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Uncomfortable facts and trends

The economic and demographic impacts of humanitarian immigration in Finland and Sweden the years 1990-2018

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Abstract

Humanitarian immigration has with the recent European immigration crisis in 2015-2016 become a hotly debated subject, not least in Finland and Sweden. While there are many discussions being had surrounding this topic, few economic or demographic studies or analyses have been done. This study aims to combine the data, literature and studies done so far on humanitarian immigration in both countries in order to discuss and compare the economic and demographic effects humanitarian immigration has had in respective countries in the 1990-2018 period. The results from this study show that in both countries the net economic and demographic impacts of humanitarian immigration have been negative; with largely similar trends but certain differences in short- and long-term costs, rates of assimilation, and future prospects.

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Introduction

Scope of the study

The countries chosen for this study are Finland and Sweden. This choice was made based for three reasons. First, Finland and Sweden present contrasting cases of more restrictive and more liberal humanitarian immigration policies. Second; the two countries are similar in population, economic development, societal and political structures. In other words, the choice of countries was made on the *most similar* basis. Third, the author chose the countries to utilize his language and contextual knowledge on the two countries. This relates to the fourth reason; which is the author's invested interest in the two countries. The time period chosen for the study relates both to availability of data, historical patterns of immigration in the two countries, as well as comparability between the two countries; which will be discussed in the background section.

Aim of the study

The study aims to highlight the economic and demographic effects humanitarian immigration has had on Finland and Sweden during the time period 1990-2018, as well as compare how these impacts have differed between the two countries due to their different immigration and integration policies. Thereby the research question for the study is as follows:

Research question

What has the economic and demographic impacts of humanitarian immigration in Finland and Sweden the years 1990-2018 been, and how have the two countries differed?

Relevance and contribution

There have been no comparative studies previously done on the economic and demographic impacts of humanitarian immigration in Finland and Sweden, and few studies done on the individual countries. This is an unfortunate gap in the literature considering the magnitude of the impact humanitarian immigration is having in both countries; a gap that this study will try to contribute to filling by discussing and comparing the available data and studies on this topic.

Background

The year 1990 was chosen as the starting point due to data availability and comparability between the Finland and Sweden. In Sweden during the 1950s-1960s immigration was labour dominated, with the immigrants coming mainly from the other Nordic countries; Finland in particular. In the

1970s and early1980s a limited amount of politically motivated immigration was allowed from countries like Turkey, Lebanon, Chile, Vietnam, and Poland. During the 1980s immigration on humanitarian grounds started increasing, Ethiopia, Iran and Chile being major source countries (Åslund et al., 2017). In Sweden humanitarian immigration dates back roughly to the 1970s, according to Christer Lundh (2010) "*Since the 1970s immigration has increasingly comprised of refugees and relatives"*, and really took off in the 1990s. During the 1990-1997 period as little as 13 percent of the total immigration was made up of labour immigrants (Lundh, 2010: 214-215). The share of foreign-born in Sweden rose from around 1 percent in 1930, to 7 percent in 1970 (Åslund et al., 2017), and to around 24 percent in 2018 (SCB, 2018). Finland was up until the late 1980s characterized by emigration, and immigration consisted mainly of returning emigrants. The first refugees to arrive were 180 Chileans between 1973 and 1978 (Sarvimäki, 2017), and Finland began receiving refugee quotas in 1986 (Elinkeinominiseriö, 2015). In the early 1990s with the possibility of emigration from the Soviet Union, the composition of immigration changed. Around the same time Finland started admitting refugees, primarily from Somalia, former Yugoslavia, Iraq, and Iran. By the end of the 1990s around 18,000 refugees with family members were residing in Finland (Sarvimäki, 2011; Sarvimäki, 2017) The increase in immigration, in part due to humanitarian immigration, since the 1990s can be seen in the trend over the chosen period of time in Finland as illustrated in Chart 1. Based on the above mentioned reasons the author deemed that the year 1990 serves as a suitable starting point for comparison.

Literature review

Definitions

First off, a definition of humanitarian immigration is in order to clarify what the author is referring to. With humanitarian immigration the author is referring to any form of immigration policy motivated on the grounds of the United Nations High Commissioner of Refugees (UNHCR) 1951 Geneva Convention on the protection of refugees (UNHCR Geneva Convention 2010). Accordingly, 'refugee' is defined as: "*...owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is out-side the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.*"(UNHCR, 2010: 14). Based on this definition, the author identified a number of

countries of origin, from which immigrants are in this study collectively referred to as humanitarian immigrants.

Immigration and integration policy development

Both Finland and Sweden introduced new immigrant integration related legislation in the late 1990s. In Finland the 'Act on the Integration of Immigrants and Reception of Asylum Seekers' came into force in 1999, with the goal of promoting immigrant integration, freedom, and equality by assisting them in acquiring information and skills that they need in Finnish society. Firstly it redevised the responsibilities between local and central administrations and required municipalities to prepare integration programmes. Secondly it stated that individualized integration plans be drawn-up for recently arriving non-labour immigrants; consisting of language training, vocational training, career counseling, work practice and so on (Sarvimäki and Hämäläinen, 2010). Sweden introduced a similar act on integration policy in 1997 based on the 'Sweden, the future and diversity – from immigration policy to integration policy' bill. The stated point of departure is integration policy focused on ethnic and cultural diversity. The Swedish Integration Board was set up in 1998, entrusted with the task of introducing, integrating and monitoring the integration progress of newly arrived refugees in Sweden. Some of the focal points of the integration policy were to introduce new legislation against ethnic discrimination, making use of immigrants' qualifications and skills on the Swedish labour market, integrating immigrants into the Swedish education system, as well as introducing urban policies to promote positive development in segregated immigrant housing areas (Regeringskansliet, 2002).

Stricter migration policy post-2015

Finland has been receiving quota refugees for over 25 years, which since 2001 has been 750 persons per year except for 2014 and 2015 when the quota was temporarily raised to 1050. Since 2016 migrants from Somalia, Iraq, and Afghanistan have been submitted to stricter criteria in being granted subsidiary protection due to the improved situation in these countries. Furthermore the first residence permit application of family members of those who have received international protection are subject to a fee, and there is now an income requirement on family reunification also for those granted international protection. In Sweden's case a number of policy changes were also made as a response to the 163,000 asylum seekers that arrived in 2015. One reaction was reintroduction of ID controls 2015- between Sweden, Norway, Germany and Denmark. Family reunification applications for beneficiaries of subsidiary protection were restricted to exceptional circumstances.

Moreover a temporary law was enacted in 2016 to limit residence permits given to refugees to 3-year temporary permits. Those with subsidiary protection are now granted one year residence permits and are ineligible for family reunification. The law is to be in effect for three years (OECD, 2017: 48, 53, 186, 234).

Integration policies post-2015

Beside the more restrictive immigration policies in both countries, a multitude of costly integration initiatives have been implemented by the governments of both countries; more so in Sweden than in Finland presumably due to the sheer difference in the scale of immigration discussed in the analysis section. Many of the measures have been a reaction to the 2015 migration crisis that had a particularly large impact on Sweden. One of the measures by the Swedish government has been to increase the available places in reception centers and resettlement places for asylum seekers. In terms of education Sweden's government has provided; educational support in terms of language training, supplementary tertiary education, increased funding to the Swedish Council for Higher Education for evaluation of foreign qualifications, bridging programmes for immigrants with credentials in e.g. medicine and nursing to complete their required training to practice in Sweden etc. In terms of labour market integration the Swedish government has; opened a vocational introduction jobs and trainee jobs scheme for recently arrived immigrants, started taking the immigrants socio-economic background into account and placing them into places where they have potential work and education opportunities, opened 200 new government agencies 2016-2018 to provide work experience to immigrants, as well as tailored support packages to large private sector employers that hire 100 or more refugees. The Finnish government has for instance; designed personalized language training programmes, launched a new discrimination act (2015) and the 'TRUST"' initiative to counter discrimination and promote mutual respect between immigrants and natives, promoted labour-market training of immigrants with the goal of quickly moving them into employment, allowed NGOs to support startup project by immigrants in reception centers, as well as launched the "Good Start" model co-financed by the EU to provide counseling, guidance, vocational and language training, and integration training to immigrants. In both countries social innovations such as the smartphone applications such as 'TEMWISIT' in Finland and 'Setel.in' in Sweden have been developed; 'TEMWISIT' to guide newly-arrived immigrants to public services and 'Setel.in' to collect existing websites and applications relevant to newly-arrived immigrants under one application (OECD, 2017: 40-42, 79-80, 83, 85-86, 88-89, 91-93).

Philosophical approaches

Brücker (2018) presents a number of different philosophical approaches to humanitarian immigration in his article. He himself argues for a utilitarian approach; that is the maximization of the sum or arithmetic mean of individual utilities. This is essentially a cost-benefit analysis, with a focus on the humanitarian immigrant's welfare. Another approach to humanitarian immigration is viewing humanitarian migration as a fundamental right which should be applied to every human being. Within this approach there are different nuances to this right. One take on this right is based on Immanuel Kant's (1775) view that a temporary right to hospitality is a part of the non-alienable human rights; whereas a more permanent stay ought to be subject to a mutually beneficial contract that a sovereign nation state can reject. The more radical view within this approach is the open-borders argument; the right to international migration as an essential liberty that each and every individual is entitled to. A third approach Brücker mentions is the Rawlsian approach of equity which is based on the principle that free migration is desirable so long as it favors the least well-off individuals globally. This would also mean that as soon as the least well-off person in the receiving country bears a cost for humanitarian immigration, any further migration would be ruled out. Lastly Brücker mentions the communitarian approach which in Brücker's words means that: "*ethical judgements have to be embedded in social contexts...those who are closer to the person undertaking the judgement are valued higher, e.g. family members, friends or the citizens of the same nation state...international migration should be limited in order to maximize the well-being of citizens of the national state or to preserve the reproduction of institutions there.*" (Brücker, 2018: 307). Compared to the previous three approaches the communitarian approach puts more emphasis on the receiving country and the sending country, rather than focusing primarily on the welfare of the individual migrant. It also differs in its rejection of the universalistic statements around the rights of migrants that is more prevalent in the previously mentioned three approaches (Brücker, 2018).

Theoretical approaches

As the focus on this study lies on humanitarian immigration to Finland and Sweden the years 1990-2018 and the economic and demographic impacts this has had on both countries, the author has chosen to focus on two sets of theory; international migration theory, and theory on immigrant assimilation. The international migration theory relates to the causes behind international migration and the factors that influence the rates and volumes of immigration, both on the individual level and in terms of broader trends. The theory on immigrant assimilation considers the factors that influence

how well immigrants are assimilated into the host country society and labour market; which relates to the economic impact humanitarian immigration has had on Finland and Sweden.

International migration theory

A common way to divide migration theories is to sort them into three categories based on the level of analysis; the macro-, meso-, and micro-levels. The macro-level looks at for instance the broader economic structures of income and employment as well as broader trends in migration; the meso-level looks at social networks in terms of families or households; and the micro level looks at individuals, their values, desires, and expectations. The theories can further be divided on the basis of whether they deal with initiation or perpetuation of migration; that is with the initial push- or pull-factors causing migration or the factors that maintain the migration flows once they have been set in motion. There are a plethora of different theories on international migration, and only a few of them will be mentioned below (Hagen-Zanker, 2008; Piché and Dutreuilh, 2013).

Micro-level theories of migration

On the micro-level one of the perhaps well-known theories is Lee's framework of push- and pull-factors on the individual level. In this framework negative and positive pull- and push-factors at the destination countries and countries of origin as well as intervening factors like migration laws or personal perceptions of migrants alter the patterns of migration. The neoclassical school's micro-level theory is the human capital approach. Here migrants are seen as rational actors who decide to migrate based on a cost-benefit calculation that leads them to expect a positive net return. International migration is thereby conceptualized as an investment in human capital. The theory focuses on the labour market, while also explaining selectivity and heterogeneity among migrants. A theory focused more on migrant behavior is Wolpert's (1965) stress-threshold model. In this model migrants have a utility threshold level that they aim to reach. To do this they compare the utilities of place to their threshold level to decide where to migrate. The place utilities for the present location of the migrant are based on past and future rewards, while the place utilities for potential destinations are dependent on the expected rewards. The knowledge of the migrant is seen as incomplete and subjective in nature, which means that rationality is limited (Hagen-Zanker, 2008; Massey et al., 1993).

Meso-level theories

Sandell (1977) and Mincer (1978), contrary to the micro- and macro-level theories choose to focus on the family as the decision making unit for migration. Here the family as a whole migrates if the

benefit they gain is net positive; therefore if only one family member migrates, the rest of the family follows only if the gains of the migrating member cover the losses of the rest of the family (Hagen-Zanker, 2008).

Macro-level theories of migration

On the macro-level there is another set of neoclassical theories that see migration as a part of economic development. The theories focus on geographical differences in demand and supply of labour, primarily within countries; the most common example being migration between the rural agricultural sector and urban manufacturing sector. Another commonly used theory is the dual labour market theory which more or less scales up the neoliberal migration theory to the international level; labour demand in developed countries exerts a pulling force on excess labour in developing countries. A theory focused more on historical power structures is the world systems theory, which uses colonialism and capitalist expansion of multinational corporations and neoclassical governments as the explanation for dislocations and disruptions in the developing world referred to as the periphery. Here global cities act as the pulling force in the dynamic context of the global economy. Lastly, there is Zelinsky's (1971) hypothesis of mobility transition which argues that migration is a part of the modernisation process. Zelinsky states that rates and patterns to migration are intricately linked to stages of modernisation and demographic factors, for instance industrialisation and fertility rates (Hagen-Zanker, 2008).

Perpetuation of migration

One of the main theories in perpetuation of migration is network theory. This theory argues that migrant networks on the meso- and micro-levels are essential in determining the volume and patterns of migration once it has been initiated. Following pioneering migrants, subsequent migrants have an easier time migrating due to the new communities of migrants and communication channels being established in the receiving country. Another theory on perpetuation on the meso-level is Massey's (1990) theory of cumulative and circular causation, which states that migration is a self-sustaining process once it has started. The past migration changes the socio-economic context in which migrant households make their migration decisions; as migrant networks expand migration becomes more accessible to all levels of the population and becomes ingrained in the local culture. Therefore, the more migration there is, the more migration there will likely be in the future (Hagen-Zanker, 2008). Hagen-Zanker's own general framework of migration decision making that served as an inspiration for this study's international immigration theory framework is shown in Figure 1.

