

Poster Session #2

Time: Thursday, August 9, 2012 PM

*Paper Prepared for the 32nd General Conference of
The International Association for Research in Income and Wealth*

Boston, USA, August 5-11, 2012

**At Home and Abroad – Does Income Distribution among Immigrants
Adapt to Country of Residence?**

Asena Caner and Peder J. Pedersen

For additional information please contact:

Name: Asena Caner

Affiliation: TOBB ETU, Turkey

Email Address: acaner@etu.edu.tr

This paper is posted on the following website: <http://www.iariw.org>

At Home and Abroad – Does Income Distribution among Immigrants Adapt to Country of Residence?

Asena Caner¹ and Peder J. Pedersen²

July 13, 2012

Abstract

Germany and Denmark have received a large number of Turkish immigrants within the last few decades. We ask in this study how the indicators of income distribution, income mobility and poverty for Turkish citizens living in their home country compare to the indicators for migrants from Turkey living in two European countries, Denmark and Germany. Our focus is on identifying the extent to which adaptation occurs to the income distribution in Denmark, and Germany, relative to the income distribution of individuals staying at home. Denmark and Germany are selected because of the availability of micro data, and because these two countries represent different welfare state models in the Esping-Andersen classification. Our data sources are the Income and Living Conditions Survey in Turkey, the German Socio-Economic Panel in Germany, and annual panel data based on administrative registers in Denmark. The micro datasets contain a number of background variables on demography, education, income and labor market status. We find evidence for adaption of Turkish immigrants to the country of residence in some aspects. We try to link our findings to the differences in the welfare regimes in the two host countries.

Key words: income distribution, migration, adaptation

JEL classifications: D31, F22, I32

¹ Department of Economics, TOBB University of Economics and Technology, Ankara, Turkey. E-mail: acaner@etu.edu.tr

² Department of Economics and Business, Aarhus University, Denmark. E-mail: ppedersen@econ.au.dk

Acknowledgements: The authors are grateful to TURKSTAT for providing the Turkish data, and to Güllü Çalık and İlkay Kahveci from TURKSTAT for patiently answering our numerous questions. Murat Dönmez kindly provided help with literature review. Palle Sørensen and Rune Smet have been most helpful with efficient research assistance.

1. Introduction

European countries have received immigrant workers for many years, mainly with the motivations to satisfy the excess demand for labor and to reduce the burden on public pension programs in ageing societies. Germany has been an immigration country for many decades, mainly since the World War II. The share of foreign nationals in the German population increased from 1.0 percent in 1951 to 8.9 percent in 2002 (Riphahn, 2004). Denmark's immigration policy began later with the introduction of a guest worker program in the 1960s. The share of foreign nationals is currently 7 percent of the population.

Immigration of young people could help solve the demographic problem in ageing and labor deficient countries. Yet, immigration brings its own problems. An influx of immigrants may have undesirable impacts on the labor market, public finances and social conditions. For instance, recent studies in a number of European countries show that immigrants actually tend to be more welfare dependent than natives (examples are Riphahn (2004), Hammarstedt (2000), and Storesletten (2003)). Therefore, it is important to know if the income distribution and the labor market status of immigrants adapt to the distribution in the host country or not, and further to know over which duration of time adaptation and labor market integration occurs.

Both Germany and Denmark have received a substantial number of Turkish immigrants for many years. Currently, there are about 2 million Turkish immigrants in Germany and 36 thousand in Denmark³. In this paper, we study how close the income distribution and indicators of poverty and income mobility of Turkish immigrants have adapted to the distribution in two specific host countries, namely Germany and Denmark. In particular, we aim to determine whether Turkish immigrants have moved away from the original distribution characteristics in their home country and how near they get to the distribution characteristics in Germany and Denmark. The host countries that we choose for the study offer two different environments to Turkish immigrants with respect to the 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 distribution characteristics in the host country.

³ A recent summary of the number and distribution of people of Turkish origin in European host countries can be found in Table A1 in the Appendix.

2. Other studies

There are very few studies on the adaptation of immigrants to the distribution in the host country. The literature on inequality is focused mostly on cross national differences in distribution of income and poverty incidence; yet these studies do not investigate the distributional characteristics of residents in the host country and compare them to the corresponding indicators among immigrants. The literature on immigration either deals with identifying the determinants of immigration, or investigates how the arrival of immigrants generates an economic effect in the host country, such as a change in wages or in inequality.

Deding et al. (2010) presents a comparative analysis of the distribution among natives and immigrants in Denmark and Germany for the period 1984-2003. They find higher inequality for immigrants than for natives in Denmark and the opposite pattern for Germany. They also decompose two inequality measures to show that immigrants contributed to the rise in inequality in these two countries, but that the main contribution of immigrants was through the rise in their population share and not through a rise in inequality among immigrants. Picot and Hou (2003) contains a specific analysis of the rising poverty among immigrants in Canada. For Germany, Frick et al. (1997) found that immigration had increased inequality and poverty in Germany, however only slightly. Büchel and Frick (2004) is an interesting contribution comparing market income distribution and public sector redistribution among immigrants and natives in the UK and West Germany. They find the expected impact from two types of European welfare states. Kim and Tebaldi (2009) demonstrates that immigration is not the explanatory factor behind rising poverty in the USA. Between 1998 and 2004 poverty rates fell much faster among immigrants than among natives. None of these studies examine whether and to what extent immigrants adapt to the income distribution in the host country.

3. Background factors

To gain some insight on the aggregate emigration propensity of Turkish people, we first examine the factors that we would expect to influence the decision to migrate. These factors are differentials between Turkey and the other two countries in income, income growth rate, composition of the economy on sectors, labor market conditions, the share of the youth in the population and indicators of well-being such as education and health (See, for example, Sorhun (2011) for a list of

determinants of immigration propensity). Then, we provide information on the phases of Turkish immigration to Denmark and to Germany.

Descriptive statistics on income, labor markets, health and education in the three countries

Table 1 presents data for the period 1985-2010, reported for every five years. Despite being the poorest among the three countries in terms of per capita GDP, Turkey has the highest average economic growth rate as shown in the table. With a higher growth rate, Turkish per capita income has risen relative to Danish and German per capita income. In particular, it has risen from 13% to 18% of Danish per capita income and from 17% to 21% of German per capita income (not shown in the table). Nevertheless, the absolute income gap is still substantial as of 2010.

Table 1. Descriptive statistics on income, labor market indicators, population in Turkey, Denmark and Germany

	1985	1990	1995	2000	2005	2010
Turkey						
GDP per capita (constant 2000 US\$)	2,876	3,448	3,714	4,189	4,887	5,349
GDP per capita growth (in previous 5 years, average annual %)		3.7	1.5	2.4	3.1	1.8
Unemployment, total (% of total labor force)	11.2	8	7.6	6.5	10.6	11.9
Unemployment, youth total (% of total labor force ages 15-24)	-	16	15.6	13.1	19.9	21.7
Employment to population ratio, 15+, total (%)	-	-	50.4	46.6	42.2	43.6
Population (in 1000)	49,400	54,130	58,865	63,628	68,143	72,752
Population growth (in previous 5 years, average annual %)		1.8	1.7	1.6	1.4	1.3
Denmark						
GDP per capita (constant 2000 US\$)	22,556	24,098	26,572	29,980	31,439	30,532
GDP per capita growth (in previous 5 years, average annual %)		1.3	2.0	2.4	1.0	-0.6
Unemployment, total (% of total labor force)	7.8	8.3	7	4.5	4.8	7.4
Unemployment, youth total (% of total labor force ages 15-24)	11.5	11.5	9.9	6.7	8.6	13.8
Employment to population ratio, 15+, total (%)	-	-	60.8	62.9	62.7	59.8
Population (in 1000)	5,114	5,141	5,233	5,340	5,419	5,547
Population growth (in previous 5 years, average annual %)		0.1	0.4	0.4	0.3	0.5
Germany						
GDP per capita (constant 2000 US\$)	17,038	19,601	21,061	22,946	23,564	25,306
GDP per capita growth (in previous 5 years, average annual %)		2.8	1.4	1.7	0.5	1.4

average annual %)						
Unemployment, total (% of total labor force)	-	-	8.1	7.7	11.1	7.1
Unemployment, youth total (% of total labor force ages 15-24)	-	-	8.2	8.4	15.2	9.7
Employment to population ratio, 15+, total (%)	-	-	53.5	53.7	51.9	55.4
Population (in 1000)	77,685	79,433	81,678	82,212	82,469	81,777
Population growth (in previous 5 years, average annual %)		0.4	0.6	0.1	0.1	-0.2

Source: World Bank, World Development Indicators & Global Development Finance.
(<http://databank.worldbank.org/ddp/home.do?Step=1&id=4>)

All three countries experienced a shift in the sectoral composition of employment and value added, as depicted in Figures 1 and 2. In Germany and Denmark, the transition was from industry to services as the share of agriculture in both employment and value added had already declined to less than 10% by 1985. The services sector made up around 70% of both employment and value added in Germany, while the figure was around 77% in Denmark. In contrast, Turkey moved from being an agricultural economy to an industry and services economy. The share of agriculture in value added dropped from 20% in 1985 to about 10% in 2010. The share of agriculture in employment declined too, from 45% in 1985 to about 24% in 2010, but it was still high compared with the other two economies. For comparison, agricultural employment was only 2.4% in Denmark and 1.6% in Germany. Obviously, a substantial share of Turkish population is still dependent on agricultural activities.

Comparing Denmark and Germany with Turkey in terms of some labor market indicators, we see that Turkey is less successful in employing its people. The difference in unemployment between Turkey and the other two countries is visible especially in youth unemployment rates which are 5-12 percentage points higher in Turkey. Employment to population ratio is lower in Turkey with a more pronounced difference between Denmark than with Germany. The ratio in Turkey is 3 to 12 percentage points lower than the ratio in Germany, but it is 10 to 20 percentage points lower than the ratio in Denmark.

