54	-0.072	-5.8	-0.040	-3.1	-0.067	-0.7	-0.097	-210.7	-0.089	-10.9
Age 55-59	-0.109	-7.0	-0.003	-0.2	-0.261	-1.9	-0.133	-192.0	-0.172	-13.4
Age 60-64	-0.159	-9.7	-0.024	-1.5	0.177	0.9	-0.171	-226.5	-0.168	-11.2
Age 65+	-0.156	-12.0	-0.085	-6.4	-0.065	-0.4	-0.177	-371.1	0.062	5.1
Labor force	-0.031	-4.7	-0.077	-8.6	-0.217	-3.4	-0.108	-332.5	-0.239	-52.4
Educ. years	-	-	-0.026	-14.9	-0.055	-3.7	-	-	-	-
Primary school	-0.120	-16.0	-	-	-	-	-	-	-	-
Secondary school	-0.173	-16.9	-	-	-	-	-	-	-	-
High school	-0.263	-25.8	-	-	-	-	-	-	-	-
University	-0.349	-21.1	-	-	-	-	-	-	-	-
Vocational	-	-	-	-	-	-	-0.032	-106.9	-0.101	-18.4
Medium long	-	-	-	-	-	-	-0.046	-110.3	-0.165	-17.8
Long theoretical	-	-	-	-	-	-	-0.083	-113.6	-0.242	-12.9
No. of obs.	19915		19734		698		4165128		43125	
Pseudo R ²	0.208		0.109		0.108		0.186		0.108	

Source: Authors' estimations based on Danish register data, German SOEP, and Turkish SILC (including all in ages 18 and up).

Notes: All regressions include a constant.

Table 4: Fairlie decomposition, Germany and Denmark, 2013

<i>Germany</i>		<i>Denmark</i>	
	Coefficient	%	p-value
Predicted poverty rate (natives)	0.102		0.087
Predicted poverty rate (immigrants)	0.346		0.358
Difference	-0.244		-0.271
Explained difference	-0.108		-0.052
Percent explained	44.4		19.3
<u>Contributions from inter-group differences in:</u>			
Male	0.000	0.06	0.90
Age	-0.004	3.35	0.42
Number of children in HH	-0.058	53.18	0.00
Marital status	0.020	-18.71	0.00
Education	-0.072	66.57	0.00
In labor force	0.005	-4.55	0.00
N	20,432		N
			4208253

Notes: The ‘%’ column shows the percentage of the explained difference that is attributable to a particular group of explanatory variables. Source: Authors’ estimations based on Danish register data and German SOEP data (including all in ages 18 and up).

Table 5: Poverty in the five groups in 2008 and 2013

2008	Germany		Denmark		Turkey
	Natives	Immigrants	Natives	Immigrants	
Headcount poverty rate -FGT(0) (%)	11.22	43.48	8.83	32.62	25.20
Poverty gap -FGT(1) (%)	2.48	10.01	5.13	9.01	8.02
Squared poverty gap -FGT(2) (%)	0.94	3.76	0.85	5.63	4.50
Average income	18688	10942	26702	18244	3564
Average income among the poor	7123	7040	6007	10381	1076
Average poverty gap among the poor	2023	2106	8335	3961	503
Population share (%)	97.87	2.13	98.99	1.01	-
Poverty share (%)	92.21	7.79	96.37	3.63	-
Poverty risk	0.94	3.65	0.97	3.59	-

2013	Germany		Denmark		Turkey
	Natives	Immigrants	Natives	Immigrants	
Headcount poverty rate -FGT(0) (%)	11.83	38.15	8.78	36.93	22.17
Poverty gap -FGT(1) (%)	2.57	9.68	2.87	9.94	7.31
Squared poverty gap -FGT(2) (%)	0.95	3.72	0.94	5.54	3.59
Average income	20474	12632	31498	20076	4250
Average income among the poor	7731	7375	10858	11792	1533
Average poverty gap among the poor	2153	2509	5274	4341	552
Population share (%)	97.37	2.63	98.87	1.13	-
Poverty share (%)	91.98	8.01	95.43	4.57	-
Poverty risk	0.94	3.05	0.96	4.06	-

Source: Authors' calculations based on German SOEP data and Danish register data.