Immigrant assimilation in the U.S. context

In a study comparing the economic assimilation of different cohorts of immigrants to the United States, Borjas (2015) finds that the cohorts who entered in the 1990s have shown significantly lower rates of economic assimilation than the earlier cohorts in the 1970s and 1980s. In fact, the evidence that Borjas brings forth suggests that cohorts that entered the United States in the 1990s have shown no economic assimilation whatsoever. His analysis suggests that the reason for the sharp decline in economic assimilation of recent cohorts lies in significant reductions in their rate of human capital accumulation. One important factor behind this that Brojas identifies is that the faster the increase of immigrants of the same national origin is, and the larger this group of immigrants gets; the slower the increases in both English language proficiency and economic assimilation are for this group. Borjas explanation for this phenomenon is that the recent immigrant cohorts to the United States have fewer incentives to invest in host country specific human capital because the growth of the immigrant population makes these investments less profitable, and these reduced incentives slow down the rate of economic assimilation. Borjas (2018) attributes a part of the slowdown in economic assimilation in the United States to the rise of large ethnic enclaves. Another point that Borjas draws from the results of his analysis, is that the only immigrant cohorts that have made significant improvements during their lifetime in the United States were those who immigrated between the two mass migrations at both ends of the 20th century (Borjas, 2018). Another factor has been the change in the mix of source countries among immigrants in the United States from Western Europe to Asia and Latin America; which has resulted in an immigrant population that on average is relatively less skilled. According to Borjas study, the increase in size of national origin groups accounts for around a quarter of the decrease in rates of economic assimilation and human capital acquisition (Borjas, 2015). Borjas (2018) points out in one of his other studies, quite bluntly, that every estimate that shows economic benefits from immigration is based on theoretical assumptions and equations; not empirical data. To prove his point, Borjas runs his own simple calculation on the supposed aggregate increase in wealth for the native population, the "immigration surplus", that the laws of supply and demand dictate. When he weighs this surplus against the redistribution of wealth that immigration causes, it becomes quite clear that the effect of immigration is distributional (Borjas, 2018). As he himself puts it: "*Those who compete with immigrants are effectively sending billions and billions of dollars to those who use immigrants*" (Borjas, 2018: 340). Based on Borjas' studies and a few other authors, a theoretical framework for humanitarian immigrant assimilation was constructed, which is shown in the Theory section.

Studies on immigrant assimilation if Finland and Sweden

Explanatory aspects

Despite the efforts and resources poured into immigrant integration programmes by both the Swedish and Finnish governments, labour market assimilation has been largely unsuccessful and average wage levels have remained far below native averages for post-1990 humanitarian immigrant cohorts in both countries; as will be shown in the Analysis section later on. The big question however is why this is the case. One of the key arguments relates to the change in the economic structure of both countries. The more successful labour market assimilation of immigrants arriving in the 1960-1980 period is at least to some extent related to the fact that the industry and manufacturing sector was more important and a bigger employer during this period. The labour intensity of production was also higher, meaning a greater need for low-skill labour. Since the 1980s the service sector has gradually become the major employer; which has increased the importance of Swedish and Finnish language proficiency, communication skills, as well as familiarity with institutions in the receiving countries. This together with the increased educational levels of the native Finnish and Swedish populations has put a higher demand on the educational and skill-levels of immigrants; who since the 1990s have increasingly come from low- and medium-HDI countries with much lower average levels of education. Moreover, the skills that these humanitarian immigrants acquired in their home countries are in many cases incompatible with the needs presented by the Swedish and Finnish labour markets. Another mismatch relates to the quality of the education that the immigrants from low- and medium-HDI countries have; as a higher education degree in a country with a low standard on its higher education system does not necessarily meet the standard required by the Swedish and Finnish labour market with internationally high standards on their higher education. It may also be difficult to evaluate the competence of individuals holding higher education degrees from institutions that are not internationally recognized (Aradhya, 2018: 37-38; Akay and Tezic, 2007). Another factor that may have played a role is related to the low participation and employment rate of women among recent humanitarian immigrants. The cultural background of immigrants and the gender roles of the source countries therefore seem to play an important role. Aradhya (2018) finds that the recent immigrant groups display a significantly smaller girl advantage in education than the Swedish-born population when the parents were born in gender unequal societies, which Aradhya argues: "*reflects a lingering effect of gender norms that are transmitted across generations within the household*" (Aradhya, 2018: 58). Neuman (2018) reaches a similar conclusion from her quantitative study on labour market assimilation of immigrant women in Sweden 1990-2007 where she concludes that:

"*...source country female participation is not strongly correlated with immigrant men's labor market participation in Sweden. This strengthens the idea that the source country FLFP(Female Labour Force Participation) rate captures source country culture on gender roles rather than other omitted factors, such as work behavior, that affect men and women similarly.*" (Neuman, 2018: 606). Yet another explanation relates to the characteristics of the labour markets in Finland and Sweden. As Sarvimäki (2011) mentions in his article, Finland is a country characterised by a compressed wage distribution, high union density, an extensive welfare state and a short history of immigration. While the last part about having a short history of immigration does not apply as much in the Swedish case, the previous three certainly do (Akay and Tezic, 2007; Sarvimäki, 2011). These three factors influence that minimum wage levels and employment costs are very high for employers, making employment of low-skilled labour with little to no work experience and knowledge of the local labour market a prohibitively expensive endeavour. Moreover, the generous welfare benefits offered by both the Finnish and Swedish governments to arriving humanitarian immigrants certainly do not increase their incentives to invest in education and find employment. Lastly the change in the composition of source countries may have some explanatory power. Since 1990 the humanitarian immigration to both Finland and Sweden has been characterized by low- and medium-HDI countries, mainly from the MENA (Middle-East and North Africa) region. This is a clear shift from the labour immigration from other Nordic countries that dominated until around 1970 in particular, but also the culturally closer humanitarian immigrant groups from Latin America and Europe during the from the 1970s until the early 1990s (Aradhya, 2018: 34, 37-38; Akay and Tezic, 2007). Other less country specific factors that may have influenced the poor assimilation of recent cohorts of humanitarian immigrants to Finland and Sweden were discussed in the previous section on theoretical approaches and will be further discussed and presented in the theory section below.

Empirical aspects

Päivinen (2017) in his report on the costs of immigration in Finland comments on an estimate in the European Commission's report *An Economic Take on the Refugee Crisis - A Macroeconomic Assessment for the EU* (Melander, 2016) which states that the net effect of asylum seekers may change to positive within 10-15 years of staying in the receiving country. He points out however that there is no calculated scenario in the study; the estimate is based purely on the general discussion and the knowledge base surrounding the theme (Päivinen, 2017: 49). In other words the 10-15 year estimate lacks the empirical data to support it. On the contrary there are studies and calculations done on both Finland and Sweden that show quite different results.

Sarvimäki (2011) did a study on the net impact of immigrants the years 1993-2003 focusing on the working age population, born between 1944 and 1968, meaning that the individuals were between 25 and 60 years old during the 1993-2003 time period. The sample he used consisted of 48,905 observations on 5,715 immigrants and 403,741 observations on 37,264 natives. The analysis was based on individual-level panel data by Statistics Finland, where information from different administrative registers was combined. The key sources were the tax register, population register, and the register on social assistance kept by the National Institute for Health and Welfare. The results he arrives at are that men of non-OECD origin who arrived in the 1990s earned around 17,000 euro less than comparable native men upon arrival. For OECD-born men and women the gap was around 10,000 euro. Sarvimäki estimates that after living in Finland for 15 years, with increases of around 1,000 euro per year during the first year but with diminishing returns over time, non-OECD immigrants are expected to earn around 10,000 euro more than comparable non-OECD immigrants upon arrival. This would still leave a gap of around 7,000 euro in earnings to comparable natives. Sarvimäki's estimates suggest that up to 90 percent of the difference in initial earnings between non-OECD immigrants and natives are attributable to differences in employment. With the decrease in native-immigrant employment differences over time the ratio decreases, but it remains above 50 percent. During their first year of stay in Finland non-OECD immigrants received twice as much in income transfers as comparable native households. This gap narrows down and becomes statistically insignificant after roughly 20 years of stay in Finland. Households with an OECD-born member on the other hand receive roughly the same amount in income transfers as comparable native households. Concerning unemployment four fifths of non-OECD households receive unemployment benefits during their first year in Finland, which decreases to almost half of households after 20 years of stay. In comparison around a third of OECD and native households receive unemployment benefits during a year (Sarvimäki, 2011). One conclusion Sarvimäki reaches in his study is that: "*...only men from OECD countries converge to the annual earnings of comparable natives. After 20 years in the country, non-OECD immigrants have not reached even the level of low-skilled natives.*"(Sarvimäki, 2011: 21). Sarvimäki did another study on the labour market integration of refugees in Finland in 2017. He used data provided by Statistics Finland that combined data from different administrative registers. The data contained information on mother tongue, country of birth, nationality, family structure, income, and employment for the entire working age population in Finland the years 1988-2013. Sarvimäki chose to focus on 25-60 year-olds who immigrated at the age of 18 or older. In this paper Sarvimäki calculates and visualizes the trends in employment, earnings, and benefits received among different immigrant groups in Finland against the Finnish-born population. His analysis shows that despite early increases in earnings and

employment, the different immigrant groups stagnate over time at rates significantly lower than the Finnish-born population (Figure 2). Immigrants from Somalia, Afghanistan, and Iraq (humanitarian immigrants) in particular show drastically lower earnings and employment than the Finnish-born population and significantly slower growth in earnings and employment than other immigrant groups (Sarvimäki, 2017).

Similarly, Tino Sanandaji in his essay describes the misconception around humanitarian immigration being the solution to an ageing society due to their average age being significantly lower than that of the receiving countries population. Sanandaji concludes that despite their demographic advantage in having a larger share of their population in working age (77 percent versus 54 percent), immigrants born outside of Europe of working age on average earn roughly half as much as Swedish-born (158,500 SEK versus 306,900 SEK) annually, earning less even when the parts of the population outside working age are included (121,800 SEK versus 162,100 SEK). This also means that they pay significantly less in taxes; whereby it goes without saying that they will not be having a net positive impact on the Swedish economy. Granted, this was only based on the latest data from year 2015, but the populations used in the calculation include all immigrants born outside of Europe at that point in time (Sanandaji, 2017).

Ruist (2018) in his study on refugee immigration to Sweden finds the following. For the refugees who arrived 1982-88 the labour participation was over 60 percent two to three years after immigration for men, and five years for women. For more recent cohorts the duration to reach 60 percent labour participation has increased to six to nine years for men and eight to twelve years for women. Reunited relatives of refugees are not counted in the calculations. While the increase in the rate of labour market participation has been significantly slower for more recent cohorts, Ruist comes to the conclusion that on a 15 to 20 year horizon, both the 1980s cohorts and more recent cohorts converge at around 70-80 percent labour participation for men and 65-75 percent for women. Age has also played an important role in refugee labour participation, as men over 35 years of age have had a somewhat slower increase in labour participation rates, while men over 40 had significantly slower increase in labour participation rates. Aldén and Hammarstedt (2016) did a similar study on the labour market assimilation of refugees arriving in Sweden the years 2005-2007. They calculated the progress of refugees over a seven year period and reached a number of conclusions. After seven years in Sweden the labour participation rates of refugees with higher education was around 60 percent, and those with only primary education around 50 percent. The average male refugee had a labour participation rate of 60 percent, while the average female refugee had a rate of 40 percent. It is important to note however that labour participation in Sweden is

defined as working for at least one hour per week (SCB, 2019c) or participating in certain labour market policy measures (Schermer, 2019); which means that labour participation does not guarantee productive employment.

To sum up; the empirical literature on Finland and Sweden indicates that labour market assimilation of humanitarian immigrants has been slower and less effective for humanitarian immigrants arriving since the 1990s than for previous immigrant cohorts, and that wages of humanitarian immigrants do not catch up to the level of the native-born population over time. This in turn would mean that humanitarian immigration in both countries is an economic burden; which will be further discussed in the analysis section.

Theory

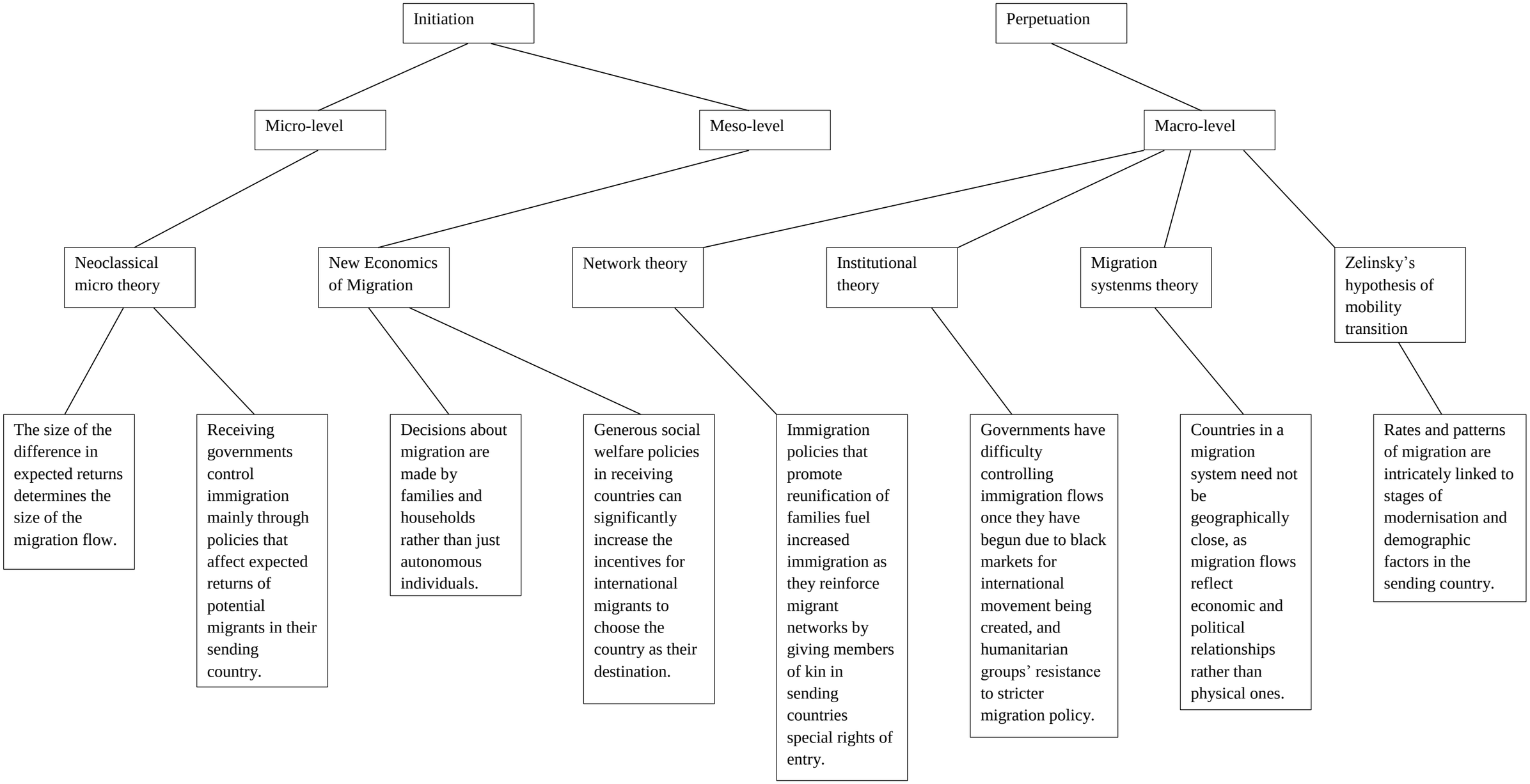
Philosophical approach

Of the four approaches mentioned by Brücker in the literature review, the author found the communitarian approach to be the most appealing and suitable for the chosen study due to its focus on the independent nation state and the society receiving the migrants. The second philosophical approach that this study will utilize is that of pragmatism. The author argues that all policy on humanitarian immigration needs to be subjected to and supported by empirical data in order to evaluate its usefulness and efficiency.