Germany is the most populous country in the group with more than 81 million people in 2010. Turkey, with a population mark of about 73 million people, stood in between Germany and Denmark as of year 2010. Denmark had 5.5 million people in 2010. Population growth rate has been the greatest in Turkey, where the average annual rate in five-year periods was in the range 1.3-1.8%, whereas the rates in Germany and Denmark were at most 0.6% per year on average. In Germany, population decreased between 2005 and 2010. The three countries have very different age distributions. Turkey is the country with the youngest population. As shown in Figure 3, the majority of Turkish people were younger than 35 in 2005. The share of the 15-34 year old people, the group that would be expected to be the most likely to migrate for education or employment, is the highest in Turkey with 36.2%. In Germany and Denmark, the 35-64 age group was 42.9 and 41.7 percent of the population, whereas in Turkey the same group was only 29.8 percent of the population.

The three countries also differ with respect to education and health indicators. The average years of schooling in Denmark is around 10; in Germany it has risen from 6 in 1985 to almost 12 in 2010. In contrast, Turkey has an average of 7 years of schooling in 2010. Despite a rising trend since 1985, the country is far behind the other two in terms of average educational achievement. As expected, a bigger share of the population has completed tertiary education in Denmark and Germany than Turkey. Furthermore, the share of population with no education is almost zero in Denmark, around 4-5% in Germany, but still at 10.8% in Turkey in 2010, despite a declining trend since 1985. Life expectancy at birth has risen over time in all three countries; yet there is still a gap in 2010 between Turkey (73.7 years) and the other two countries (Germany at 80 years and Denmark at 79.1 years).

Noting the differences in education and health indicators, it is perhaps not surprising that Germany and Denmark spend much more on health and education. Public expenditure on education as a percent of GDP is about 3% in Turkey, about 8% in Denmark, and about 4.5% in Germany. Spending on health is higher in Denmark and Germany than in Turkey both on a per capita basis and as a share of the GDP.

Although Denmark and Germany have similar education and health indicators, they have quite different welfare systems. Denmark has a large welfare state financed by a high income tax rate. As presented in Table 2, tax revenues constitute a much larger part of the GDP in Denmark (more than 30%) compared with Turkey (around 20%) and Germany (11-12%).

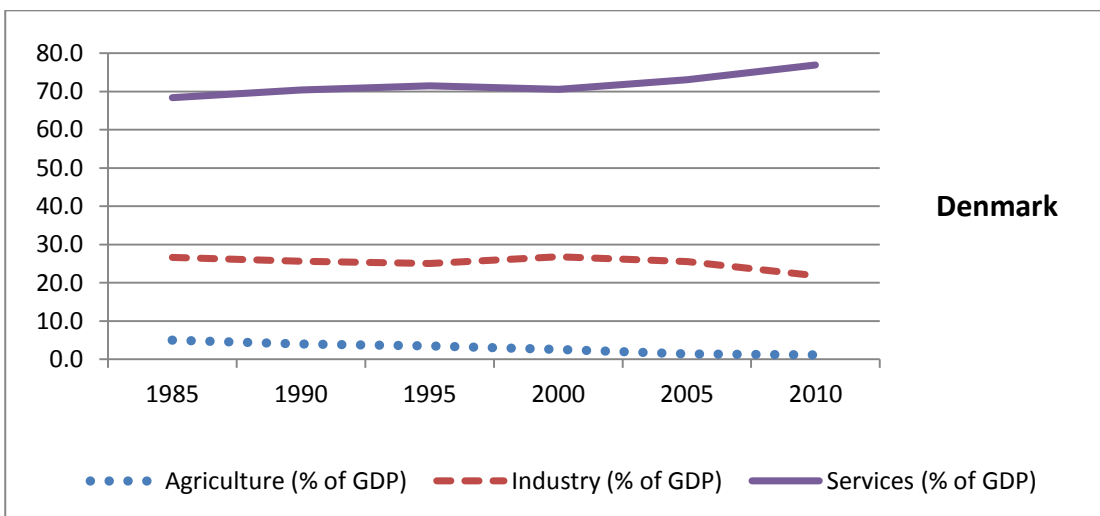
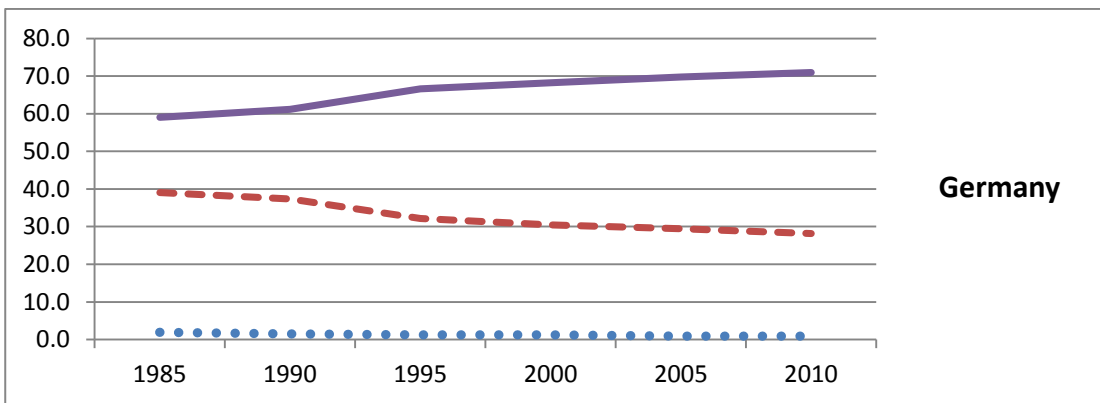
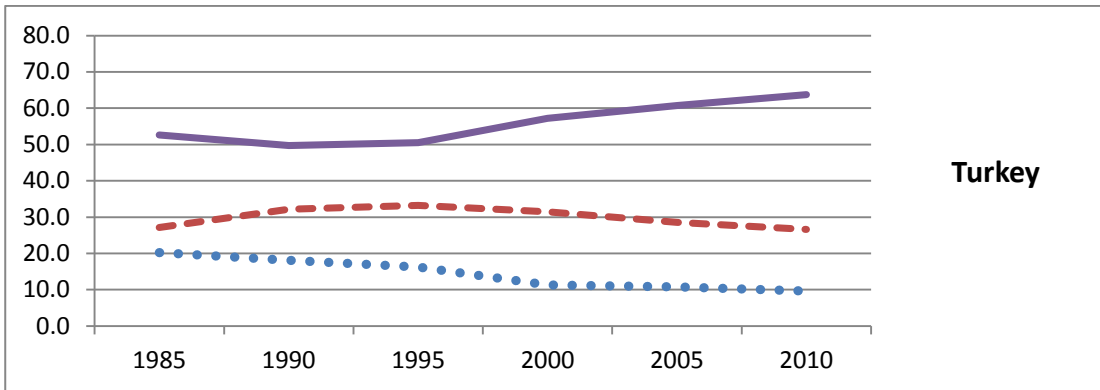


Figure 1. Shares of agriculture, industry and services in the value added.

Source: World Bank. (<http://databank.worldbank.org/ddp/home.do?Step=1&id=4>)

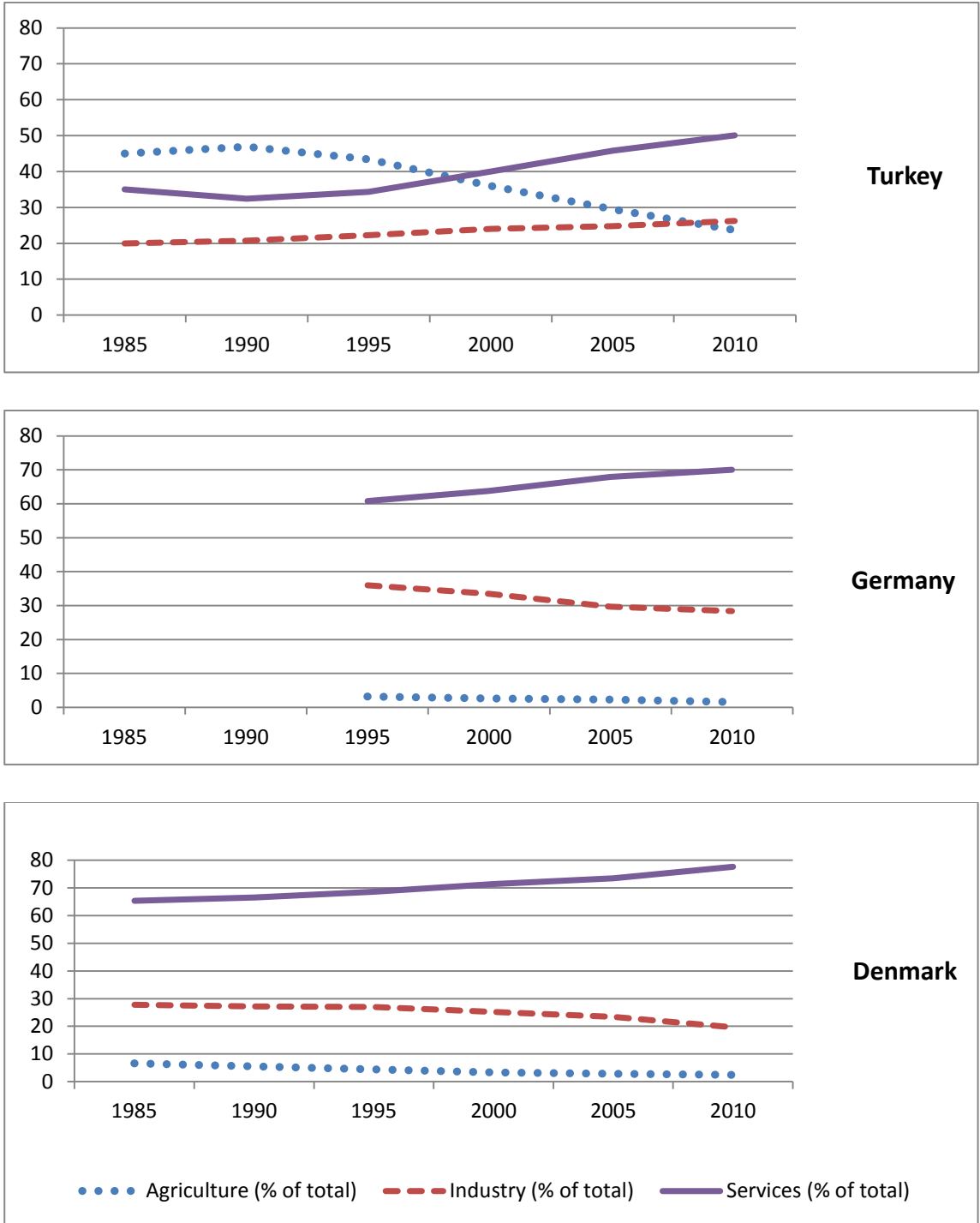


Figure 2. Shares of agriculture, industry and services in employment.