Notes: Includes all ages 18 and up. Incomes are expressed in euros based on mid-year exchange rates. Weighted statistics are presented for Germany and Turkey.

Poverty share= population share* FGT(0) in subgroup / overall FGT(0).

Poverty risk= poverty share/ population share.

Next, we decompose poverty rate (FGT(0)) in 2008 and 2013 by population subgroups. We define subgroups by family type, labor market status, and age and education of the household head. Here, the aim is to identify the specific subgroups in Germany and Denmark that are more vulnerable to poverty. The results are presented in Tables 6 and 7.

The results reveal strikingly high poverty rates in some subgroups. For example, Table 6 shows that, among immigrants in Germany, 54.88% of households with children and only one adult and 50.67% of larger households (with more than two children or two adults) are poor (panel a).

Moreover, 64.14% of households in the 60-64 age group and 55.72% of households in the 65+ age group are poor (panel c). For these subgroups, poverty rates were high in 2008 as well.

In some subgroups, both natives and immigrants face high poverty risk. For example, the poverty risk of households with children and only one adult is 4.38 for immigrants and 3.12 for natives (Table 6, panel a, 2013). In general, poverty risk is higher among immigrants than natives, but some subgroups face really high poverty risk unlike their equivalent native groups. For many immigrant groups in Germany, poverty risk is greater than 3, which means that the poverty share of the group is more than 3 times its population share. For example, in larger households poverty risk is 4.05 among immigrants, but 2.45 among natives. In households with children where only one adult is employed, the risk is 3 among immigrants, but 1.28 among natives. In households with a head who is 60 or older, poverty risk is 4.00-4.61 among immigrants, but only 0.82-0.95 among natives. Moreover, in households where the head has 16 or more years of education, poverty risk is 3.03 among immigrants, but 0.48 among natives. Comparing 2013 to 2008, in Germany, we see no substantial changes in the poverty risk of immigrants relative to the risk for natives.

Table 7 shows that among immigrants in Denmark, some subgroups face very high poverty rates, exceeding 50%. For example, among immigrant households with children, 56.41% of those with only one adult, 53.32% of those with only one employed adult, and 73.14% of those with no employed adult are poor (panel b, 2013). Grouped according to the age of the household head, 58.76% of households in the 65+ age group are poor (panel c, 2013).

Like the results in Germany, in Denmark, poverty risk statistics for immigrants show us that some subgroups face a very high poverty risk unlike the natives in the same subgroup. In general, poverty risk is higher among immigrants than natives. In some sub-groups, poverty risk is, however, high both for natives and immigrants. For example, the poverty risk of households with children with no employed adult is 8.04 for immigrants and 6.22 for natives (panel b, 2013); the poverty risk of households with a head younger than 30 is 4.48 for immigrants and 3.51 for natives (panel c, 2013).

In some other groups, the risk is substantially higher among immigrants than natives. For example, in households with children and only one adult poverty risk is 6.20 among immigrants, but 3.17 among natives; in larger households, poverty risk is 3.51 among immigrants, but only 0.38 among natives (panel a, 2013). In households with children where only one adult is employed, the risk is 5.86 among immigrants, but 1.67 among natives (panel b, 2013). In households with a head who is 65 or older, poverty risk is 4.85 among immigrants, but only 0.37 among natives (panel c,

2013). Moreover, in households where the head has less than 9 years of education, poverty risk is 3.85 among immigrants but 1.34 among natives (panel d, 2013). Comparing 2013 to 2008, in Denmark, as in Germany, we see no substantial changes in the poverty risk of immigrants relative to the risk for natives.