Theoretical frameworks

As Massey et al. (1993) point out; there is still no agreement on a coherent theory for international migration. Instead there is an array of fragmented theories that have developed separately from each other. Unsurprisingly, none of these scattered theories can on their own capture the complex issue of international migration. This study has therefore chosen aspects from across this array of theories to best fit the context of the study's topic of humanitarian immigration to Finland and Sweden (Massey et al., 1993). As with international migration, immigrant assimilation is also a complex issue that includes a wide range of aspects such as; volume, rate, demography, country of origin, culture, policy, education, labour market experience etc. The author chose to focus on economic aspects relating to the labour market, rates, volume, and composition of countries and cultures. The frameworks the author compiled are presented below. These theoretical frameworks served mainly as frameworks of the theoretical expectations and key influencing factors behind the immigration and assimilation processes of humanitarian immigrants arriving in Sweden and Finland the years 1990-2018.

International immigration theoretical framework for humanitarian immigration to Finland and Sweden 1990-2018



Sources: (Piché and Dutreuilh, 2013; Massey et al., 1993; Hagen-Zanker, 2008; Borjas, 1999) Author's own compilation.

Immigrant assimilation theoretical framework for humanitarian immigration to Finland and Sweden 1990-2018

Some of the qualifications and training that the immigrants acquired before entry into the host country may be specific to their home country, thereby reducing their stock of marketable human capital in the post-immigration period. As a result, immigrants that are highly skilled "on paper", may in reality have their skill level downgraded significantly in the context of the host country; especially if the host country population on average is highly skilled (Borjas and Monras, 2017)

Humanitarian principles that encourage host countries to receive as many immigrants as possible significantly impacts distributional patterns in the host country, as the classical model of supply and demand in the labour market predicts (Borjas and Monras, 2017).

A sudden influx or large numbers of humanitarian immigrants may cause a supply shock in the labour market that will harm low-skilled workers in the host country due to the resulting oversupply of unskilled or low-skilled labour (Borjas and Monras, 2017).

Natives in the receiving country with productive endowments that complement those of immigrants stand to gain from immigration, while those natives who with endowments that compete with those of immigrants stand to lose (Borjas, 1999).

A key determinant for immigrant assimilation into the labour market of the host country is how the skills of the immigrant compare to that of natives in the host country (Borjas, 1999).

The kinds of welfare benefits that earlier immigrant waves receive influence the kinds of welfare benefits that newly arrived immigrants receive. This correlation would entail that there are information networks within ethnic communities that transmit information about the availability of benefits to newly arrived immigrants (Borjas and Hilton, 1995).

The incentives to assimilate are greater for an individual from a small minority than that of an individual from a large minority group. In host societies with a large majority of individuals sharing the same culture, immigrating individuals from minority groups assimilate more quickly. Immigrating individuals are less likely to assimilate when their native language and culture are broadly represented in the host country. (Lazear, 1999).

Recent immigrants on average have lower labour force participation rates than natives, leading to worker shares that are lower than their population shares. This is even more evident in countries accepting more asylum seekers and refugees (Kerr and Kerr, 2011)

Immigrant traits vary greatly between countries of origin. The strong explanatory power of country of origin points to poor measurements of observable characteristics such as immigrant educational attainment, language proficiency, and work experience (Kerr and Kerr, 2011).

Immigrants are not a randomly selected sample of the population of the sending countries (Borjas, 1999).

Sources: (Lazear, 1999; Kerr and Kerr, 2011; Borjas and Monras, 2017; Borjas and Hilton, 1995; Borjas, 1999) Author's own compilation.

Research Design

A historical research design will be used for the research. This design was chosen as the most suitable because the research is looking at long-term trends over a period of almost 30 years. The research tries to understand the present situation by looking at the historical development; and potentially anticipate future developments. Moreover, the research design is unobtrusive which reduces potential bias to the author's selection and analysis of data. Unobtrusiveness and reducing bias is also vital in accomplishing the necessary objectivity needed to achieve the aim of the research.

Methodology

Quantitative cross-national research was chosen as the preferred method for this study due to a number of reasons. First, the author believes that comparing two different contexts, Finland and Sweden, when dealing with effects of immigration is of value as it can illustrate the effects of different structure and volume of immigration. Second, there was the concern of data availability which might have constrained the research, which is why two countries were chosen for comparison. Third, the author was interested in understanding the trends related to humanitarian immigration more broadly; in this case the Nordic context. Generalizability over the wider EU context was not the aim of the research due to time and resource constraints, and also due to the author's approach to the problems being centred on the independent nation state. Fourth, the author is most interested in the macro level effects of immigration which is why the research focuses on comparing nation states.

Data Collection

The types of data that were used are: statistical data, statistical reports, academic literature, and research reports. Data sources for the authors own empirical analyses were collected from: Statistics Finland, Statistics Sweden, OECD Statistics & Data, Eurostat, Finnish Immigration Service, and Swedish Migration Agency. As the author relied on reputable databanks as well as international and national institutions for his data the preliminary assumption was that there were no issues concerning the validity and accuracy of the selected data for analysis. Each set of data was however critically scrutinized for its accuracy, validity and relevance to the study.

Data analysis

The research question covers different demographic and economic aspects of humanitarian immigration in Finland and Sweden. Areas that were looked into were volume of immigration, age structure, sex ratios, fertility rates, labour participation, employment, unemployment, wage levels, and education. Empirical data was gathered from various databanks and state institutions as listed in the data collection section. The relevant indicators were then visualized in simple frequency tables, charts or longitudinal series of absolute and relative frequencies due to the nature of the data and the limitations of the author's quantitative data analysis skills. Excel was the main tool of analysis. Moreover data and context information from a number of academic papers and reports were analysed. The results of the analyses in the respective countries were then discussed and compared to see whether and how humanitarian immigration had differed in its economic and demographic impacts in the two chosen countries. Data was collected and organized into the aspects of the research mentioned above. Each set of data then underwent a rejection process to filter out redundant data. Each set of data was then analysed separately, but organized into sections to make the analysis as clear and easy to follow as possible. Once all the sections were analysed, the results were discussed and a number of conclusions were drawn.

Biases

The main sources of bias when it comes to the study concern the choices of countries, the time period, the aspects covered, as well as the indicators and datasets chosen for analysis. The countries and time periods have already been argued for above. As for the aspects, indicators and datasets; these choices and narrowing down of the topics are inevitable in order to reach any conclusions with the study. The aspects chosen were perceived by the author as the most relevant in understanding the demographic and economic impacts of humanitarian immigration in Finland and Sweden.

Analysis

Origin and volume of humanitarian immigrants

The Graphs 1 and 2 show the absolute and relative growth of the 12 (Sweden) and 13 (Finland) biggest immigrant groups in both countries the years 1990-2018. The straightness of the Swedish line is because it is based on four values (1990, 2000, 2010, and 2018). In both cases the growth has been more rapid in Sweden by a large margin; while also beginning at higher levels in 1990. In

absolute terms the gap increased from around 150,000 individuals in 1990 to around 700,000 individuals in 2018. In relative terms the gap increased from over 1.7 percentage points to almost 6 percentage points in 2018. The composition of source countries in both countries in the 1990-2017/2018 (Graphs 3 and 4) period are fairly similar; the majority of source countries being MENA countries, with a few other African and South Asian countries in the mix. The fastest growing immigrant groups in Finland the years 1990-2017 were Somalis and Iraqis, in Sweden Syrians and Iraqis; with all the other groups showing somewhat slower levels of increase.

The sex ratio, the number of men per 100 women, is generally agreed upon to be at a natural rate of around 1.05 at birth. This ratio tends to level out with the increase in age due to men having higher natural death rates as well as being at a higher risk of dying from external causes (injury, accident, viloence etc.). This means that the sex ratio of the population as a whole is expected to stabilize around 1.0 (World Health Organization, 2019). When looking at the ratio between male and female immigrants arriving in Finland and Sweden the years 2000-2017 there are significant differences in the sex ratios. For Sweden's case the data is a bit indecisive when comparing between asylum seekers receiving residence permits and numbers of humanitarian immigrants living in Sweden. For the asylum seekers (Table 1) receiving residence permits, the sex ratio has increased from around 1.56 men per woman in 1995 to around 1.89 men per woman in 2018; while the sex ratio for the data on the combined 12 largest humanitarian immigrant groups living in Sweden (Table 2) grew from around 1.12 to 1.19 the years 2000-2018. This is a significant disparity, for which the author could not find an explanation; even when considering the substantial family reunification Sweden has had during this period (Graph 5). For the Finnish case the sex ratio of the combined 13 largest humanitarian immigrant (Table 3) groups has dropped drastically from around 4.22 in 1990 to around 1.42 in 2017. Depending on the data on Sweden, the humanitarian immigrants arriving in Finland either have a significantly higher or lower sex ratio. In Finland's case the high male to female ratio is however not as big a concern as in Sweden due to the absolute and relative number of immigrants being so much smaller in Finland. When looking at the sex ratio of the entire Finnish and Swedish populations the years 1990-2018 (Tables 4 and 5) there is only a slightly faster increase in the Swedish sex ratio from around 0.976 in 1990 to around 1.011 in 2018; whereas in Finland there was an increase from around 0.943 in 1990 to 0.968 in 2018; a 3.5 percent increase in Sweden and a 3.3 percent increase in Finland. This would indicate no significant difference in the impact of humanitarian immigration on the sex ratio of the total population in the two countries. The lower initial sex ratio in Finland dates back to the almost exclusively male casualties during the

Winter War (1939-1940) and Continuation War (1941-1944) that Finland fought with the Soviet Union.

When comparing the age structure between the humanitarian immigrants that arrived in Finland and Sweden the years 2000-2017 there are a couple of points where they differ. Firstly, the share of young children aged 0-14 has been much higher in Finland at around 30 percent (Chart 2), compared to around 10 percent in Sweden (Chart 3). Another point where they differ is that the share of the immigrants that are under 44 years of age in Finland is as high as 85-90 percent, while in Sweden the share is only at around 70 percent. This means that the humanitarian immigrant population that has arrived in Finland during this period has been significantly younger than the population arriving in Sweden. This could have two implications. One implication could be that the younger immigrant population arriving in Finland, particularly the fairly large share of 0-14 year olds, would have better prospects for assimilating into society. The other implication could be that labour market integration of the younger immigrant population arriving in Finland would be more successful and the time they spend working in the labour market ought to be longer than it would be fore the humanitarian immigrants arriving in Sweden. This would of course require that the educational and skill level differences between the immigrant populations of the two countries do not differ significantly at the time of entry, and that similar assimilation policies and mechanisms are in place in both countries. These two assumptions would also be strengthened by the fact that the absolute and relative number of humanitarian immigrants arriving in Finland has been much smaller than that of Sweden.