Source: World Bank. (<http://databank.worldbank.org/ddp/home.do?Step=1&id=4>)

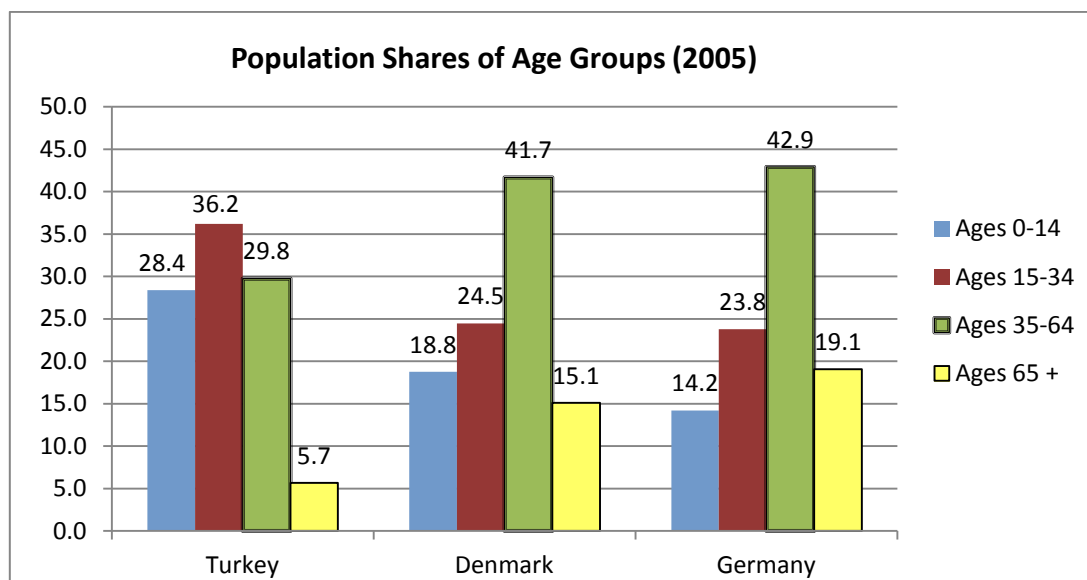


Figure 3. Population shares of age groups in Turkey, Denmark and Germany

Source: World Bank. (<http://databank.worldbank.org/ddp/home.do?Step=1&id=4>)

Table 2. Descriptive statistics on education and health in Turkey, Denmark and Germany

	1985	1990	1995	2000	2005	2010
Turkey						
Average years of total schooling (age 15+)	4.6	5.0	5.4	6.1	6.5	7.0
Percent no education (age 15+)	31.2	27.4	23.8	15	11.9	10.8
Percent completed tertiary (age 15+)	6.3	5.8	5.4	5.0	4.2	5.3
Public expenditure on education as % of GDP	1.8	-	-	2.6	2.9	-
Life expectancy at birth, total (years)	60.1	63.1	66.1	69.4	72.1	73.7
Health expenditure per capita (current US\$)	-	-	84	204	382	678
Health expenditure, total (% of GDP)	-	-	2.5	4.9	5.4	6.7
Tax revenue (% of GDP)	-	-	-	-	19.7	20.5
Denmark						
Average years of total schooling (age 15+)	10.0	9.4	9.7	9.7	9.9	10.1
Percent no education (age 15+)	2.0	0.1	0.1	0.1	0.1	0.1
Percent completed tertiary (age 15+)	9.8	7.4	9.4	9.7	10.8	12.6
Public expenditure on education as % of GDP	6.6	-	-	8.3	8.0	8.7
Life expectancy at birth, total (years)	74.4	74.8	75.2	76.6	77.8	79.1
Health expenditure per capita (current US\$)	-	-	2817	2474	4504	6422
Health expenditure, total (% of GDP)	-	-	8.1	8.3	9.5	11.4
Tax revenue (% of GDP)	-	-	31.9	30.8	32.6	34.3
Germany						

Average years of total schooling (age 15+)	6.0	8.0	9.2	10.0	11.8	11.8
Percent no education (age 15+)	5.1	5.0	5.4	5.1	4.6	4.0
Percent completed tertiary (age 15+)	3.7	7.6	9.5	10.7	11.0	10.9
Public expenditure on education as % of GDP	-	-	-	4.6	4.4	4.6
Life expectancy at birth, total (years)	74.2	75.3	76.4	77.9	78.9	80.0
Health expenditure per capita (current US\$)	-	-	3123	2366	3635	4668
Health expenditure, total (% of GDP)	-	-	10.1	10.3	10.7	11.6
Tax revenue (% of GDP)	-	-	11.1	12.0	11.1	12.2

Source: World Bank, Education Statistics; Health Nutrition and Population Statistics (<http://databank.worldbank.org/ddp/home.do?Step=1&id=4>)

Notes: The average years of schooling and the percentages of population with no education or tertiary education variables are defined by Barro and Lee. The full name of the “Percent no education (age 15+) variable is “Barro-Lee: Percentage of population by educational attainment, age 15+, total, no education”.

Public expenditure on education as % of GDP: Germany 2000 is 1998 figure, in all three countries 2005 are 2006 figures, Denmark 2010 is 2009 figure, Germany 2010 is 2008 figure.

Phases in emigration from Turkey to Denmark and to Germany

Turkish immigration to Europe started after the World War II when Turkish men were admitted to European countries as guest workers. Immigration was seen as a promising solution to the unemployment problem in Turkey and as a way to satisfy the increasing need for labor in the growing economies of Europe; therefore it was welcomed by both sender and receiver parties. (Kaya, 2008).

The first guest worker (*Gastarbeiter* in German) agreement was signed between Turkey and Germany in 1961. Agreements with other European countries followed, thus setting the legal framework of immigration. Migration peaked during the years 1971-1973, when more than half a million Turkish workers arrived in Europe. Germany received masses of Turkish workers in 1961-1973 and became the country that had the largest number of Turkish immigrants in Europe, with more than 600 thousand workers by 1973 (Crul, 2007; Kaya, 2008).

Turkish workers were employed primarily in industry, and also in the agricultural and construction sectors. First wave of migrants were in the ages of 20-40, had some education and basic employable skills; these workers came from the relatively more prosperous western cities of Turkey. Only 17.2% of the first wave of Turkish immigrants had rural origin. But with increasing demand for labor, workers arriving later came mostly from the rural areas of Turkey (Kaya, 2008).

In response to the economic recession following the first oil price shock, both Germany and Denmark ended the guest worker program in 1973 and declared that it would no longer admit guest workers. The German government offered financial incentives for returning to Turkey. Taking advantage of the plan, about 150,000 workers returned to Turkey. This was however a relatively small number compared with the stock of immigrants. As a consequence of the termination of worker recruitment and the provision of financial incentives to return, Turkish population in Germany somewhat declined, but only temporarily. Turkish immigration to Europe continued through family reunification in the 1980s and most of the 1990s. Since family members were still allowed to join the workers, many workers chose to bring their families to Germany or Denmark instead of returning to Turkey. Other countries such as France, Belgium and the Netherlands followed Germany and Denmark in 1974 by ending guest worker agreements. As in Germany, immigration declined for a while but with family reunification the increase in the number of Turkish nationals resumed soon (Razum et al., 2005; Kaya, 2008)

Family reunification created a substantial increase in the Turkish population in Europe. The first groups of immigration who arrived during 1961-1973 mainly consisted of male workers. In the following years, female population increased through family reunification and, later, family formation. As a consequence, the male-female ratios among Turkish immigrants reached balance in European countries. Manco (2007) reports that 45.3% of Turkish immigrants in Germany, 46.4% in the Netherlands, and 48.8% in Belgium are females.

In the 1990s, a new kind of immigration emerged in the form of family formation through “imported” spouses. As the children of the first-generation immigrants reached the age of marriage, many parents, who were anxious to preserve their cultural identity, disapproved the notion of their children marrying a native of the country, or even a Turkish immigrant. These parents arranged for their children to marry a person “imported” from their home country. Family formation became the main reason of Turkish immigration to European countries in the 1990s and 2000s (Kaya, 2008; Timmerman, 2006).

Another reason behind Turkish immigration to European countries was the 1980 military coup. After the coup, thousands of Turkish citizens sought asylum abroad, mostly in Germany and

Sweden. The European Stability Initiative (2012) reports that asylum applications to Germany still continue, mostly by Kurdish people; however, very few of them are accepted to the country. In 2007 there were 2,119 asylum decisions in Germany concerning Turkish citizens. Only 19 people (0.9 percent) were awarded residence status following their application for asylum.

One 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. The concentration of the current locations of immigrants is also noteworthy. 64% of the Turkish population in the U.K. live in Greater London, half of Sweden's Turks are in Stockholm. Half of Denmark's Turks live in Copenhagen. 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.

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. In a macro level analysis of immigration flows between countries, Pedersen et al. (2008) use 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. They find that the selection effect is weaker than the network effect, proxied by the stock of immigrants in the destination country. A study specifically conducted on Turkish immigration to Germany, but that does not pay attention to selection effect and that defines variables in a different manner than Pedersen et al. (2008), found that economic factors, such as unemployment rate and wage differentials, are more important determinants than social factors (Sorhun, 2011).

4. Labor market integration in host countries

As we want to compare income distribution indicators for those who stay in Turkey with the situation for emigrants relative to natives in Denmark and in Germany, we shall look briefly into

some summary labor market indicators. Based on data in OECD (2008) Table 3 gives a summary idea of employment rates for natives in each of the three countries around 2005.