To summarize the results of poverty decomposition analyses, we find that, on average, in both host countries the poverty risk for immigrants is 3-4 times the risk for natives (Table 5). Some immigrant subgroups are especially vulnerable. In both countries, immigrant households with children face high poverty risk. The following immigrant households are at particularly higher poverty risk compared to natives: households with 2 adults and 1-2 children; with children and with only one employed adult; with more than 2 adults or 2 children. The risk for such families is lower in Germany than it is in Denmark, partly because the German program for child benefits is progressive in the number of children, whereas the Danish program is proportional in the number of children.

On the other hand, regardless of immigrant status, in households with children, having only one adult or having no one employed increases the poverty risk. It is striking that in the two countries with different welfare regimes, household types that face high poverty risk are the same. In both countries, elderly immigrants face higher poverty risk than elderly natives reflecting that both countries apply conditions for eligibility for old age pension dependent on duration of residence in the host country.

As we have seen before, the Fairlie decomposition analyses have shown that observed characteristics can explain only 19.3% and 44.4% of poverty differences between natives and immigrants in Denmark and Germany, respectively. This means that the larger portion of the immigrant-native poverty difference is related to differences in unobservables or the differences in how the market values observed characteristics or discrimination. Regardless of this finding, poverty risk regressions and poverty decompositions show us that observed characteristics, such as age or the number of children in the household, are still of crucial importance in identifying immigrant households that are under high poverty risk.

Table 6: Poverty among natives and Turkish immigrants in Germany, decomposed according to household type (2008 and 2013)

	2008						2013					
	Poverty rate (FGT(0))		Poverty share		Poverty risk		Poverty rate (FGT(0))		Poverty share		Poverty risk	
	Native	Immig	Native	Immig	Native	Immig	Native	Immig	Native	Immig	Native	Immig
Single-adult hh, no children	15.58	53.42	36.48	1.02	1.31	4.48	17.14	38.73	39.18	1.28	1.37	3.09
Childless couples	6.82	60.28	26.80	3.52	0.57	5.06	6.53	42.25	24.45	2.60	0.52	3.37
a Hh with 1 adult and child(ren)	49.41	32.65	10.07	0.19	4.15	2.74	39.11	54.88	8.61	1.37	3.12	4.38
Hh with 2 adults and 1-2 children	10.01	21.61	15.73	1.56	0.84	1.81	11.05	25.42	15.18	1.84	0.88	2.03
Larger households	18.16	63.31	3.14	1.50	1.52	5.31	30.62	50.67	4.57	0.93	2.45	4.05
Hh with children; > 1 adult employed	5.23	21.59	5.65	0.96	0.44	1.81	6.52	7.98	5.21	0.20	0.52	0.63
b Hh with children; only 1 adult employed	19.89	35.35	13.85	1.74	1.67	2.96	16.15	37.86	9.44	0.66	1.28	3.00
Hh with children; no one employed	58.11	63.83	9.23	0.59	4.87	5.35	39.86	45.24	13.47	3.32	3.16	3.58
HH head younger than 30	29.62	64.44	18.33	0.58	2.23	4.86	31.49	41.28	16.70	0.83	2.26	2.96
c HH head 30-45	11.93	26.84	23.77	1.87	0.90	2.02	13.68	36.40	20.32	2.27	0.98	2.61
HH head 46-59	11.49	50.71	20.53	0.95	0.87	3.83	10.93	25.41	21.84	0.95	0.78	1.82
HH head 60-64	10.56	55.42	5.50	0.73	0.80	4.18	13.21	64.14	7.54	0.43	0.95	4.61
HH head 65+	10.58	62.34	26.37	1.37	0.80	4.70	11.37	55.72	27.79	1.32	0.82	4.00
Education HH head <=9 years	27.38	48.46	22.13	2.80	2.07	3.66	32.85	44.04	23.39	2.59	2.36	3.16
d Education HH head 10-12 years	12.19	28.49	51.94	1.68	0.92	2.15	12.47	31.69	49.17	1.89	0.90	2.28
Education HH head 13-15 years	11.56	19.41	12.51	0.10	0.87	1.46	11.68	39.23	13.30	0.26	0.84	2.82
Education HH head >=16 years	6.29	85.68	7.91	0.93	0.47	6.46	6.74	42.21	8.33	1.07	0.48	3.03

Notes: Includes all ages 18 and up. Weighted statistics are presented. Poverty share= population share* FGT(0) in subgroup / overall FGT(0). Poverty risk= poverty share/ population share. Source: Authors' calculations based on German SOEP data.