Demographic Impacts

When looking at fertility rates of immigrants from different countries of origin in Finland the years 2000-2016 (Table 6) there are clear differences among source countries as well as between immigrants and native Finns. The highest fertility rates are among immigrants from MENA countries as well as Former Yugoslavia. Some immigrant groups have seen a small decrease in fertility rates; such immigrants from Somalia, Morocco, D.R. of Congo, Turkey, and Iraq. Others, on the other hand, have actually seen an increase in fertility rates; such as immigrants from Afghanistan, Former Yugoslavia, and Ethiopia. The substantial gap in fertility rates between humanitarian immigrant groups and native Finns, combined with the fact that native Finns have had a reduction in their fertility rate from 1.7 to 1.6 over the time period, means that the share of children born to humanitarian immigrants have increased and the share of Finnish-born children have decreased as parts of the total number of live births. This is clearly visible in the statistics on

live births by country of origin (Table 7) where there is a clear decline in live births by Finnish natives from around 54,000 in 2000 to around 44,000 in 2017; a drop of over 10,000 births or almost 20 percent in only 17 years. On the other hand, all of the 12 biggest humanitarian immigrant groups (by country of origin) have increasing trends in number of live births. When looking at live births among all individuals of foreign origin in Finland it has almost tripled in the 2000-2017 period, from around 2,400 in 2000 to around 6,700 in 2017. Statistics on immigrant fertility rates in comparison to the native population in Sweden is unfortunately less detailed than the data on Finland, as it lacks data on the individual countries of origin. The trends however are quite similar as graph 6 shows. Immigrants from low-HDI countries have had a fertility rate increase from 2.5 to 3.5 and back down to 3.0 in the period 1990-2007, while immigrants from medium-HDI countries have had a gradual decrease in fertility from around 3.0 in 1980 to around 2.3 in 2007. In the 1980-2007 period Swedish-born have had a fertility rate from around 1.6 in 1980 to 2.1 in 1990, back down to 1.5 in 2000 and up to 1.7 in 2007. The gap in fertility to medium-HDI countries decreased roughly by half from around 1.4 in 1980 to around 0.7 in 2007, while it increased fourfold between natives and immigrants born in low-HDI countries from around 0.3 in 1990 to around 1.3 in 2007. A part of the explanation behind the large increase in the fertility rates among immigrants born in low-HDI countries is the increase in Somali immigrants during this period of time; which have the highest fertility rates among immigrants in both Finland (5.0 to 4.3 the years 2000-2016) and most likely also in Sweden (Persson, 2008). A recent report by Statistics Sweden from 2017 shows that the fertility rates among immigrants from low-HDI countries have increased even further to around 3.2, decreased slightly among immigrants from medium-HDI countries to around 2.3, and increased slightly among Swedish-born mothers to 1.8 in 2016 (Lundkvist, 2017). Around 70 percent of the live births among medium-HDI immigrant women were by mothers either from Syria or Iraq in 2017, while around 40 percent of the live births among low-HDI immigrant women were by mothers from Somalia, other common countries of birth being Afghanistan and Eritrea. The share of all children born in Sweden from medium-HDI country mothers increased from around 4 percent in 2000 to 10 percent in 2017, while it increased from 2 percent in 2000 to 7 percent in 2017 for low-HDI country mothers. The total increase in the percentage of children born from low- and medium-HDI country mothers was thereby from 6 percent in 2000 to 17 percent in 2017; almost a threefold increase (Lundkvist, 2018: 51, 53). The fertility rate of women born outside of Europe was around 2.4 in 2017, while the fertility rates of women born in Sweden and the EU were around 1.8 (Miranda et al., 2018: 83).

The trend in both Finland and Sweden the years 2000-2017 has been a substantial increase in births among women from low- and medium-HDI countries, while the births per woman of native origin has decreased substantially in Finland by almost 20 percent, while remaining fairly stable among Swedish-born mothers; both groups of native-born mothers however having fertility rates well below replacement levels at around 1.6 and 1.8 respectively. The natural increase in young children aged 0-4 as a proportion of the total population seen in both countries the years 2013-2018 can thereby be contributed to immigrants from low- and medium-HDI countries (charts 4 and 5). This is a worrying trend considering the lower employment and wage levels and slow labour market assimilation seen among immigrants from low- and medium-HDI countries discussed in the next section. It also means that families of low- and medium-HDI country origin are becoming even more reliant on income distributions from public finance in both countries.

Labour market and educational impacts

Data on employment, unemployment and labour participation

Tables 8 and 9 show the employment rates of working-age native- and foreign born individuals in Finland and Sweden the years 2000-2015 by levels of educational attainment. What is immediately noticeable is the persistent gap in employment rates seen across levels of educational attainment. In the Finnish case the total gap decreased from around 22 percentage points in 2000 to around 13 percentage points in 2015, in Sweden the total gap decreased from around 20 percentage points in 2000 to around 17 percentage points in 2015; a somewhat slower decrease. In Finland the gap has been the largest between highly educated natives and immigrants decreasing from around 36 percentage points in 2000 to around 15 percentage points in 2015, while in Sweden the gap has been the largest between lowly educated natives and immigrants remaining at around 20 percentage points throughout the 2000-2015 period. Overall it seems that immigrants on the whole have integrated slightly better in Finland than Sweden during this time period.

Table 10 and 11 present the employment, unemployment, and labour participation rates for native- and foreign born men and women the years 2000-2017. What stands out the most are the significant gaps in employment, unemployment and labour participation between native- and foreign-born women as well as between foreign-born men and women. In Finland foreign-born women have had around 26 to 16 percentage points lower employment rates, 9 percentage points higher unemployment rates, and 15 to 11 percentage points lower participation rates than native-born women in 2000 and in 2017. In Sweden the corresponding rates were 25 to 17 percentage points lower, 7 to 11 percentage points higher, and 22 to 9 percentage points lower. While there have been

increases in both labour participation and employment rates among foreign-born women, the gap in unemployment has remained stable in Finland and increased in Sweden.

When comparing between foreign-born men and women the employment for women was around 10 to 15 percentage points lower, the unemployment rate 15 points lower to 3 percentage points higher, and the participation rates 19 to 15 percentage points lower in 2000 and in 2017. In Sweden the corresponding rates were 3 to 8 percentage points lower, 2 to 1 percentage point lower, and 5 to 10 percentage points lower. Foreign-born women have thereby had persistently lower employment and participation rates than foreign-born men in both countries. The unemployment for foreign born-women relative to men has on the one hand increased drastically in Finland by around 18 percentage points, while it has increased only slightly in Sweden by around 1 percentage point.

When comparing all native-born and foreign-born in Finland the employment rates for foreign-born were 23 to 10 percentage points lower, unemployment rates 20 to 7 percentage points higher, and participation rates 10 to 6 percentage points lower in 2000 and 2017. The corresponding rates in Sweden were 24 to 13 percentage points lower, 8 to 11 percentage points higher, and 22 to 5 percentage points lower. The clear difference here is that foreign-born in Finland as a whole have decreased their negative gaps to the native population across all three measurements, while the gap in unemployment has increased in Sweden.

The conclusion that can be drawn from tables 8-11 is that although the trend has been positive across most of the indicators, persistent gaps have remained. The problem with the tables is however that they clump all immigrants together in one group, whereas the study has chosen to focus on humanitarian immigrants. There author found no available data on unemployment rates between immigrants from different regions or nations in the Swedish case; but did find unemployment data by region of birth on Finland. Table 12 shows the labour force, number of unemployed and unemployment rates for Finnish-born as well as immigrants from different regions in Finland the years 2000-2017. While the trend in unemployment has been positive among all regions of origin except for America; the gaps are significant in all regions of origin. The unemployment rate for Finnish-born changed from around 12.3 in 2000 to 10.9 in 2017. The unemployment rate of European-born (excluding Finnish-born) was around 18 to 9 percentage points higher, for African-born 31 to 25 percentage points higher, for American-born 3 to 13 percentage points higher, and for Asian-born 27 to 18 percentage points higher than the Finnish-born population. From the Finnish experience it therefore seems that African- and Asian-born have had the highest unemployment rates; which is problematic considering that most of the

humanitarian immigrants arriving post-1990 in both Finland and Sweden originate from MENA countries.

Data on education

One more aspect that the author found useful to look at was the educational attainment of humanitarian immigrants. Charts 6 and 7 show the composition of educational attainment for non-EU28 immigrants in Finland and Sweden the years 2006-2018. From the charts, the share of immigrants holding only primary education or lower have increased in both countries during the 2006-2018 period; from around 40 percent to 43 percent in Finland and 40 percent to 51 percent in Sweden. Another fairly drastic change in the Finnish case is the decrease in the share of individuals holding tertiary education 2014-2018; a decrease from around 26 percent to 17 percent. Two likely factors behind this decrease are the introduction of tuition fees for international students 2016-2017 as well as the fairly rapid increase in humanitarian immigrants during this period (Graph 3). In the Swedish case the increase in individuals with primary education or lower has been accompanied by a significant decrease in individuals with secondary education; from around 28 percent to 15 percent. The doubt concerning the Swedish data is the consistently high and increasing proportion of individuals with tertiary education throughout the time period; from 31.9 percent to 34 percent, which in 2018 was twice as high as in Finland. This share of individuals holding tertiary education seems disproportionately high considering that Sweden had around 700,000 more humanitarian immigrants occupying 6 percentage points more of the Swedish total population than the humanitarian immigrants did in Finland in 2018, combined with the fact that the majority of these immigrants were from low- and medium-HDI countries (roughly the same source countries as humanitarian immigrants in Finland). This cannot be explained with non-EU28 immigrants gaining Swedish citizenship either, since the proportion of Swedish-born individuals holding tertiary degrees has steadily increased throughout the time period, being only slightly lower than in Finland (Eurostat, 2019). Regardless the accuracy concerning the share of individuals holding tertiary education in Sweden; the share of non-EU28 citizens holding only primary education or lower was in 2018 roughly 2.5 times as high in Finland and 2.6 times as high in Sweden compared to native citizens. Concerning tertiary education the share of non-EU28 individuals holding tertiary education in Finland was less than half of than that of Finnish citizens, while the difference in Sweden was only a couple of percentage points (Eurostat, 2019).

Looking at differences in how well immigrants and second-generation immigrants fare compared to the native-born children in school, Chart 8 shows the differences in year 2009's PISA reading

scores. In the case of Finland the gap to native-born children is roughly 80 points for immigrants and 40 points for native-born children of immigrants. In Sweden's case the corresponding gaps are around 80 points and 30 points. In other words, immigrants in both countries showed roughly the same gaps in scores. Chart 9 shows the PISA science performance difference between immigrants and native-born in 2006 and 2015. For Finland the gap was roughly 90 points in 2006 and 80 points in 2015, for Sweden the gaps were roughly 60 points and 70 points respectively. As with the PISA reading scores there were significant gaps between immigrants and native-born in science performance; with the gap narrowing slightly in Finland and increasing slightly in Sweden. The only PISA data specifically on humanitarian immigrants that the author could find is shown in chart 10, with Arab-speaking immigrants in Finland showing roughly 150 points lower scores in science, with second-generation Arab-speaking immigrants showing roughly 100 points lower scores (OECD, 2016: 67, 83).

The author found no comparative studies done between natives and humanitarian immigrants in Finland's case, but found one done on Sweden by Grönqvist and Nikami (2017). They did a study on the development of grade point averages (GPAs) for refugee students the years 1998-2014. The results (Graph 7) show that refugee students on average scored roughly 10 percentile ranks lower than native students until 2008, after which there was a sharp increase in the gap to around 16 percentile ranks by 2010, which remained stable until 2014.

The sharp increase in the gap can in part be explained by the increase in average age of immigrants around the time when the gap started increasing. Another factor that may have impacted the increase in the gap was the change in the composition of source countries of the immigrants around the same period of time. Grönqvist and Nikami find that controlling for the age of the immigrant at the time of arrival explained around two thirds of the increase in the gap, and when further controlling for the composition of source countries the change in the gap was reduced by another 25 percent. Demographic factors therefore seem to explain most of the change in the gap. A similar gap was seen in the development of upper secondary school qualification rates 1995-2014. Natives are stable with around 90 percent qualifying for upper secondary school, whereas the refugee students' rates drop from around 75 percent to 65 percent 2008-2010, and remain at 65 percent until 2014; a significant gap to native students of around 25 pecentage points. The authors find that when controlling for parental socioeconomic background and neighbourhood, the gap in GPA scores and qualification for upper secondary school are almost eliminated (Grönqvist and Niknami, 2017).

The theoretical discussion, the discussion on immigrant assimilation in Finland and Sweden, the demographic data, the labour market data, and the data on education presented in tables 8-12, charts 6-8 all seem to point to that humanitarian immigration has induced, and will continue to induce a significant economic burden on public finance in both Finland and Sweden. This will be confirmed in the section below.

Net economic impact of humanitarian immigration

There have been a few studies done on the economic impact of humanitarian immigration in Finland and Sweden. On Finland the author found two studies done by Salminen (2015,2019) and on Sweden two studies by Ruist (2015, 2018), which were complemented with a study by Aldén and Hammarstedt (2016).

Data and methodology

Salminen has done an extensive quantitative analysis of the public sector expenses of immigration in Finland as well as the expected life-cycle costs of Iraqi's and Somali's, the two groups inducing the highest public sector expenses in Finland, published in 2015 and 2019 respectively. In his first study (2015) Salminen measures the expenses and incomes of public finance to calculate the net impact of individual immigrants by nationality in comparison with native-born Finns. The expenses he calculates with are: direct income distributions, provided services, provided education, and legal expenses from committed offenses. The incomes he calculates with are: direct and indirect taxes paid by the individual, other tax-like payments, and fines paid by the individual (Salminen, 2015: 9). For his second report Salminen does a life-cycle cost-projection for the entire Finnish population as well as for Finns, Iraqis, and Somalis separately. The life-cycle cost-projection is composed as follows;

1. The state of the individual ages 0-100: in Finland, abroad, or diseased. For immigrants the life-cycle begins with their entry into Finland.
2. The net impact on public finance of individuals under 15 years of age; mainly daycare and primary education.
3. The net impact on public finance of individuals ages 15-62
4. Wages of individuals aged 18-62; the sum of all wages that the individual pays mandatory pension insurance fees for.

5. The net impact on public finance of individuals over 62 years of age, exluding expenses related to pensions. Mainly social welfare and health care costs.
6. A set of 24 random parameters used in the above mentioned components
7. The net life-cycle impact on public finance of the children of individuals, e.g. family benefits etc.

(Salminen, 2019: 23-25)

For his publications he made use of the Finnish Longitudinal Employer-Employee Dataset (FLEED) which consists of a random sample of one third of 15-70-year olds residing in Finland the years 1988-2011; a total of around 1.2 million persons annually. Since the dataset is longitudinal it follows the individuals during the entire time period so long as they are 15-70 years of age. The data used includes basic personal details, information on their family, housing, employment, unemployment, incomes, and education (Tilastokeskus, 2014). He also used registry information held by Statistics Finland on income distribution, information on The Social Insurance Institution of Finland's income distributions, information on individuals' mandatory pension- and unemployment payments, as well as information on legal expenses. Concerning information on healthcare and social services Salminen used data from Finnish National Institute for Health and Welfare. Aside from the listed sources he also used annual national budget reports as well as various datasets from Statistics Finland (Salminen, 2015: 14-16; Salminen, 2019: 19-20).