Table 3. Employment rates for men and women (Germany, Denmark, and Turkey, around 2005)

	Men	Women	All
Germany	80,1	65,7	72,9
Denmark	86,5	78,6	82,6
Turkey	82,1	46,0	64,3

In Denmark and Germany employment rates for immigrants from Turkey have consistently been lower than for natives and at the same time quite volatile, see OECD (2008). In Germany, the unemployment rate for men from Turkey steeply declined from unification to the mid-1990s from nearly 75 per cent to 63 percent followed by stabilization around this lower level. For women of Turkish origin there was a correspondingly steep decline in employment rates from around 39 percent in 1991 to 30 percent in 1997 followed by an increase to a level around 33-34 percent. In Denmark men with Turkish origin also experienced a steep decline in employment rates between 1984 and 1994 from close to 60 percent to around 42 percent. Over the next decade employment rates return to a level slightly above 60 percent. For women there was a corresponding U-profile from close to 40 percent, down to slightly above 20 percent in the mid-1990s and a return to about 40 percent around 2005 (OECD (2008)). Notice however that these big swings may reflect swings in inflow rates besides cyclical and structural variations. Further, OECD (2008) comparing the situation for individuals with origin in Turkey finds Turkish immigrants in Denmark to be significantly younger, having on average a shorter duration of residence and being slightly better educated, especially so for the women.

Another relevant indicator is information regarding the use of welfare benefits among Turkish immigrants in Denmark and Germany relative to natives. Barrett and Maitre (2011) find, in a general cross-European approach to analysis of welfare dependence among immigrants, that compositional effects are the main explanation of higher welfare dependence rather than any residual immigrant specific factor. In an analysis relative to Turkish immigrants in Germany, Riphahn et al. (2010) find the same result, i.e. no difference in overall welfare dependence relative

to natives after controlling for general covariates. For Denmark, Pedersen (2011) reports that immigrants from Turkey have a dependence on temporary welfare benefits at the average level among immigrants from non-Western countries. As the welfare programs in Denmark are universal, i.e. dependent on residence and common eligibility rules the prior expectation here is also higher welfare dependence explained by general covariates, but not by any immigrant residual factor.

5. Data and distribution indicators

Data

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 plus self employment income), social security transfers from public sources and taxes (Burniaux et al, 1998).

Turkish data are from the nationally representative Income and Living Conditions Survey (ILCS) conducted by TURKSTAT for years 1994 and 2006-2009. In the ILCS data, we can identify earnings, private transfers (rent, interest, dividends, net transfers from other households), self employment income, public transfers (social assistance, retirement income) and some part of taxes (taxes paid on some assets such as real estate and motor vehicles). All income components are reported net of income taxes; therefore to estimate disposable income a reduction of taxes is not required.

The German data come from the German Socio Economic Panel (GSOEP), a big and unique survey-based panel dataset originating in 1984. The Danish data are panel data based on administrative registers compiled by Statistics Denmark and covering the whole population of natives and immigrants.

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”).

Table 4. Distributional indicators for Turkish natives (Part A), Turkish immigrants and natives in Germany (Part B), and Turkish immigrants and natives in Denmark (Part C)

Part A:						
Turkish natives (Cross Sectional Data)						
	All ages			25-59 years old		
	Gini	90/10	PO60	Gini	90/10	PO60
1994	0.5027	7.2020	0.2411	0.5058	7.1470	0.2345
1995-2005	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2006	0.4476	8.387	0.2662	0.4503	8.512	0.2711
2007	0.4306	6.761	0.2520	0.4332	6.778	0.2497
2008	0.4258	6.918	0.2483	0.4282	7.006	0.2490
2009	0.4381	7.236	0.2566	0.4369	7.030	0.2545
Turkish natives (Panel Data)						
	All ages			25-59 years old		
	Gini	90/10	PO60	Gini	90/10	PO60
2006	0.4483	8.253	0.2410	0.4482	8.153	0.2586
2007	0.4529	6.835	0.2243	0.4507	6.725	0.1794
2008	0.4436	6.784	0.2221	0.4390	6.833	0.2229
2009	0.4498	7.098	0.2428	0.4475	7.015	0.2332

Part B:						
Germany, Turkish Immigrants						
	All (18-66)			25-59 years old		
	Gini	90/10	PO60	Gini	90/10	PO60
1994	0.2013	2.3533	0.2833	0.1973	2.3216	0.2633
1995	0.2272	2.8809	0.3329	0.2253	2.7059	0.3225
1996	0.2208	2.6633	0.3274	0.2219	2.5891	0.3153
1997	0.2182	2.7417	0.3123	0.2161	2.7897	0.3031
1998	0.2146	2.6185	0.3091	0.2150	2.5938	0.2955
1999	0.2021	2.4130	0.3077	0.2011	2.3176	0.2957
2000	0.2184	2.6565	0.3610	0.2145	2.5815	0.3372
2001	0.2156	2.7873	0.3359	0.2091	2.4938	0.3130
2002	0.2389	2.5253	0.4305	0.2352	2.4668	0.4155
2003	0.2350	2.5543	0.4125	0.2341	2.5500	0.3898
2004	0.2398	2.6253	0.4035	0.2414	2.6626	0.3750
2005	0.2387	2.7296	0.4129	0.2365	2.6908	0.3960
2006	0.2371	2.5903	0.4479	0.2379	2.7399	0.4340
2007	0.2633	2.7961	0.4139	0.2576	2.7845	0.3889
2008	0.2671	2.6551	0.4775	0.2658	2.6256	0.4536

2009	0.2808	2.9607	0.4847	0.2865	2.9328	0.4672
-------------	--------	--------	--------	--------	--------	--------

Germany, Natives

	All (18-66)			25-59 years old		
	Gini	90/10	PO60	Gini	90/10	PO60
1994	0.2540	2.9894	0.0932	0.2538	2.9739	0.0906
1995	0.2553	3.0421	0.1007	0.2558	3.0812	0.0988
1996	0.2516	2.9082	0.0931	0.2519	2.9364	0.0895
1997	0.2409	2.8022	0.0832	0.2397	2.7962	0.0777
1998	0.2467	2.9305	0.0864	0.2451	2.9065	0.0821
1999	0.2475	2.8734	0.0822	0.2450	2.8751	0.0766
2000	0.2574	2.9466	0.0890	0.2540	2.9184	0.0846
2001	0.2498	2.9810	0.0955	0.2472	2.9477	0.0911
2002	0.3081	3.5382	0.1187	0.3015	3.4796	0.1184
2003	0.3015	3.5521	0.1205	0.2920	3.4674	0.1202
2004	0.3059	3.5222	0.1189	0.2982	3.4451	0.1175
2005	0.3094	3.5956	0.1269	0.3028	3.5144	0.1230
2006	0.3263	3.8217	0.1362	0.3237	3.7127	0.1346
2007	0.3133	3.7420	0.1302	0.3064	3.5950	0.1259
2008	0.3152	3.7657	0.1362	0.3087	3.6248	0.1312
2009	0.3112	3.8285	0.1392	0.3046	3.7245	0.1330

Part C:

Denmark, Turkish Immigrants

	All (18-66)				25-59 years old			
	Gini	Gini (N)	90/10	PO60	Gini	Gini (N)	90/10	PO60
1984	0.2348	0.2348	3.0367	0.2507	0.2512	0.2512	3.1970	0.3014
1985	0.2249	0.2249	2.9297	0.2400	0.2430	0.2430	3.1130	0.2994
1986	0.2238	0.2238	2.8768	0.2318	0.2426	0.2426	3.0888	0.3056
1987	0.2262	0.2262	2.8464	0.2435	0.2440	0.2440	3.0511	0.3296
1988	0.2284	0.2284	2.8626	0.2659	0.2465	0.2465	3.0531	0.3604
1989	0.2287	0.2286	2.8351	0.2857	0.2452	0.2452	2.9649	0.3780
1990	0.2303	0.2303	2.8632	0.3128	0.2487	0.2487	3.0872	0.4119
1991	0.2331	0.2331	2.8834	0.3423	0.2516	0.2515	3.0665	0.4328
1992	0.2376	0.2376	2.9167	0.3782	0.2536	0.2536	3.0574	0.4726
1993	0.2337	0.2336	2.8272	0.4049	0.2493	0.2492	2.9742	0.4952
1994	0.2251	0.2251	2.7191	0.4053	0.2408	0.2407	2.8940	0.5112
1995	0.2319	0.2319	2.7860	0.4297	0.2458	0.2458	2.9072	0.5244
1996	0.2374	0.2373	2.8353	0.4576	0.2461	0.2460	2.8874	0.5348
1997	0.2474	0.2474	3.0551	0.4679	0.2532	0.2531	3.0583	0.5345
1998	0.2478	0.2477	3.0978	0.4711	0.2511	0.2511	3.0735	0.5355

1999	0.2454	0.2454	3.0166	0.4632	0.2474	0.2474	2.9532	0.5242
2000	0.2482	0.2482	3.1204	0.4293	0.2485	0.2485	3.0545	0.4882
2001	0.2532	0.2531	3.2182	0.4239	0.2508	0.2508	3.0671	0.4743
2002	0.2521	0.2521	3.2083	0.4797	0.2493	0.2493	3.0814	0.5306
2003	0.2570	0.2570	3.2731	0.4790	0.2525	0.2525	3.1013	0.5218
2004	0.2656	0.2656	3.4651	0.4969	0.2581	0.2580	3.2164	0.5280
2005	0.2722	0.2722	3.6429	0.5065	0.2608	0.2608	3.2763	0.5242
2006	0.2768	0.2768	3.7971	0.4935	0.2623	0.2623	3.3661	0.5026
2007	0.2830	0.2830	3.9374	0.4809	0.2668	0.2668	3.4474	0.4779
2008	0.2815	0.2814	3.7597	0.4541	0.2756	0.2755	3.5724	0.4624
2009	0.2845	0.2844	3.9026	0.4593	0.2735	0.2735	3.5408	0.4637