Table 7: Poverty among natives and Turkish immigrants in Denmark, decomposed according to household type (2008 and 2013)

	2008						2013					
	Poverty rate (FGT(0))		Poverty share		Poverty risk		Poverty rate (FGT(0))		Poverty share		Poverty risk	
	Native	Immig	Native	Immig	Native	Immig	Native	Immig	Native	Immig	Native	Immig
Single-adult hh, no children	15.98	48.16	43.00	0.79	1.76	5.31	18.16	52.85	51.40	1.20	2.00	5.81
a Childless couples	7.31	31.94	25.39	0.54	0.81	3.52	5.52	28.86	19.42	0.62	0.61	3.17
Hh with 1 adult and child(ren)	25.72	52.70	4.63	0.14	2.83	5.81	28.86	56.41	5.45	0.17	3.17	6.20
Hh with 2 adults and 1-2 children	7.21	34.97	8.86	0.65	0.79	3.85	7.12	38.66	8.28	0.79	0.78	4.25
Larger households	4.34	26.63	14.49	1.51	0.48	2.93	3.44	31.91	10.87	1.79	0.38	3.51
Hh with children; > 1 adult employed	4.02	17.62	11.19	0.72	0.44	1.94	2.11	19.29	5.36	0.67	0.23	2.12
b Hh with children; only 1 adult employed	17.07	51.32	8.21	0.92	1.88	5.66	15.22	53.32	8.11	1.07	1.67	5.86
Hh with children; none employed	50.37	68.75	5.49	0.52	5.55	7.58	56.63	73.14	8.78	0.81	6.22	8.04
HH head younger than 30	32.30	42.44	38.83	0.86	2.82	3.70	42.47	54.28	50.09	1.15	3.51	4.48
c HH head 30-45	10.00	36.46	24.29	1.28	0.87	3.18	10.78	39.75	21.81	1.43	0.89	3.28
HH head 46-59	5.33	27.75	11.09	0.36	0.47	2.42	5.85	31.75	11.93	0.59	0.48	2.62
HH head 60-64	4.14	29.84	3.34	0.10	0.36	2.60	3.44	27.37	2.29	0.07	0.28	2.26
HH head 65+	9.16	76.93	19.50	0.36	0.80	6.71	4.54	58.76	10.29	0.36	0.37	4.85
Education HH head <=9 years	14.64	41.01	40.97	1.60	1.29	3.62	16.14	46.34	38.74	2.02	1.34	3.86
d Education HH head 10-12 years	11.32	35.40	42.89	0.71	1.00	3.13	12.48	39.89	45.50	0.98	1.04	3.32
Education HH head 13-15 years	7.24	26.44	11.75	0.16	0.64	2.34	6.73	26.65	10.70	0.21	0.56	2.22
Education HH head >=16 years	3.40	20.18	1.91	0.02	0.30	1.78	2.99	13.04	1.84	0.02	0.25	1.09

Notes: Includes all ages 18 and up. Poverty share= population share* FGT(0) in subgroup / overall FGT(0). Poverty risk= poverty share/ population share. Source: Authors' calculations based on Danish register data.