Ruist (2015) did a study on the fiscal costs of refugee immigration in Sweden during the period 1980-2006. He used Statistics Sweden's LINDA database for year 2007, as this was the last year that researchers were provided detailed information on country of birth of immigrants in the micro-data sets. The database contains a sample population of around 3 percent of Sweden's total population, with an additional random sample of around 20 percent of the total immgrant population. Ruist combines the two samples for a total of around 22 percent of the total immigrant population of Sweden. Ruist uses a random sample of 79,724 individuals, 22.4 percent of the total sample population numbering around 350,000 individuals, for his study. This sample represents around 75 percent of all asylum seekers arriving in Sweden during the 1980-2006 period. In order to calculate the fiscal cost of the refugees in the chosen sample group Ruist combines a number of different factors. For public sector expenses he uses; transfers to individuals (pensions, unemployment support; a third of public sector costs), hospital and elderly care, disability care, schooling and child care, crime and justice, language and training of immigrants, integration policies, labor market policy, as well as other expenses (infrastructure, defense, central administration; encompassing around a quarter of public sector costs). For public sector revenues he

uses; direct taxes of individuals, payroll taxes, consumption taxes, direct taxes of corporations, as well as other revenues (roughly 3 percent of public revenue). Ruist follows the recommendation of Rowthorn (2008) (Rowthorn, 2008) to distribute the cost of all public goods equally across the population; while also providing the results where the costs in the "other" category are assumed to be the same in the absence of a refugee immigrant population.

Ruist (2018) did his other study on the economic impacts of refugees on Swedish public finance, focusing on refugee immigrants age 20-50 at the time of arrival the years 1983-2015. He uses data from the LINDA and STATIV databases provided by Statistics Sweden, with a random sample population of 22.4 percent of the total immigrant population and 3 percent of the total native population for each year. Ruist gets his data on labour participation from the labour force survey (Arbetskraftsundersökning AKU) and register-based labour market statistics (registerbaserade arbetsmarknadsstatistiken RAMS) provided by Statistics Sweden. Ruist defines labour participation as having a yearly income exceeding 40 percent of the median income of 20-50 year old men during the same year, which was 34,000 SEK in 1983; 67,000 SEK in 1990; 92,000 SEK in 2000, and 138,000 SEK in 2015. The sources of public sector expenses and revenues were roughly the same as in his previous study in 2015. Ruist runs his calculations on public sector expenses and revenues based on 2015's numbers, and for the population that immigrated to Sweden up until year 2015. Based on this, the number of refugees per Ruist's definition was in 2015 690,000 individuals, roughly 7 percent of Sweden's total population (Ruist, 2018: 23, 26-27, 66-68).

Lastly, Aldén and Hammarstedt (2016) did their study on the total net costs of the refugees arriving in Sweden the years 2005-2007 using the same methodology that Ruist (2015) uses in his study, making use of Statistics Sweden's LISA database.

Results

Salminen summarizes the results of his analysis in a number of charts which are presented and analyzed as follows. From chart 11 we can see the total amount of income distributions received by country of birth for individuals aged 20-62 the year 2011. In total native Finns receive slightly more than all individuals of foreign birth together, at 4,500 euro and 4,300 euro respectively. The two clear outliers among immigrant groups are Somalis and Iraqis who receive around 9,800 euro and 8,700 euro respectively, the group receiving the third most being individuals born in former Yugoslavia at around 6,100 euro. Noteworthy is also the smaller amounts of pensions and higher amounts of family benefits received by almost all of the largest immigrant groups; Somali-born standing out in particular. This is most likely an expression of the difference in age structure and

fertility rates between native Finns the immigrant groups. In box charts 1-4 the trends in received total income distributions for individuals aged 20-62 the years 1995-2011 is shown. Both Finns, and all individuals of foreign birth show similar slight downward trends from roughly 5,000 to roughly 4,000 euro. Individuals born in former Yugoslavia show a steeper decline from roughly 9,000 euro to roughly 6,000 euro. Individuals born in Iraq and Somalia show slight downward trends from roughly 10,000 euro to roughly 8,500 euro and 9,500 euro respectively.

Chart 12 shows the direct taxes and similar payments made by individuals ages 20-62 in 2011 by country of birth. Here there is a significant difference in the amounts paid by native Finns, around 8,000 euro, and all foreign born combined, around 4,500 euro. Outliers among immigrants are Iraqi-, Somali-, and Thai-born individuals that all paid below 2,000 euro; as well as German- and Swedish-born who paid almost 8,000 euro and almost 7,000 euro respectively. Looking at the trends of direct taxes and similar payments for individuals aged 20-64 the years 1995-2011 (box charts 6-10) both Finnish-born, and all foreign born combined show increasing trends from roughly 7,000 euro and 4,000 euro to around 8,000 euro and 5,000 euro respectively. Individuals born in former Yugoslavia show an increase from almost 2,000 euro to almost 4,000 euro. Iraqi- and Somali-born both show fairly stagnant trends at below 2,000 euro.

As can be seen in chart 13 the year 2011 20-62-year-old Somalis had the most negative net impact at around - 13,800 euro on public finance in Finland, while Germans had the most positive impact at around 2,300 euro, and native Finns were slightly on the positive side at around 80 euro. Somalis and Iraqis stand out among immigrants, both being at below - 13,000 euro; and if excluding collectively consumed public services at around - 10,000 euro. There is also a significant gap of almost 6,000 euro to the next immigrant group being individuals of Thai origin. Box charts 11-15 show there have been significant differences in the development of net economic impacts between 20-62-year-olds of different countries of origin the years 1995-2011. Native Finns show a stagnant trend around 0 euro, while all individuals of foreign origin combined show a slightly positive trend from - 5,000 euro to around - 4,000 euro. Among the individual countries of origin Somalis and Iraqis have both had a slight increase from - 15,000 euro and - 14,000 euro to around - 13,000 euro respectively. Individuals of Thai origin show a stagnant trend between - 6,000 and - 7,000 euro. Chart 14 shows the net impacts on public finance by regions of origin in year 2011. All regions of origin except for Finnish-born show a negative net impact, the net impact of all immigrant regions combined being roughly - 3,500 euro. MENA and Central Asia, South-East Asia, and Sub-Saharan Africa show the largest negative net impacts of around - 10,000 euro, - 6,500 euro, and - 5,900 euro respectively.

The conclusions that can be drawn from the above mentioned charts are that the 10 biggest immigrant groups in Finland, apart from Swedes and Germans, contribute less to public finance than they receive in redistributions. Humanitarian immigrants from MENA countries, as exemplified by Somalis and Iraqis, seem to have the most negative net impact on public finance; inducing a cost roughly twice as high as the next immigrant group (those of Thai origin). The majority of the negative net impact is accounted for by lower contributions to public finance in the form of taxes and other payments; in other words lower wages and employment rates.

As for Salminen's life-cycle net impact projections, he summarizes his results as follows. The two bar charts (chart 15-16) show the life-cycle impact projection for frequencies of predicted Somali-born population. It becomes clear simply by looking that the net cost is significantly negative for the combined population. The expected values for the predictions in the charts are - 641 excluding the effect of children and - 922 including the effect of children. In the same projections for the Iraqi-born population (chart 17-18) there is a similar albeit slightly smaller negative impact. The expected values for the predictions in the charts in the Iraqi case are - 542 excluding the effect of children and -656 including the effect of children. The expected value for the predictions in the chart on the Finnish-born population (chart 19) is 0. So the prediction made by Salminen would be that throughout their lifetime the average Somali-born immigrant would have a net impact on public finance of - 641,000 euro excluding the effect of children and - 922, 000 euro including the effect of children. Similarly the effect of the average Iraqi born would be - 542, 000 euro excluding the effect of children and - 656, 000 euro including the effect of children (Salminen, 2019: 543, 558, 574).

What Salminen's (2019) life-cycle net impact projections indicate is that humanitarian immigrants from MENA countries seem to induce a substantial burden on Finland's public finance across their lifespan. When taking into account the above replacement (more than 2.1 children per woman) fertility rates of humanitarian immigrants from MENA countries, as was discussed in the demographic impact section above, the net negative impact on public finance increases substantially for each additional child; as is seen in the substantial increase in the net negative impact when including the effect of immigrants' children. The significant gap between Somali (higher fertility) and Iraqi immigrants in the negative net impact on public finance seen when including the effect of immigrants' children makes this difference even clearer.

Ruist estimates in his 2015 study that redistributed resources to refugees for the year 2007 was around 32.5 billion SEK, roughly 1 perecnt of Sweden's GDP for that year. By dividing total amount redistributed by the estimated refugee count, the annual sum per average individual refugee

for 2007 was around 70,000 SEK. If the "other" category of costs are excluded the estimated redistribution would be 7.2 billion SEK in total and 15,000 SEK per refugee annually (Ruist, 2015). Graph 9 on shows the public finance net distributions per refugee for year 2015 by country of origin from Ruist's 2018 study. There are significant gaps between the different countries of origin, a difference of around 100,000 SEK per person and year between the most and least successful immigrant groups. Among the immigrant counties of birth; Somalis, Iraqis, Lebanese, and Syrians perform the worst over time. The graphs also show how long it takes before refugee immigrants reach 0 or positive distribution, and how many of the immigrant groups stagnate at around 0. The overall conclusion that Ruist draws from the results from this study is that refugee immigration is a net cost on public finance both short-term and long-term. He calculates that the annual lifetime net distribution to the average refugee in Sweden is around 74,000 SEK. Ruist also divides the refugee immigrants into two groups; one with high integration potential (1991-2006 cohorts, when a large part of the refugee immigrants came from former Yugoslavia) with an estimated net-cost on public finance of 53,000 SEK annually and one with low integration potential (2008-2009 cohorts, when a large part of the immigrants came from Somalia and Iraq) with an estimated net-cost of 94,000 SEK annually. With current (2018) refugee immigrants expected to live roughly 58.3 years in Sweden, the expected lifecycle net distribution per refugee for the total refugee immigrant population would be around - 4.3 million SEK, while the lifecycle net distribution for high- and low integration potential immigrants would be around - 3.1 million SEK and - 5.5 million SEK. The one percent discounted net imapct would be roughly - 3 million SEK, - 2 million SEK, and - 3.9 million SEK respectively. Ruist also does a prognosis on the expected annual public finance net distributions for Sweden's current (2018) refugee population. The result is shown in Graph 10; which shows a net distribution of - 55 to - 60 billion SEK for 2018, which drops down to its lowest at 5-10 billion SEK in 2029-35, and increases back to around 60 billion SEK around 2070 and then gradually falls down to 0 once all the immigrants in the sample population have passed away (Ruist, 2018: 74, 77-79, 83-84).

Lastly, Aldén and Hammarstedt (2016) calculated that annual net costs for the Swedish public sector per refugee during the year of arrival (2005-2007) was around 190,000 SEK; which gradually decreased to around 95,000 SEK after seven years of stay in Sweden. When excluding the collectively consumed public consumption that in the short run is assumed to be unchanged by the increase in refugee immigration (i.e. infrastructure, defense, central administration spending) the corresponding net costs are around 125,000 SEK, and after seven years 37,000 SEK (Aldén and Hammarstedt, 2016).

Comparison

While there are some differences in the methods used in the studies of Finland and Sweden, they use components and calculations in their analysis similar enough for comparison. While the unit of measurement differs a bit between Salminen and Ruist, at least the annual net costs per humanitarian immigrant and the life-cycle net impact predictions for Somalis and Iraqis are comparable. Moreover there are some similar trends in both countries.

Ruist (2015) finds in his calculations that around 80 percent of the net distribution to refugees is attributed to lower per capita revenues from refugees and 20 percent from higher per capita spending on refugees. This would indicate that the majority of public finance costs of refugees relate to their lower employment and wage levels (Ruist, 2015). Salminen (2015, 2019) notes a similar trend in his analysis of the redistribution to humanitarian immigrants in Finland; where at least in the case of direct income transfers (the majority of net income transfers) the greater part of the difference in income transfers between the native Finnish population and the Somali- and Iraqi-born immigrant populations are caused by the difference in paid income tranfers (taxes etc.) rather than received income transfers (Salminen, 2015: 20, 34; Salminen, 2019: 607).

Since a large part of Ruist's high integration population are immigrants from former Yugoslavia, and the low integration population are immigrants mainly from Somalia and Iraq; the most comparable numbers from Salminen's report are the net impacts of these nationalities (average of Somali- and Iraqi-born as one group and immigrants born in former Yugoslavia as the other) (Chart 13). In this case Salminen's estimated net impact of Somali and Iraqi immigrants would be around -13,000 euro and for immigrants from former Yugoslavia - 5,800 euro; Ruist's estimates would be roughly - 9,100 euro and - 5,200 euro (The SEK-EUR exchange rate was taken from 16.5.2018 using XE converter as Ruists report was published in May 2018). The difference between in the net impact between immigrants born in former Yugoslavia is rather small at only 600 euro, while the difference between Somali and Iraqi immigrants is much greater at almost 4,000 euro.

Concerning the life-cycle net impact on public finance for Somalis and Iraqis, Salminen arrives at net impacts of - 641, 000 euro and - 542,000 euro respectively; while Ruists analysis arrives at - 378,000 euro (The one percent discounted 3.9 million SEK for the low integration population. This value was chosen as it was the closest to the discount rate used by Salminen in his study.). One thing should be mentioned here. Ruist (2018) bases his analysis on the assumption that immigrants receive the same net-sum in national pensions as the average of total population of Sweden (Ruist, 2018: 76). Salminen (2019) points out that this is an unrealistic assumption considering that

Somalis and Iraqis receive lower than average occupational pensions and higher than average national pensions (Salminen, 2019: 608). This would decrease the gap between Salminen's and Ruist's results. Even considering the aforementioned point, the gap in the expected life-cycle net impact of Iraqis and Somalis in Finland and Sweden is likely to remain significant; considering that the majority of the net impact of humanitarian immigrants in both studies is concluded to lie in their lower tax payments rather than received benefits.

There seems to be a faster decline in the costs per humanitarian immigrant in Sweden than in Finland when comparing Aldén and Hammarstedt's results with the slow decline seen in net costs over time displayed in Salminen's study (box charts 11-15). Although the last three years of Aldén and Hammarstedt's time period (2007-2014) are missing from Salminen's data on Finland (1990-2011) the long-term trend and post-2007 development indicate that no such rapid decline has occurred in Finland. It is however also possible that Haldén and Hammarstedt's analysis overestimates the decline in costs as they rely on data only up to 2007.

What is clear from both Salminen's and Ruist's economic impact analyses is that humanitarian immigration induces a substantial burden on public finance, and that humanitarian immigrants are predicted to induce a negative impact on public finance throughout their stay in bothcountries. It also becomes clear that immigrants of certain countries (Somalia, Iraq...) and regions of origin (MENA, Central Asia) induce significantly higher net costs and slower declines in annual net costs on public finance than humanitarian immigrants of other nationalities (Former Yugoslavia, Turkey...) and regions of origin (Eastern Europe, Latin America...).