Denmark, Natives

	All (18-66)				25-59 years old			
	Gini	Gini (N)	90/10	PO60	Gini	Gini (N)	90/10	PO60
1984	0.2446	0.2445	3.1353	0.1489	0.2467	0.2466	3.0546	0.1410
1985	0.2386	0.2386	3.0370	0.1431	0.2395	0.2394	2.9343	0.1343
1986	0.2392	0.2391	3.0390	0.1429	0.2396	0.2395	2.9196	0.1336
1987	0.2487	0.2486	3.1296	0.1429	0.2502	0.2500	3.0185	0.1372
1988	0.2503	0.2501	3.1681	0.1478	0.2515	0.2513	3.0480	0.1392
1989	0.2491	0.2490	3.1330	0.1464	0.2506	0.2504	3.0131	0.1369
1990	0.2522	0.2521	3.1720	0.1484	0.2520	0.2518	3.0039	0.1360
1991	0.2506	0.2505	3.1527	0.1464	0.2476	0.2475	2.9537	0.1322
1992	0.2604	0.2602	3.2194	0.1493	0.2566	0.2563	2.9789	0.1331
1993	0.2588	0.2586	3.2055	0.1467	0.2524	0.2522	2.9356	0.1289
1994	0.2588	0.2587	3.1300	0.1430	0.2502	0.2501	2.8813	0.1232
1995	0.2598	0.2597	3.1066	0.1393	0.2520	0.2519	2.8543	0.1197
1996	0.2638	0.2638	3.1559	0.1382	0.2551	0.2550	2.8952	0.1184
1997	0.2668	0.2668	3.2200	0.1396	0.2571	0.2570	2.9299	0.1186
1998	0.2712	0.2712	3.2693	0.1409	0.2607	0.2607	2.9749	0.1205
1999	0.2724	0.2723	3.2883	0.1428	0.2621	0.2620	2.9805	0.1223
2000	0.2770	0.2769	3.2489	0.1418	0.2679	0.2678	2.9706	0.1231
2001	0.2766	0.2766	3.2896	0.1431	0.2671	0.2670	2.9985	0.1246
2002	0.2753	0.2753	3.3900	0.1450	0.2624	0.2624	3.0278	0.1223
2003	0.2771	0.2771	3.4179	0.1463	0.2635	0.2635	3.0404	0.1228
2004	0.2790	0.2790	3.4925	0.1507	0.2627	0.2626	3.0853	0.1264
2005	0.2906	0.2905	3.5961	0.1536	0.2724	0.2724	3.1596	0.1294
2006	0.2971	0.2970	3.6123	0.1529	0.2779	0.2778	3.1576	0.1288
2007	0.3068	0.3066	3.6544	0.1542	0.2876	0.2875	3.1589	0.1287
2008	0.3130	0.3124	3.6009	0.1551	0.2992	0.2985	3.1938	0.1327
2009	0.3019	0.3015	3.7219	0.1587	0.2809	0.2805	3.1999	0.1318

Sources: Turkish data are from the Income and Living Conditions Survey (ILCS). The data are released in two formats: cross sectional and panel. Panel data are available for years 2006-2009 only.

Notes: Gini (N) stands for the normalized Gini coefficient.

Some central information in Table 4 is illustrated below in Figures 4 – 6. In these three graphs we focus on the central labor market age group of 25 – 59 year old individuals. In Figure 4 we show the Gini coefficient for the distribution of equivalence scale adjusted disposable income for natives in Germany and Denmark along with immigrants from Turkey in the two countries. For reason of scale, the Turkish Gini coefficients are not shown in Figure 4. Referring to Table 4 we find a quite steep decline from the 1994 observation to the 2006-2009 observations. The level of inequality in Turkey is significantly higher than values in Germany and Denmark.

One reason for the big difference in inequality is the failure of the tax and transfer system in Turkey to redistribute income. It is a striking observation that inequality of market income (excluding taxes and public transfers) in many European countries is not very different from that in Turkey (Gürsel et al., 2000). If the redistributive tax and transfer system had not existed, the Gini coefficients for market income would have been 0.420 in Denmark (in 1994), 0.487 in Sweden (in 1995), 0.527 in Belgium (in 1995). With the inclusion of taxes and transfers we observe a Gini coefficient of 0.217 in Denmark, 0.230 in Sweden, and 0.272 in Belgium. In Turkey, in 1994 Gini coefficient of market income would have been 0.027 points lower in 1994 if public transfers did not exist⁴ (Gürsel et al., 2000). It is interesting to observe the different trends, i.e. towards higher inequality for immigrants in the two host countries and towards a more equal distribution in the home country.

Three points emerge from Figure 4. The first is a trend towards higher inequality in all four groups starting around the turn of the century. The second point is the high correlation between the Gini coefficients for natives and immigrants, however with a bigger absolute difference in Germany. The third important observation is that income inequality among Turkish immigrants in both host countries has increased, but the distribution in the home country has become more equal over time (not shown in the table).

⁴ The effect of taxes are not examined in the study because of lack of sufficient data.

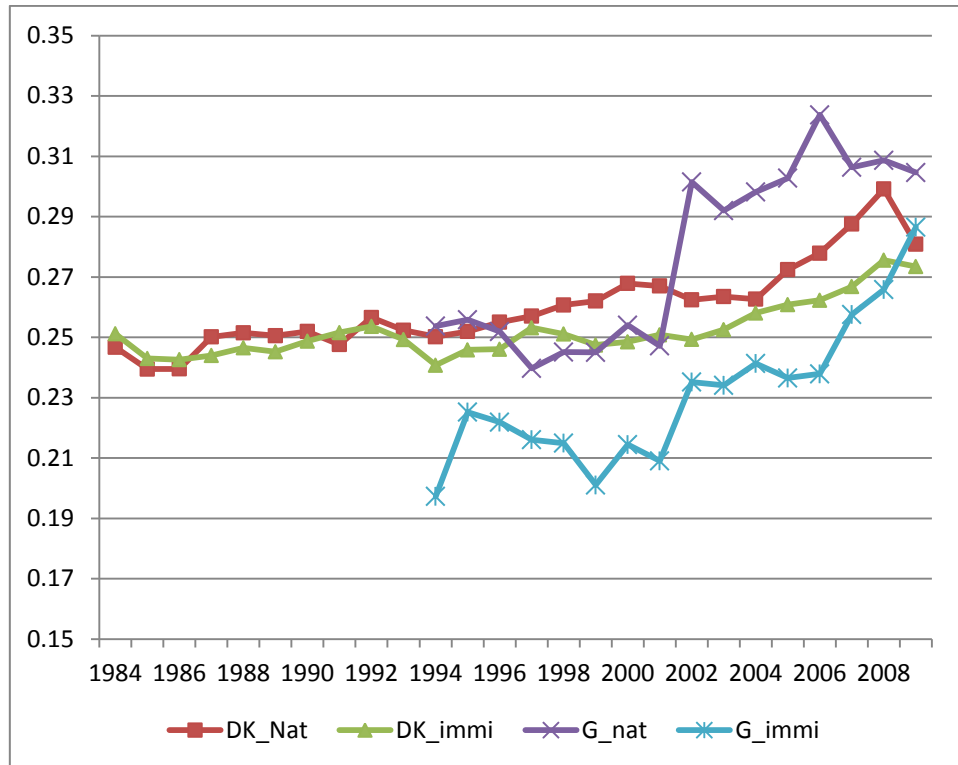


Figure 4. The Gini coefficient for 25 – 59 years old (Natives and immigrants from Turkey in Germany and Denmark)

Next, we show in Figure 5 the 90/10 ratio in the distribution for the 25 – 59 years old belonging to the same 4 groups. In Denmark, a trend towards higher inequality begins already in the mid-1990s and from 2003/04 the 90/10 ratio increases faster for immigrants reflecting most probably a quite strong upturn in employment. In Germany the profiles are different. Natives show the same move to higher inequality from the turn of the century as found for the Gini coefficient. For immigrants, the ratio is stationary and we consequently find an increasing gap relative to natives using this indicator. Here too, observations for Turkey are excluded for reasons of scale. Referring to Table 4, looking only at the last 4 years we find a confirmation of the more equal distribution shown by the Gini coefficient. Comparing with the 1994 observation, the status appears however to be unchanged.

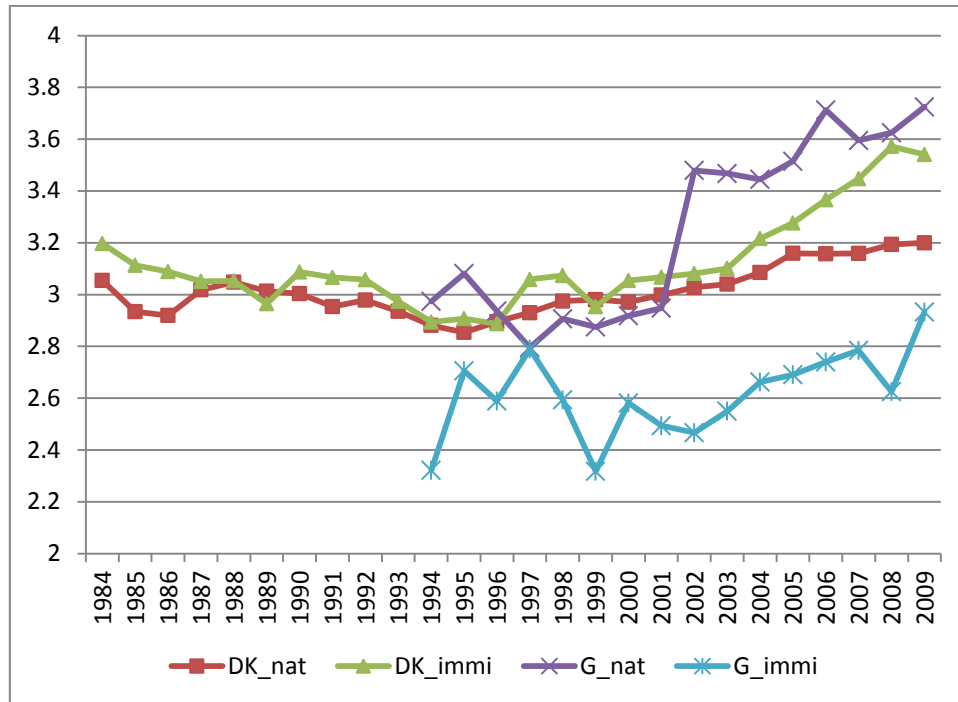


Figure 5. The 90/10 ratio for 25 – 59 years old (Natives and immigrants from Turkey in Germany and Denmark)

Finally, the last indicator is shown in Figure 6. This is the poverty rate defined as the share in each of the 5 groups lying below 60 percent of the median in the equivalence scale adjusted distribution of disposable income. For the three native groups we find no trend in this indicator, around 12 percent in Germany and Denmark and around 25 percent in Turkey. For the two immigrant groups the situation is however quite different. In Denmark we find a step increase from around 30 percent to around 50 percent from the mid-1980s to the mid-1990s reflecting the steep decline in the employment rate mentioned above. The subsequent improved employment situation results only in a modest decline in the poverty rate. For Germany, we find the same profile from the mid-1990s to 2009.