Table 8: Poverty in Turkey, decomposed according to household type (2008 and 2013)

		2008			2013		
		Poverty rate (FGT(0))	Poverty share	Poverty risk	Poverty rate (FGT(0))	Poverty share	Poverty risk
a	Single-adult hh, no children	3.08	0.19	0.12	11.87	1.10	0.50
	Childless couples	6.28	1.96	0.25	6.35	2.82	0.27
	Hh with 1 adult and child(ren)	8.12	0.10	0.32	17.77	0.38	0.76
	Hh with 2 adults and 1-2 children	13.19	10.12	0.52	11.88	10.61	0.51
	Larger households	31.12	87.63	1.24	30.39	85.09	1.29
b	Hh with children; > 1 adult employed	30.46	37.80	1.05	24.53	31.14	0.87
	Hh with children; only 1 adult employed	28.85	45.72	0.99	30.56	47.32	1.09
	Hh with children; none employed	50.42	13.67	1.73	56.80	14.64	2.02
c	HH head younger than 30	24.37	5.27	0.97	20.98	3.07	0.89
	HH head 30-45	29.50	53.75	1.17	27.32	46.82	1.16
	HH head 46-59	21.65	27.06	0.86	22.99	33.31	0.98
	HH head 60-64	21.29	4.89	0.84	16.17	5.12	0.69
	HH head 65+	20.06	9.03	0.80	18.69	11.69	0.79
d	Education HH head <=9 years	33.47	87.82	1.33	31.67	81.95	1.35
	Education HH head 10-12 years	14.62	5.78	0.58	22.25	10.55	0.95
	Education HH head 13-15 years	10.23	6.11	0.41	9.93	6.69	0.42
	Education HH head >=16 years	0.83	0.29	0.03	1.58	0.81	0.07

Notes: Includes all ages 18 and up. Weighted statistics are presented. Poverty share= population share* FGT(0) in subgroup / overall FGT(0). Poverty risk= poverty share/ population share.

Source: Authors' calculations based on Turkish SILC data.

Poverty statistics in Figure 2 imply that the poverty rate in Turkey is lower than the rate for immigrants in Germany and Denmark, but higher than the rate for natives in these two countries. To see the differences across population subgroups, we decompose poverty in the Turkish SILC sample. The results, which are presented in Table 8, show large differences in poverty rates across subgroups. In particular, households with children, especially where no adult is employed, large households and households whose heads have little education have a high risk of poverty, similar to the structure observed in the two host countries. However, with the highest poverty risk estimated to be 2.02, poverty risk in Turkey is nowhere close to the figures reported in the two host countries, where poverty risk for Turkish immigrants can go up to 6 or even 7 in some subgroups (Tables 6 and 7). As a result, we can say that some groups of Turkish immigrants live in a much higher

relative poverty risk in the two host countries, compared to Turks with similar characteristics who live in the home country.

8. Conclusions: Convergence to host country poverty rates?

Considering the evidence we have collected in this paper, we can say that Turkish immigrants in Germany and Denmark live under a much higher poverty risk than natives in these countries and that convergence to native poverty rates is far from accomplished. Some immigrant subgroups, such as households with children and elderly households, are especially vulnerable. It is noteworthy that in the two countries with different welfare regimes, the household types that face high poverty risk are the same.

Comparing the relative position of Turkish immigrants across the two host countries, we find that immigrants in Denmark fare somewhat worse than their counterparts in Germany. This is visible in the increased poverty risk for immigrants in Denmark and decreased risk in Germany between 2008 and 2013 (Tables 6-7) and the higher poverty risk for many subgroups (such as households with children and the elderly) in Denmark than in Germany (Tables 8-9).

Decomposition analyses tell us that in Germany, compared to Denmark, a greater part of the poverty difference can be explained by the characteristics of the disadvantaged groups. This means that in Denmark, the poverty difference between immigrants and natives is more closely related to the combined influence of market valuation of characteristics and discrimination. Moreover, comparing the evidence from years 2008 and 2013, we can say that poverty of immigrants (relative to natives with similar characteristics) has worsened over time in Denmark, whereas it has somewhat improved in Germany. This, however, also reflects that the Danish economy was hit more severely than the German economy by the Great Recession beginning in 2008.

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