Conclusion

This study sought out to discuss and compare the effects humanitarian immigration has had in Finland and Sweden over the 1990-2018 period. The overall conclusion is that humanitarian immigration has from the beginning been a significant economic burden on both countries' economies, a burden that has increased over time and will continue to do so in case the current trends in immigration and demography continue. The economic burden on Sweden has historically been and will continue to be significantly greater than the burden on Finland, again due to historical and current trends in immigration and demography. Concerning the net economic impact on public finance per individual humanitarian immigrant, the data and studies seem to point towards a more negative impact in Finland than in Sweden, but there is some uncertainty on this point due to the lack of comparability in parts of the data. The factors that lead to these conclusions are as follow.

The integration literature shows that humanitarian immigrants in both countries do not reach wage levels on par with the average wage of the native population throughout their stay in the host country; with labour participation rates taking somewhere around 20 years to even reach close parity to natives. Humanitarian immigrant women have fared significantly worse than their male counterparts as well as compared to the native-born female populations of both countries. Certain groups of immigrants, particularly from the MENA region, fare particularly poorly especially in the case of Finland (where data is abundant), but most likely in Sweden (which is lacking in data on country of origin) as well. This is a worrying trend considering that most of the humanitarian immigration to both countries has since the 1990s been from the MENA region, and the increasing trend in humanitarian immigration to both countries; at least up until the 2015-2016 European immigration crisis. The theoretical and empirical literature offers a number of explanations for the slow and ineffective labour market assimilation of humanitarian immigrants such as; the composition of source countries, low levels of education often incompatible with host country labour market, difficulty learning host country language, insufficient availability of work, high skill requirements of Finnish and Swedish labour markets, as well as immigrants cultural background and host country immigration policy factors influencing the incentives of immigrants to assimilate into the host population and labour market.

Concerning the structure of the immigration itself the following can be said. The composition of source countries of humanitarian immigrants to both countries has been quite similar, while Sweden has clearly taken in more humanitarian immigrants than Finland (roughly eight times as many in absolute terms and four times as many in relative terms). Since the fertility rates of humanitarian immigrants, from the MENA region in particular, have fertility rates at around or significantly higher than replacement rates (more than 2.1 children per woman), while Finnish- and Swedish born women both have fertility rates significantly below replacement levels (1.6 and 1.8 respectively), humanitarian immigration has increased and will continue to increase the share of immigrants of MENA origin as a part of the total population in both countries. Humanitarian immigration has also increased the share of children as a part of the total population in both countries in recent years. While there are some that would claim that this is a positive development with arguments such as that it would lower the average age of the total population as a solution to solving the issue of having an aging society; the theoretical and empirical literature on humanitarian immigrant labour market assimilation, educational performance, and wage level development all indicate that this increase in population will in fact only increase the burden of the already hard-pressed Finnish and Swedish public finance.

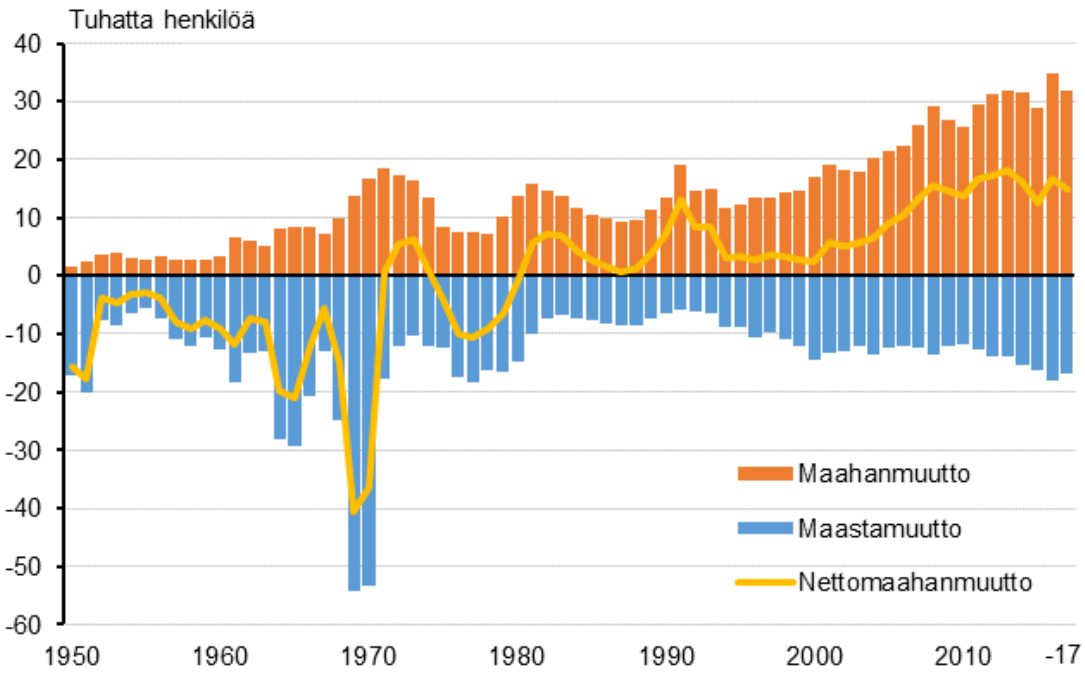
All in all, while both countries have huge challenges ahead of them in how to deal with their increasing humanitarian immigrant populations; Finland is with its historically more restrictive immigration policy in the better position out of the two countries. In both countries there is however a need for re-evaluating humanitarian immigration and -assimilation policies, as the results from the past three decades have proven to be anything but desirable.

There are several important aspects to humanitarian immigration that falls outside of the scope of this study and therefore haven't been looked into. Some aspects that future research would benefit from looking into are for instance; whether or not humanitarian immigration has constituted an effective and efficient measure in relieving migration pressures from the MENA area to Europe, crime related to humanitarian immigration, and the cultural effects of humanitarian immigration.

Appendix

Charts

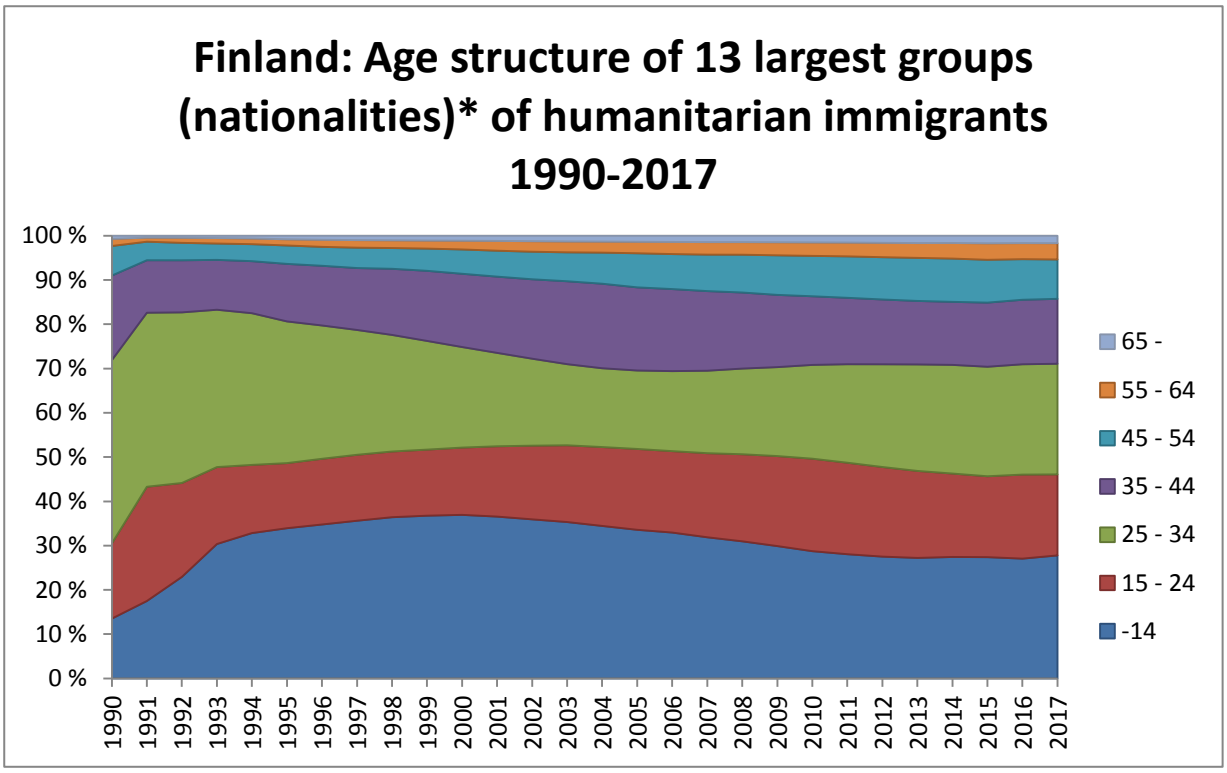
Chart 1



Orange: immigration, Blue: Emigration, Yellow line: Net migration (Thousand persons on y-axis)

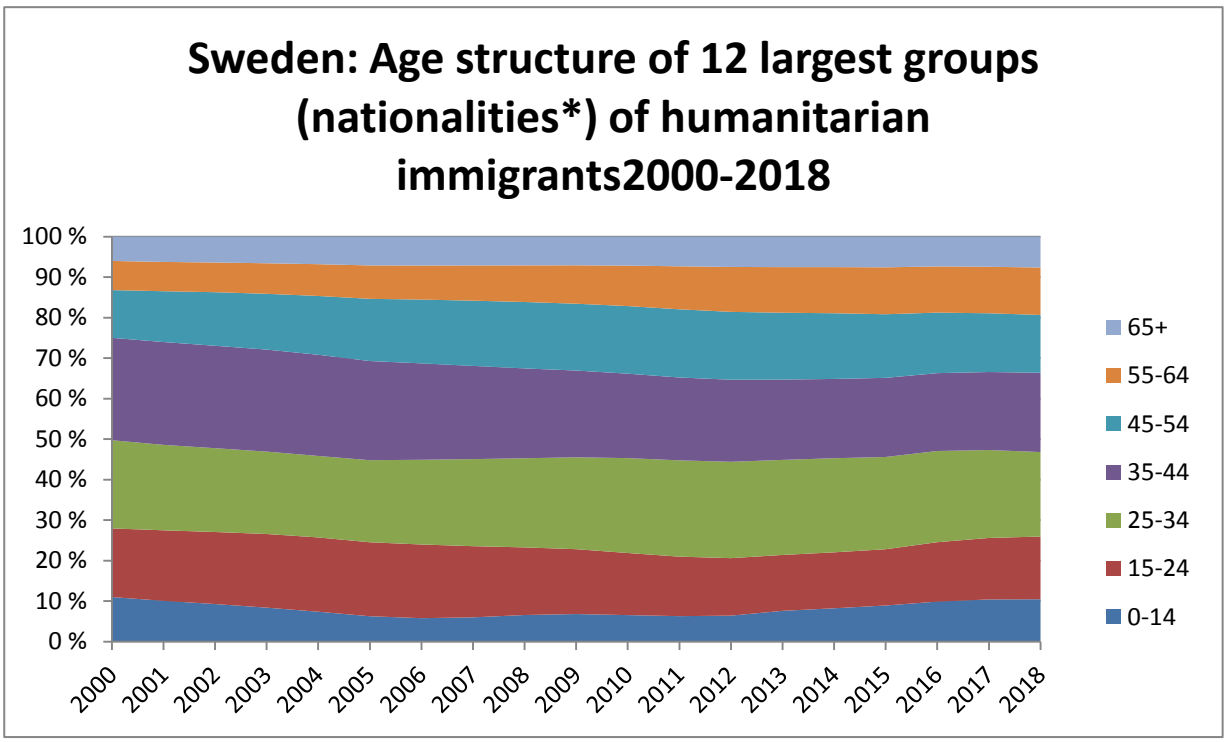
Source: (Tilastokeskus, 2018)

Chart 2



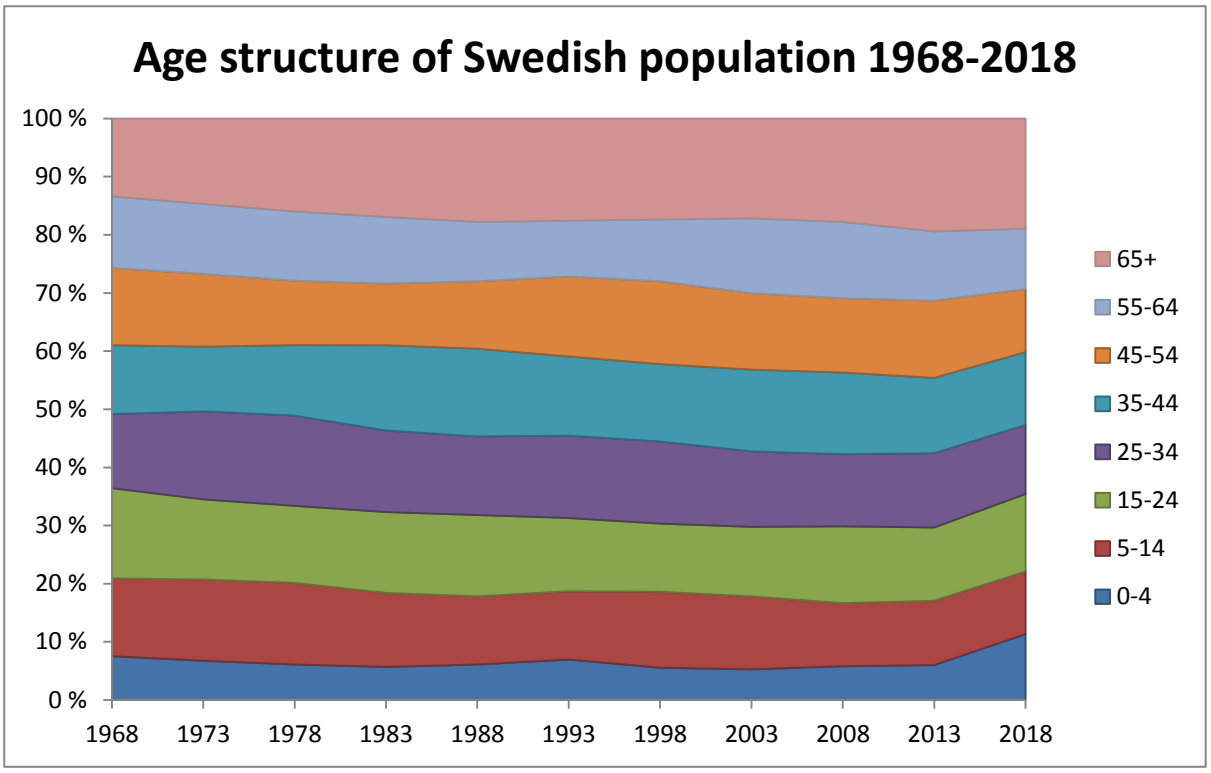
***Former Jugoslavia, Turkey, Morocco, Nigeria, Somalia, Afghanistan. Bangladesh, Iraq, Iran, Nepal, Pakistan, D.R.Congo, Syria **Source:** (Tilastokeskus, 2019e)