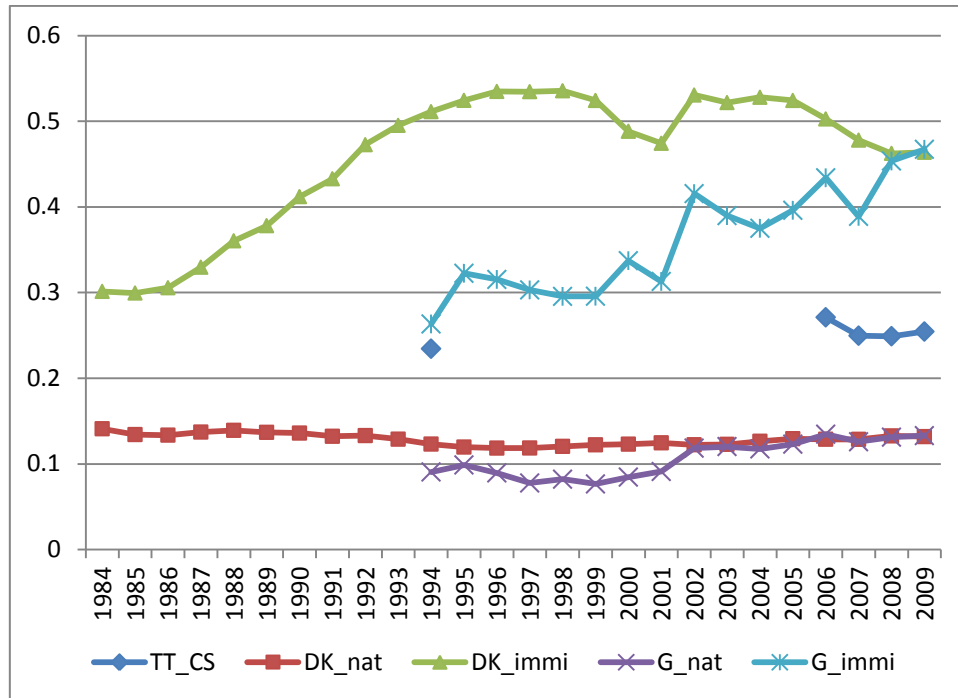


Figure 6. The poverty rate for 25 – 59 years old (Natives in Denmark, Germany, and Turkey; immigrants from Turkey in Germany and Denmark)

6. Analyses and discussion

In this section we shall present and discuss a number of preliminary estimation results regarding the distributional indicators. First, we present results from probit estimations of the poverty risk for our population groups where the risk is measured as being below 60 percent of the median in the equivalence scale adjusted disposable income in the most recent year, 2009, in the period we analyze. Next, we present estimation results from relating entry to and exit from poverty between 2007 and 2008 to a number of background factors. Finally, we present results from a number of preliminary estimations on income mobility between 2007 and 2008. We measure upwards mobility as a move from the 2nd quintile in the 2007 income distribution to the 4th quintile in 2008. Downwards mobility is measured as a move from the 4th quintile in 2007 to the 2nd quintile in 2008.

First, as mentioned, we present a number of cross-section results reporting the risk of being in poverty in a specific year, in this case the year 2009, Table 5 shows the marginal effects in estimations for natives and for immigrants from Turkey in Denmark in 2009.

Table 5. Marginal effects in estimations on the risk of poverty. Denmark, natives and immigrants from Turkey. 2009.

	DK_natives		DK_immig. Turkey	
	Marg. effect	Z value	Marg. effect	Z value
No. of children	0,0513	254,18	0,2299	66,86
Married	-0,0447	-128,71	-0,2267	-28,70
Male	-0,0018	-6,08	0,0011	0,20
Age 25-34	-0,0947	-291,42	-0,3107	-34,85
Age 35-44	-0,1141	-321,48	-0,3379	-35,76
Age 45-54	-0,1186	-355,67	-0,3123	-32,07
Age 55-59	-0,1002	-277,33	-0,2571	-17,58
Age 60-64	-0,1084	-331,18	-0,2198	-14,65
Age 65+	-0,1322	-396,25	0,2714	15,94
Labor force	-0,1302	-307,02	-0,3248	-51,52
Vocational	-0,0451	-135,23	-0,1037	-12,65
Medium long	-0,0642	-151,12	-0,2124	-13,17
Long theoretical	-0,0705	-121,23	-0,2228	-6,80
No. of obs.	3807518		38204	
Pseudo R ²	0,2141		0,2075	

Explanatory variables are a number of demographic and other background factors. Looking first at the results for Danish natives all variables are highly significant which, however is no surprise considering the number of observations in the Danish data. The number of children has a significant increasing impact on the poverty risk whereas being married and male has the opposite effect. People in all age intervals 25 and older have lower poverty risk than the 18-24 years old. Being in the labor force reduces the poverty risk as expected. Education beyond basic schooling also has the expected effect of reducing the poverty risk. Comparing with the results for Turkish immigrants we find a number of differences relative to natives. The marginal effect from the number of children is much bigger for immigrants. Gender on the other hand has no impact. Being 65 or older increases the poverty risk in contrast to the finding for natives. This might reflect that a universal national pension program to some extent is dependent on having had 40 years – not of contribution – but of residence in Denmark.

Another difference between natives and immigrants is that the marginal effect of being educated is much larger for immigrants. The reason could be the heterogeneity of Turkish immigrants; i.e. those with education can earn well whereas others with no education cannot. It is probably true that the level of education draws a dividing line between the poor and non-poor among Turkish immigrants but the divide among the natives are probably not as strong. Also, below, in Table 6, we find that the marginal effect of years of education is much larger for immigrants in Germany relative to natives.

Table 6 presents the results from the same kind of analyses on Turkish cross-section data for 2009 (T_T) and on data from the German Socio Economic Panel (GSOEP) for respondents with German background (G_nat) and for immigrants with Turkey as national background (G_immi).

Table 6. Marginal effects in estimations on the risk of poverty. Turkey and Germany, natives and immigrants from Turkey. 2009.

	T_T		G_nat		G_immi	
	Marg. effect	Z value	Marg. effect	Z value	Marg. effect	Z value
No. of children	0,0752	41,27	0,0361	11,98	0,1593	4,78
Married	-0,0218	-2,87	-0,0652	-12,87	-0,2626	-2,82
Male	0,0657	10,09	-0,0152	-3,53	0,0258	0,40
Age 18-24			0,0184	0,93	0,0895	0,20
Age 25-34	-0,0668	-7,26	0,0344	1,71	-0,3306	-1,28
Age 35-44	-0,1070	-11,67	-0,0345	-2,04	-0,4365	-1,36
Age 45-54	-0,1056	-11,04	-0,0123	-0,70	-0,2568	-0,86
Age 55-59	-0,1116	-9,98	0,0034	0,18	0,1313	0,35
Age 60-64	-0,1210	-10,01	-0,0007	-0,04	-0,1082	-0,33
Age 65+	-0,1363	-14,45	-0,0113	-0,67	0,1365	0,39
Labor force	-0,0059	-0,92	-0,0337	-5,59	0,0470	0,59
Educ. years			-0,0501	-17,33	-0,2287	-4,01
Educ 2	-0,1570	-22,21				
Educ 3	-0,1736	-23,20				
Educ 4	-0,1995	-27,18				

Educ 5	-0,1940	-24,42				
Educ 6	-0,2220	-25,32				
No. of obs.	21956	0,2163	18450	0,0799	308	0,1630
Pseudo R ²			0,0799		0,1630	

The number of children has a significant impact on the poverty risk in all 3 samples and being married has consistently the opposite effect. Being male seems to have a quite sample-dependent effect, i.e. significantly negative for Germany, insignificant for Turkish people in Germany and finally significantly positive in the Turkish sample. This could reflect bigger households in Turkey than in Germany. We would expect male-headed households to be bigger than female-headed households (it is more likely for male-headed households that there are relatives living with the core family, increasing the household size but not adding much to income, thereby reducing equivalent income. If we assume that the sex ratio among individuals who are not household heads is balanced (i.e. 50% male), then the households headed by a male have a higher percentage of males compared to households headed by a female. Being in the labor force has only the prior expected sign for Germans.

Next, Figure 7 shows a number of entry rates to poverty measured as being below 60 percent of the median income. For natives in Denmark the entry rate is surprisingly stable around 5 percent in spite of very big cyclical changes over the period. For Turkish immigrants we see a completely different form showing a fairly steep increase until the mid-1990s followed by a decline, which however is to a level significantly above the initial level around 10 percent in the mid-1980s. We have three years of observations with the Turkish data showing entry rates in an intermediate position.

Figure 8 shows the exit rates from poverty. For natives we surprisingly find the same, i.e. stability, here around 30 percent over the whole period. Initially, Turkish immigrants have exit rates at about the same level. From around 1990 exit rates stabilize around 60 percent of the level for natives. Finally, in the Turkish sample we find exit rates at the same level as for native Danes.

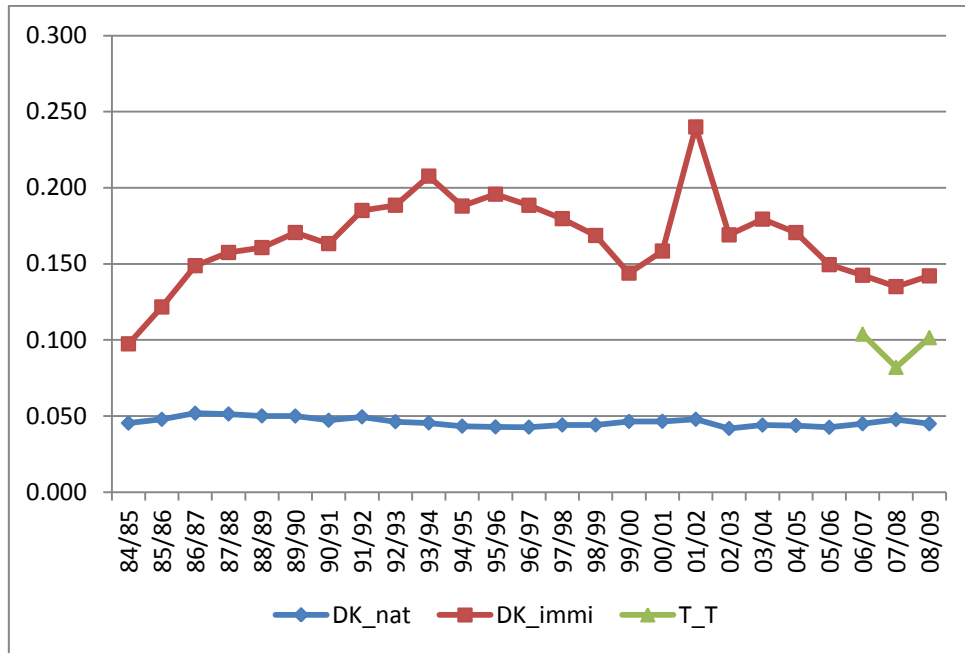


Figure 7. Entry rates to poverty for natives and immigrants from Turkey in Denmark and in the Turkish sample, 1984-2009.

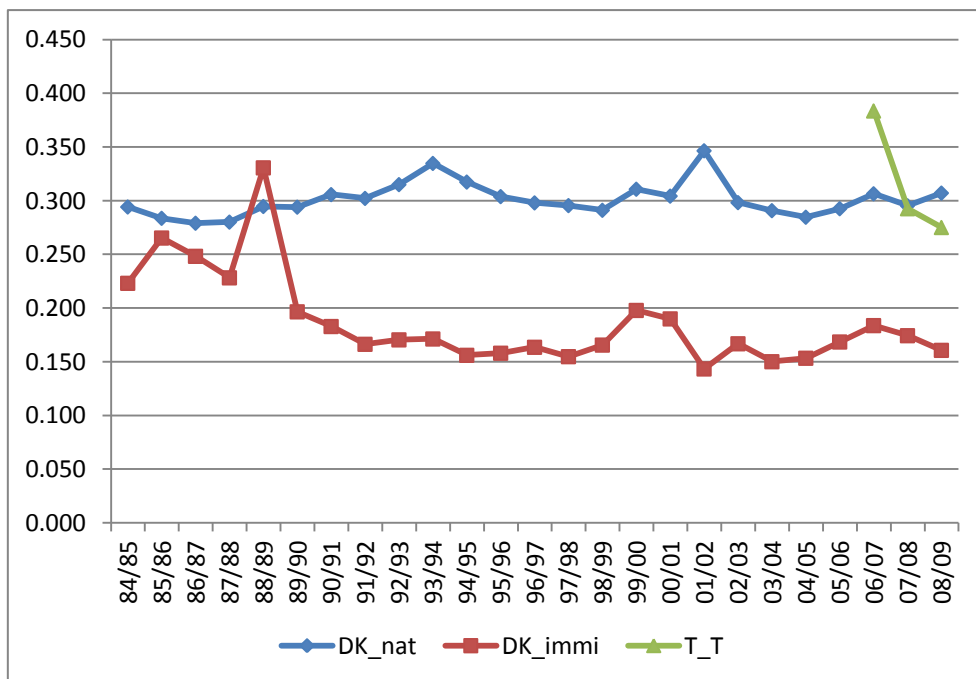


Figure 8. Exit rates from poverty for natives and immigrants from Turkey in Denmark and in the Turkish sample, 1984-2009.

In Tables 7 and 8 these transition rates are used as dependent variables in a number of probit analyses. Regarding entry rates, being male has a significant negative impact on the entry rate for

natives in Denmark in contrast to being significant and positive in Turkey, i.e. the same pattern as in Table 6. Besides age and education covariates we have entered a variable *ch. civil* set at 0 for people with unchanged marital status, at +1 for people changing from being single to become married or cohabiting, and at -1 for people becoming single. For natives we find a significant impact in expected direction. The variable *Ch.LF* is set at +1 for people moving into the labor force, 0 for stayers and -1 for people leaving the labor force. We find significant expected effects for natives and immigrants. Finally, *Ch.no.ch.* measures a change in the number of children in the household and we find significant expected effects for natives and immigrants, but not in the Turkish data. For the exit probit in Table 8, we find a significant impact from gender in the same direction, positive for being a man, for natives and immigrants, and again the opposite impact in the Turkish data. Becoming married has a significant increasing impact on the exit probability for natives, but again surprisingly the opposite effect for immigrants. Both moving into the labor force and having one more or less child has expected effects both for natives and immigrants.

Table 7. Probit estimations on entry to poverty from 2007 to 2008 for natives, Turkish immigrants and individuals in the Turkish sample.

	DK_nat		DK_immi		T_T	
	Marg. eff.	Z value	Marg. eff.	Z value	Marg. eff.	Z value
Gender	-0,0057	-28,67	-0,0049	-1,08	0,0224	4,29
Age 25-34	-0,0237	-78,06	-0,0238	-3,41	-0,0214	-2,73
Age 35-44	-0,0275	-92,48	-0,0156	-2,13	-0,0331	-4,38
Age 45-54	-0,0383	-135,95	-0,0601	-8,01	-0,0425	-5,75
Age 55-59	-0,0371	-130,46	-0,0556	-5,20	-0,0581	-7,25
Age 60-64	-0,0356	-127,19	-0,0133	-1,08	-0,0597	-7,12
Age 65+	-0,0273	-96,81	0,0750	3,13	-0,0648	-9,19
Vocational	-0,0175	-80,07	-0,0385	-6,84		
Medium	-0,0234	-85,83	-0,0570	-5,98		
Long	-0,0265	-72,90	-0,0585	-3,33		
T_educ2					-0,0613	-9,63
T_educ3					-0,0703	-11,22
T_educ4					-0,0864	-14,42
T_educ5					-0,0783	-12,35

T_educ6					-0,0984	-11,18
Ch. civil	-0,0139	-23,01	-0,0229	-1,80	0,0072	0 ,39
Ch. LF	-0,0287	-85,53	-0,0620	-10,71	-0,0060	-0,78
Ch.no. ch.	0,0226	61,35	0,1375	22,38	-0,0062	-0,57
Obs.	3261003		19832		10320	
Pseudo R ²	0,0601		0,0589		0,0798	

Table 8. Probit estimations on exit from poverty from 2007 to 2008 for natives, Turkish immigrants and individuals in the Turkish sample.

	DK_nat		DK_immi		T_T	
	Marg. eff.	Z value	Marg. eff.	Z value	Marg. eff.	Z value
Gender	0,0754	19,32	0,0465	7,32	-0,0401	-2,13
Age 25-34	-0,0521	-8,51	-0,0407	-4,55	-0,0246	-0,88
Age 35-44	-0,2633	-40,86	-0,0846	-10,36	-0,0259	-0,91
Age 45-54	-0,1685	-20,44	-0,0638	-5,84	0,0616	1,78
Age 55-59	-0,0781	-5,62	-0,0899	-4,97	0,0642	1,33
Age 60-64	0,0357	2,68	-0,1432	-8,96	0,0506	0,97
Age 65+	-0,7632	-123,63	-0,2223	-16,15	1,3940	3,35
Vocational	0.1851	34,76	0,0421	3,87		
Medium	0,3835	46,43	0,1618	6,17		
Long	0.4673	27,85	0,0927	1,39		
T_educ2					0,1957	8,72
T_educ3					0,3052	7,53
T_educ4					0,3441	6,74
T_educ5					0,4645	7,67
T_educ6					0,5430	4,53
Ch. civil	-0,5554	-53,92	0,0894	4,95	-0,0171	-0,28
Ch. LF	0,1563	34,37	0,0329	4,67	-0,0075	-0,32
Ch.no. ch.	-0,3733	-74,59	-0,1508	-21,19	0,0198	1,01
Obs.	482696		16467		2811	

Pseudo R ²	0,0592		0,0889		0,0449	
-----------------------	--------	--	--------	--	--------	--

Finally, some results regarding income mobility are presented in Tables 9 and 10⁵. The mobility concept we use defines income mobility as a move, upwards or downwards, between quintiles 2 and 4 in two consecutive years⁶. Explanatory variables are the same as in the entry/exit estimations above. Looking first at the results in Table 9 regarding upwards mobility we find again that gender has only clear significance for natives in Denmark. Regarding the age covariates, the Turkish data stand out by finding higher upwards mobility in the 45-64 years old group than among the younger than 25 years. Education has a strong differential impact in the Turkish data. The only highly significant effect in the group of change variables – apart from results in the group of natives – is the finding of changes in the number of children having the same effect for Turkish immigrants as for natives.

Turning to the results in Table 10 regarding downwards mobility, once again being male has only significance for natives in Denmark. Regarding the age variables, the profile is much clearer in the Turkish data than among Turkish immigrants in Denmark. Regarding the change variables, becoming married reduces the risk of downwards mobility for natives in Denmark but has surprisingly the opposite effect for immigrants. Change in labor force status has the same effect for natives in Denmark as in the Turkish data while it is completely insignificant for the immigrants.

⁵ The mobility estimations in Tables 7-10 have been made also on the GSOEP data. The number of observations is however too small to produce relevant results regarding transitions and mobility between two consecutive years.

⁶ A longer distance between fix point years could be chosen for the Danish data but not for the Turkish data.

Table 9. Probit estimation on upwards mobility from quintile 2 in 2007 to quintile 4 in 2008.

	DK_nat		DK_immi		T_T	
	Marg. eff.	Z value	Marg. eff.	Z value	Marg. eff.	Z value
Gender	0,0019	7,83	0,0031	1,77	-0,0084	-1,26
Age 25-34	-0,0038	-9,10	-0,0045	-2,03	-0,0117	-1,16
Age 35-44	-0,0130	-35,75	-0,0112	-5,55	0,0187	1,61
Age 45-54	-0,0081	-20,94	-0,0104	-5,07	0,0246	1,76
Age 55-59	-0,0071	-14,64	-0,0098	-2,73	0,0501	2,22
Age 60-64	-0,0124	-30,89			0,0836	3,02
Age 65+	-0,0187	-50,15	-0,0013	-0,15	0,0178	0,98
Vocational	0,0042	14,81	0,0027	1,15		
Medium	0,0169	33,57	0,0085	1,71		
Long	0,0395	37,30	0,1049	4,97		
T_educ2					0,0257	2,64
T_educ3					0,0392	2,14
T_educ4					0,2043	7,15
T_educ5					0,0492	1,86
T_educ6					0,2956	5,39
Ch. civil	-0,0249	-40,22	0,0136	3,50	0,0403	1,91
Ch. LF	0,0057	12,49	0,0050	1,95	0,0030	0,33
Ch.no. ch.	-0,0366	-104,98	-0,0255	-12,62	-0,0139	-1,92
Obs.	952894		8892		3228	
Pseudo R ²	0,0993		0,1688		0,0793	

Table 10. Probit estimation on downwards mobility from quintile 4 in 2007 to quintile 2 in 2008.