Chart 3



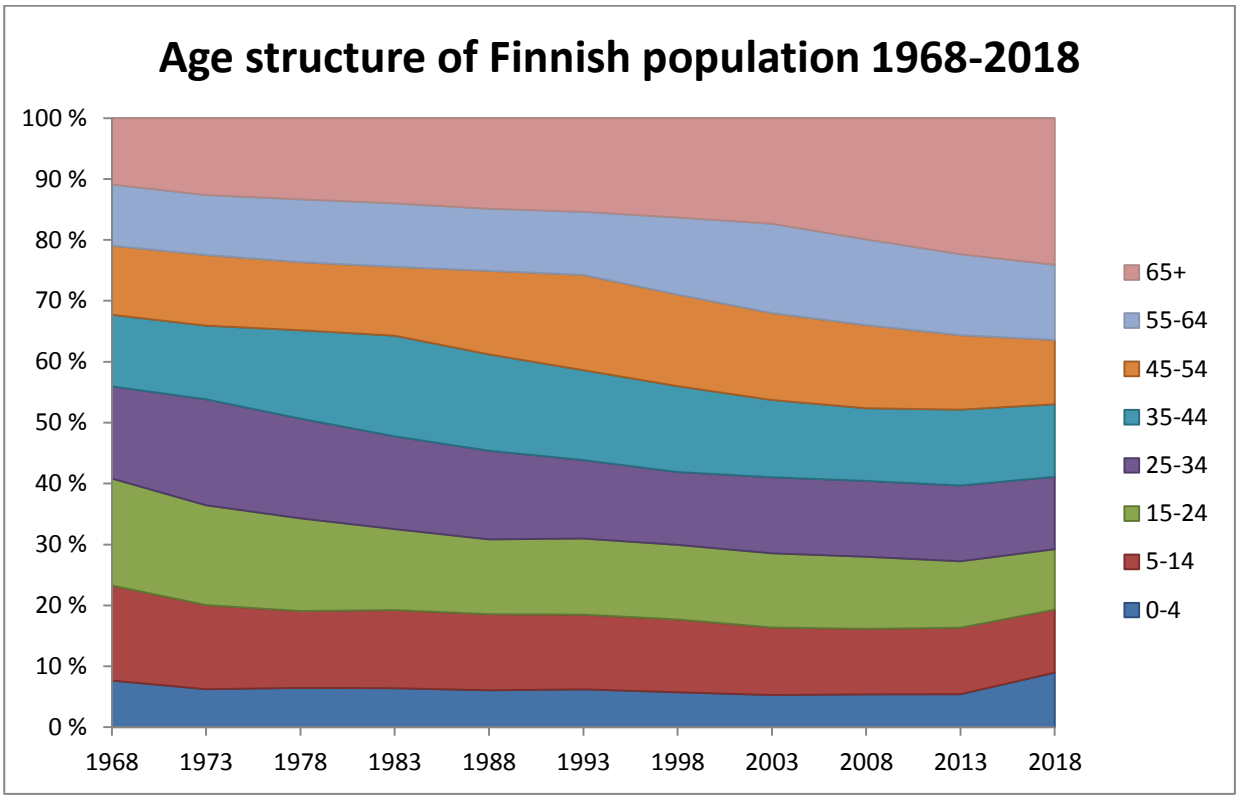
***Former Yugoslavia, Turkey, Eritrea, Lebanon, Somalia, Afghanistan, Iraq, Iran, Pakistan, Ethiopia, Syria, Bosnia and Herzegovina **Source:** (SCB, 2019a)

Chart 4



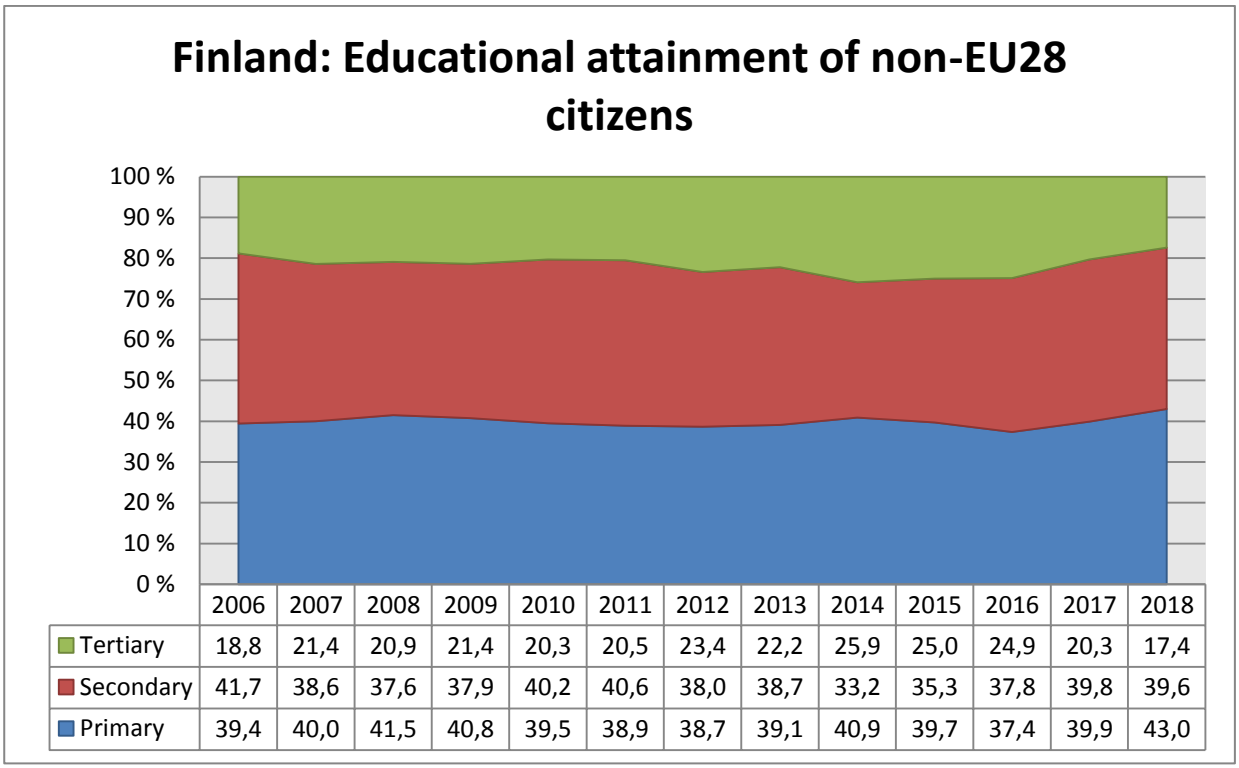
Source: (SCB, 2019b)

Chart 5



Source: (Tilastokeskus, 2019c)

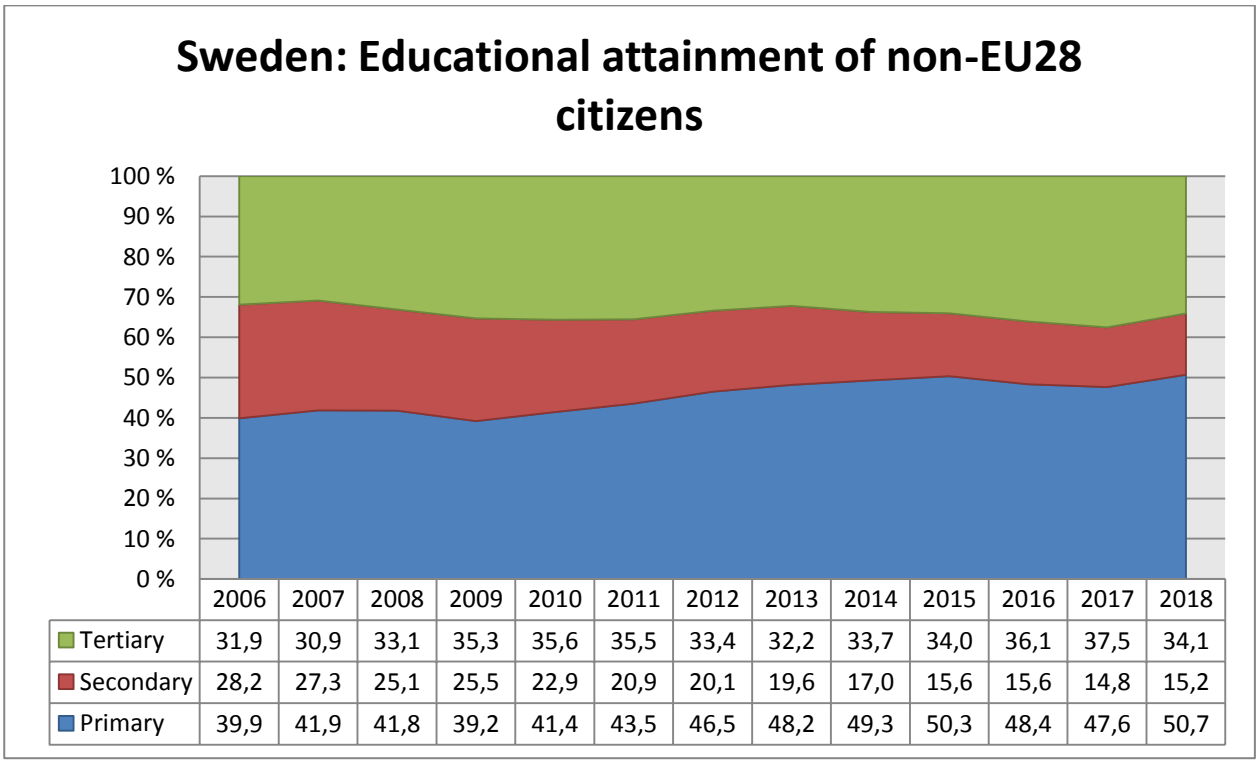
Chart 6



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Tertiary	18,8	21,4	20,9	21,4	20,3	20,5	23,4	22,2	25,9	25,0	24,9	20,3	17,4
Secondary	41,7	38,6	37,6	37,9	40,2	40,6	38,0	38,7	33,2	35,3	37,8	39,8	39,6
Primary	39,4	40,0	41,5	40,8	39,5	38,9	38,7	39,1	40,9	39,7	37,4	39,9	43,0

Source: (Eurostat, 2019)

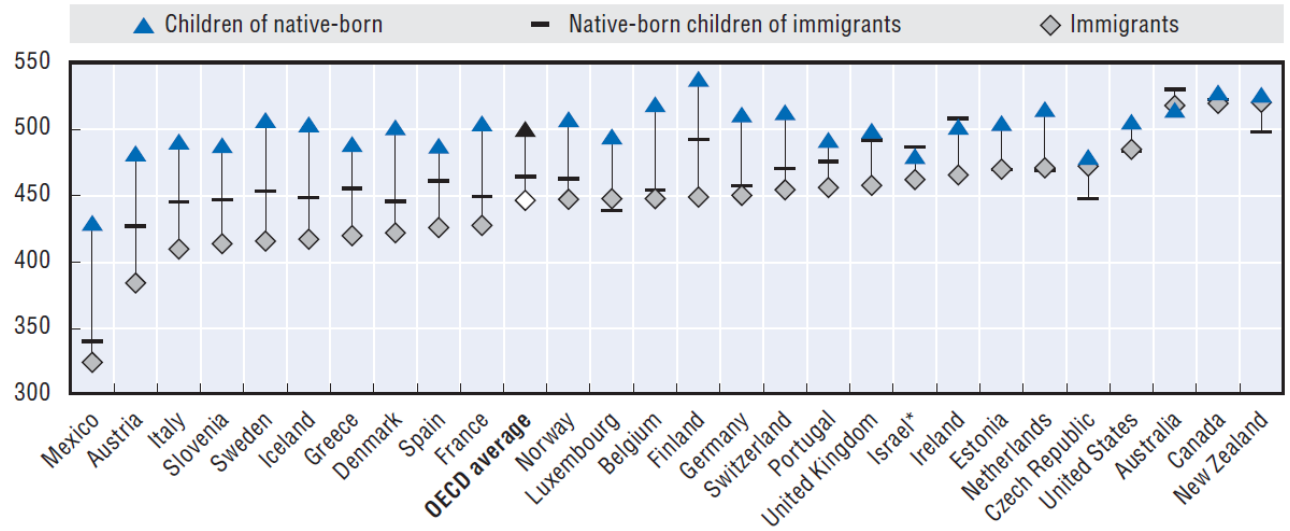
Chart 7



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Tertiary	31,9	30,9	33,1	35,3	35,6	35,5	33,4	32,2	33,7	34,0	36,1	37,5	34,1
Secondary	28,2	27,3	25,1	25,5	22,9	20,9	20,1	19,6	17,0	15,6	15,6	14,8	15,2
Primary	39,9	41,9	41,8	39,2	41,4	43,5	46,5	48,2	49,3	50,3	48,4	47,6	50,7