	DK_nat		DK_immi		T_T	
	Marg. eff.	Z value	Marg. eff.	Z value	Marg. eff.	Z value
Gender	-0,0008	-3,09	-0,0012	-0,08	0,0064	1,12
Age 25-34	-0,0105	-15,48	-0,0201	-0,92	-0,0279	-3,58
Age 35-44	-0,0110	-16,07	-0,0219	-0,96	-0,0202	-2,61
Age 45-54	-0,0212	-30,98	-0,0291	-1,27	-0,0261	-3,47
Age 55-59	-0,0188	-31,39	0,0262	0,65	-0,0192	-2,10
Age 60-64	-0,0136	-21,63			-0,0174	-1,78
Age 65+	-0,0119	-18,22	0,0350	0,40	-0,0320	-4,28
Vocational	-0,0053	-17,72	-0,0055	-0,35		
Medium	-0,0112	-33,98	-0,0541	-2,64		
Long	-0,0146	-41,06	-0,0531	-2,27		
T_educ2					-0,0229	-3,04
T_educ3					-0,0223	-2,67
T_educ4					-0,0315	-4,12
T_educ5					-0,0467	-6,29
T_educ6					-0,0648	-7,29
Ch. civil	-0,0029	-4,27	0,0833	3,36	-0,0332	-1,67
Ch. LF	-0,0171	-39,30	0,0029	0,13	-0,0252	-2,84
Ch.no. ch.	0,0339	77,34	0,1151		0,0104	1,38
Obs.	997756		1303		3988	
Pseudo R ²	0,0657		0,1040		0,0938	

7. Summary and conclusions

Germany and Denmark are two countries that have received many Turkish immigrants in the last couple of decades. In this paper, we ask to what extent Turkish immigrants in Denmark and Germany have adapted to their country of residence, by comparing some characteristics of these

two groups to Danish and German natives and to Turkish people in the home country. In particular, we study how close the indicators of income distribution, poverty and income mobility of Turkish immigrants have adapted to the distribution in two specific host countries.

First, there are differences between Turkish immigrants and natives in determinants of relative poverty (i.e. being below 60 percent of median equivalent income). Having many children increases the probability of being poor, but the marginal effect of the number of children is much bigger for immigrants. Being 65 or older increases the poverty risk among immigrants in contrast to the finding for natives. For Denmark, this might reflect that a universal national pension program to some extent is dependent on having had 40 years – not of contribution – but of residence in Denmark. Another difference is that the better educated are less likely to be poor; however, the marginal effect of being educated is much larger for immigrants than for natives. Being in the labor force has mixed effects, it reduces the likelihood of being poor in Denmark and in Turkey, but not in Germany.

In our regressions on the probability of entry to poverty, we have observed some differences between Turkish people in Turkey and those in Denmark. For example, being male has a negative effect on entry to poverty in Denmark but a positive effect in Turkey. Being educated reduces the probability of becoming poor more in Turkey than it does in Denmark. Changes in marital status, in labor force status, and in the number of children in the household have the expected effects on moving to poverty in Denmark, but such changes have no significant effect in Turkey. In these aspects, Turkish immigrants appear to have become more similar to the natives in their country of residence than to people in their home country.

About income mobility, we find some similarities between Turkish immigrants and Turks in Turkey. Specifically, the effects of being 25-54 year old on the probability of moving from the 4th quintile down to the 2nd quintile are more similar between these two groups compared to the effect for Danish natives. For the 65+ age group a different picture emerges. The effect for Turkish immigrants is very different from both Danish natives and from Turks in Turkey. This could, again, be related to the rules of the national pension program in Denmark.

References

- Barrett, A. and B. Maitre. 2011. *Immigrant welfare receipt across Europe*. IZA DP 5515. Bonn.
- Burniaux, J.-M., T.-T. Dang, D. Fore, M. Förster, M. M. d'Ercole and H. Oxley. 1998. Income Distribution and Poverty in Selected OECD Countries, Economics Department Working Papers No. 189, ECO/WKP(98)2, OECD.
- Büchel, F. and J.R. Frick. 2004. Immigrants in the UK and in West Germany – Relative income position, income portfolio, and redistribution effects. *Journal of Population Economics*, 17: 553-581.
- Crul, M. 2007. Pathways to Success for the Second Generation in Europe. Migration Information Center 2007. <http://www.migrationinformation.org/Feature/display.cfm?ID=592> (accessed June 10, 2012).
- Deding, M., M. A. Hussain, V. Jakobsen and S. Brodmann. 2010. Immigration and Income Inequality: A Comparative Study of Denmark and Germany, 1984-2003. *Journal of Income Distribution*, 19,1: 48-74.
- European Stability Initiative. 2012. “Import brides and asylum seekers” http://www.esiweb.org/index.php?lang=tr&id=281&story_ID=23&slide_ID=6 (accessed June 10, 2012).
- Frick, J.R., F. Büchel, P. Krause and G. Wagnerl. 1997. Immigration has increased income inequality and poverty in Germany slightly. *Economic Bulletin*, 34: 25-32.
- Hammarstedt, M. 2000. The Receipt of Transfer Payments by Immigrants in Sweden. *International Migration*, 38 (2): 239-268.
- IMF (2010), World Economic Outlook Database, October. <http://www.imf.org/external/pubs/ft/weo/2010/02/weodata/index.aspx>
- Kaya, İ. 2008. Avrupalı Türkler: Misafir İşçilikten Avrupa Vatandaşlığına (Euro Turks: From Guest Workers to European Citizenship), *Doğu Coğrafya Dergisi (Eastern Geographical Review)*, 13(19), 149-165. <http://www.dicle.edu.tr/a/ilhankaya/Document/DCD%2019-Avrupali%20Turkler.pdf> (accessed June 10, 2012).
- Kim, J. and E. Tebaldi. 2009. *The Immigrants Odds of Slipping into Poverty During Business Cycles: Double Jeopardy?* Mimeo. Department of Economics. Bryant University.
- Kirisci, K. 2003. Turkey: A Transformation from Emigration to Immigration. Migration Information Center, November. <http://www.migrationinformation.org/Profiles/display.cfm?ID=176> (accessed June 10, 2012).
- Manco, U. 2007. Turks in Europe: From A Garbled Image to The Complexity of Migrant Social Reality, <http://www.flw.ugent.be/cie/umanco/umanco5.htm> (accessed June 10, 2012)

OECD. 2008. *A Profile of Immigrant Populations in the 21st Century. Data from OECD Countries*. Paris.

OECD. 2010. *OECD Factbook 2010: Economic, Environmental and Social Statistics*, OECD Publishing. doi: 10.1787/factbook-2010-en

Pedersen, Peder J., Mariola Pytlikova, and Nina Smith. 2008. Selection and network effects — Migration flows into OECD countries 1990–2000, *European Economic Review*, 52(7), October, 1160–1186.

Pedersen, P.J. 2011. *Immigration and Welfare State Cash Benefits – The Danish Case*. The Rockwool Foundation Research Unit. University Press of Southern Denmark. Odense.

Picot, G. and F. Hou. 2003. The rise in low-income rates among immigrants in Canada. Statistics Canada. Business and Labour Market Analysis Division. Ottawa.

Razum, O., N. Sahin-Hodoglugil, and K. Polit. 2005. Health, Wealth or Family Ties? Why Turkish Work Migrants Return from Germany, *Journal of Ethnic and Migration Studies* 31 (4): 719-739.

Riphahn, R.T. 2004. Immigrant Participation in Social Assistance Programs: Evidence from German Guestworkers, Working Paper, <http://www.lsw.wiso.unierlangen.de/userfiles/team/riphahn/immigrant%20participation.pdf> (accessed June 10, 2012).

Riphahn, R.T., M. Sander and C. Wunder. 2010. *The Welfare Use of Immigrants and Natives in Germany: The Case of Turkish Immigrants*. LASER Discussion Papers No. 44. Univ. Erlangen-Nuremberg, November.

Sorhun, E. 2011. Economic and Social Motivation-Based Im/migration Modeling: The Case of Turkey. *Review of Development Economics*, 15(2): 356-369.

Storesletten, K. 2003. Fiscal Implications of Immigration– a Net Present Value Calculation, *Scandinavian Journal of Economics*, 105(3): pp. 487-506.

Timmerman, C. 2006. Gender Dynamics in the Context of Turkish Marriage Migration: The Case of Belgium, *Turkish Studies* 7 (1):125 - 143.

Appendix:

Table A1. Turkish population in the main European host countries in 2010*

Host country	Population of Turkish origin	Shares
(1) Germany*	2,435,987	56.18%
(2) France*	576,691	13.30%
(3) Netherlands*	383,957	8.86%
(4) Austria*	201,684	4.65%
(5) Belgium	172,388	3.98%
(6) United Kingdom	123,733	2.85%
(7) Switzerland*	118,083	2.72%
(8) Sweden	101,254	2.34%
(9) Denmark*	59,859	1.38%
(10) Italy	20,882	0.48%
(11) Norway	15,000	0.35%
(12) Finland	5,825	0.13%
(13) Spain	3,395	0.08%
(14) Ireland	1,472	0.03%
Sum (1) to (14)	4,220,210	97.33%
Total (Europe)	4,335,773	100.00%

Source: Turkish Ministry of Labour and Social Security, 2012, personal communication.

Notes: The numbers in the table are based on the official statistics reported by Turkish embassies and consulates in Europe. The totals include people of Turkish origin who have obtained citizenship of the country where they reside. The totals may not include children who are citizens of the country of birth but born to parents of Turkish origin, since their birth may not have been reported to Turkish authorities.

*The starred figures are as of December 2010. The unstarred ones are as of December 2009.