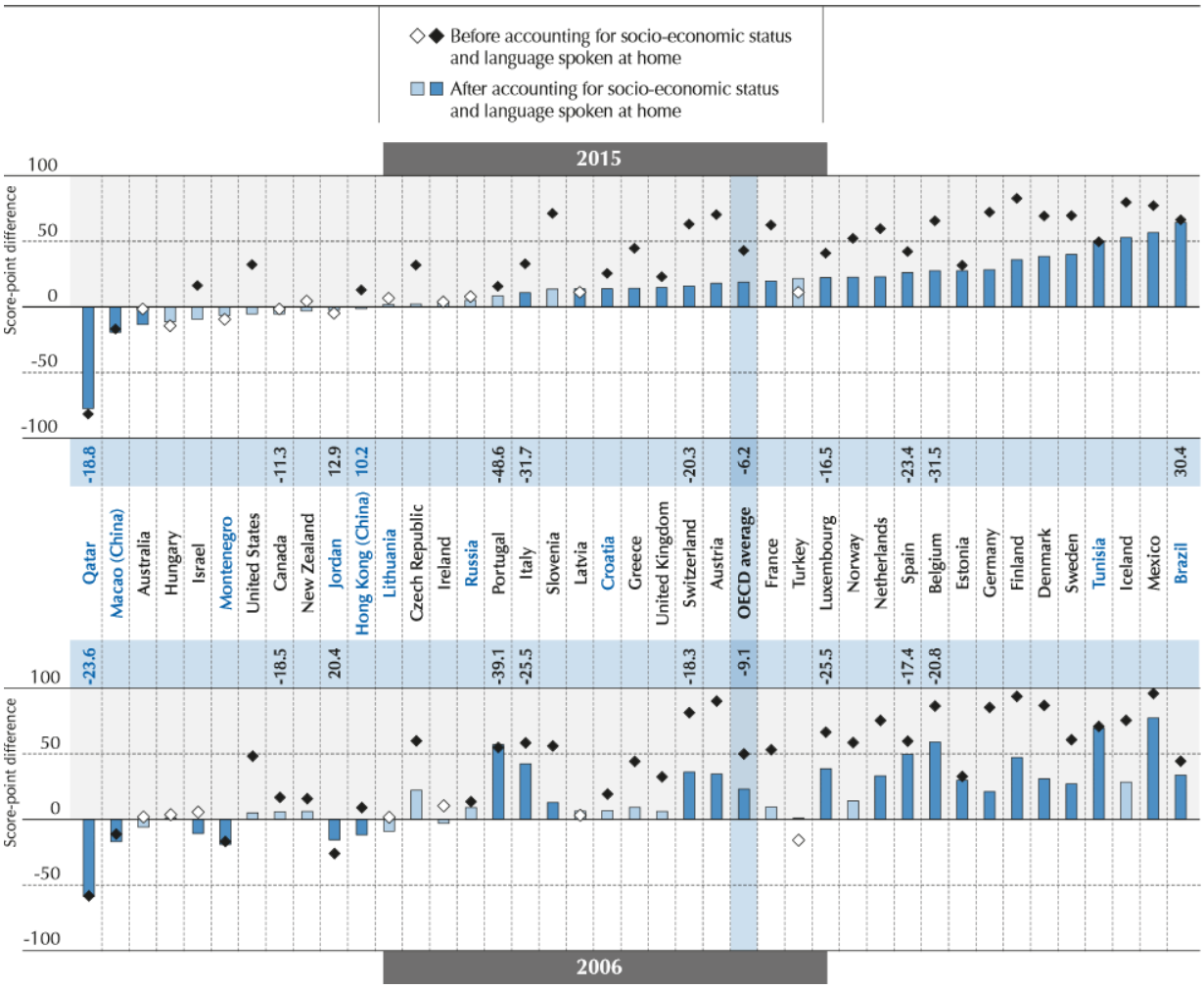
Source: (Eurostat, 2019)

Chart 8, Mean PISA reading scores by place of birth and parents' place of birth, 2009



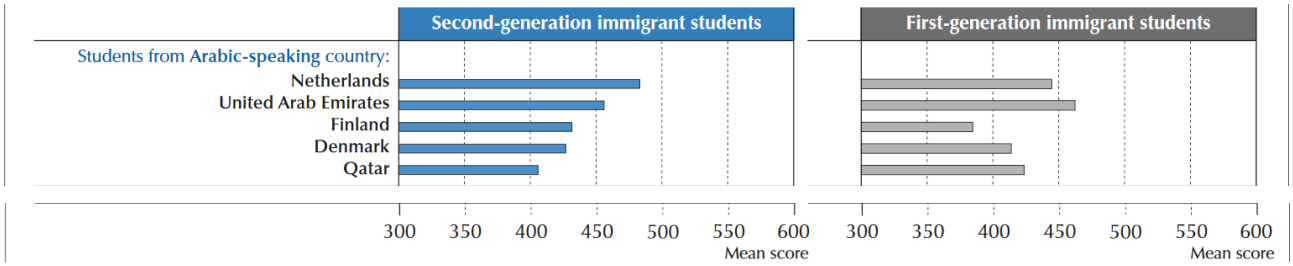
Source: (OECD, 2012: 81)

Chart 9, Change between 2006 and 2015 in the science performance difference between immigrant and non-immigrant students.



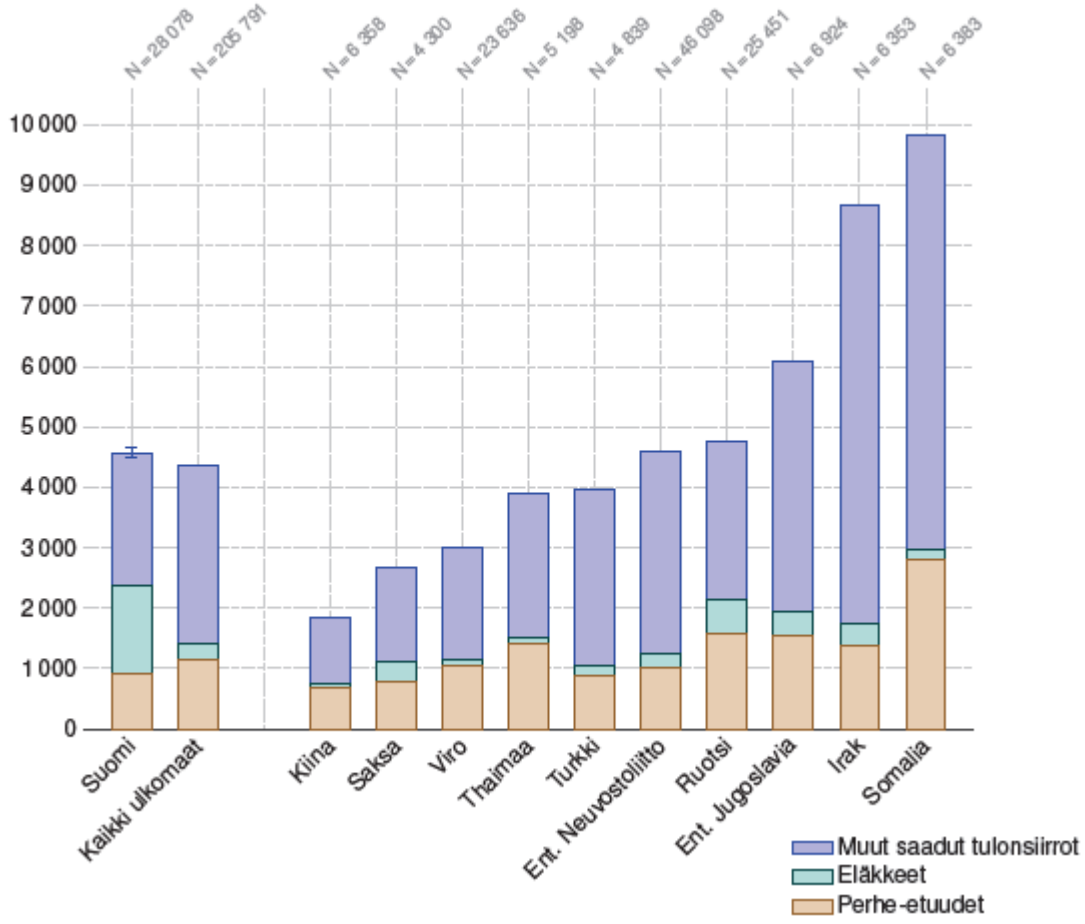
Source: (OECD, 2016: 261)

Chart 10, Immigrant students' performance in science, by country of origin and destination (Data pooled from PISA 2006, 2009, 2012 and 2015 Databases)



(OECD, 2016: 254)

Chart 11, Finland: Received income distributions (euros, ages 20-62) in 2011: ten largest populations in Finland by countries of birth

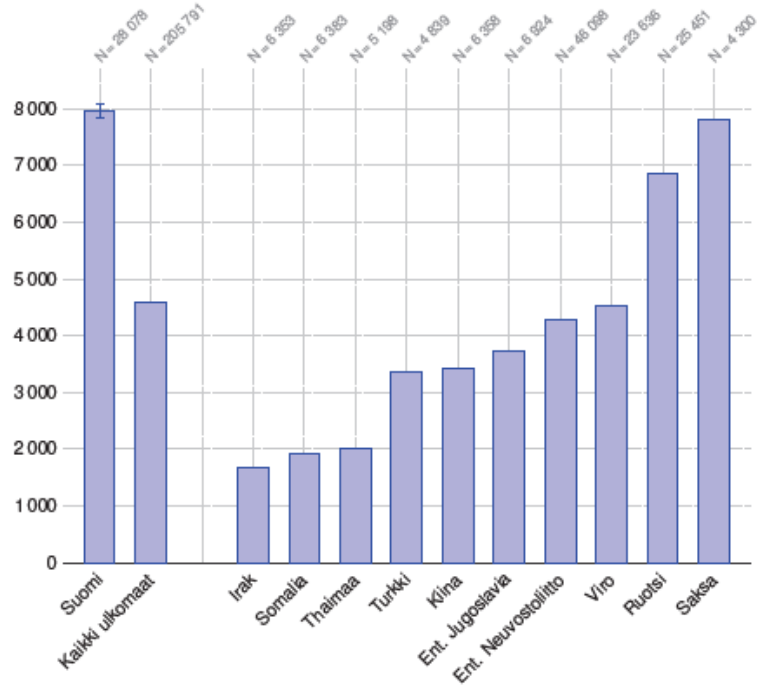


From the left on the x-axis: Finland, All foreign-born, China, Germany, Estonia, Thailand, Turkey, former Soviet Union, Sweden, former Yugoslavia, Iraq, Somalia

Blue: other income distributions, Green: Pensions, Beige: Family benefits

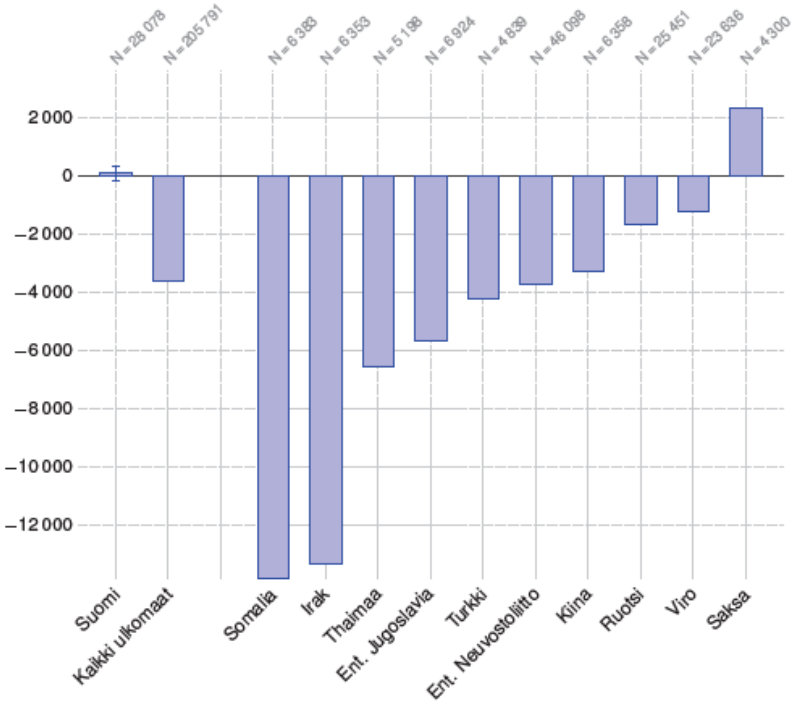
Source: (Salminen, 2015: 20)

Chart 12, Finland: Paid direct taxes and similar payments (euros, ages 20-62) in 2011: ten largest populations in Finland by countries of birth



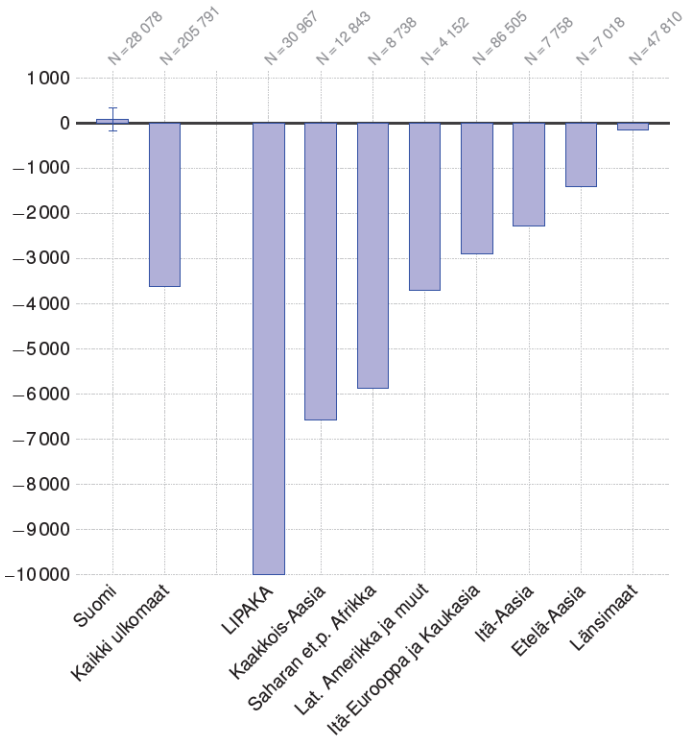
Source: (Salminen, 2015: 34)

Chart 13, Finland: Net impact on public finances (euros, ages 20-62) in 2011: ten largest populations in Finland by countries of birth. If collectively consumed public services are excluded all median values increase by roughly 3100 euro.



Source: (Salminen, 2015: 128)

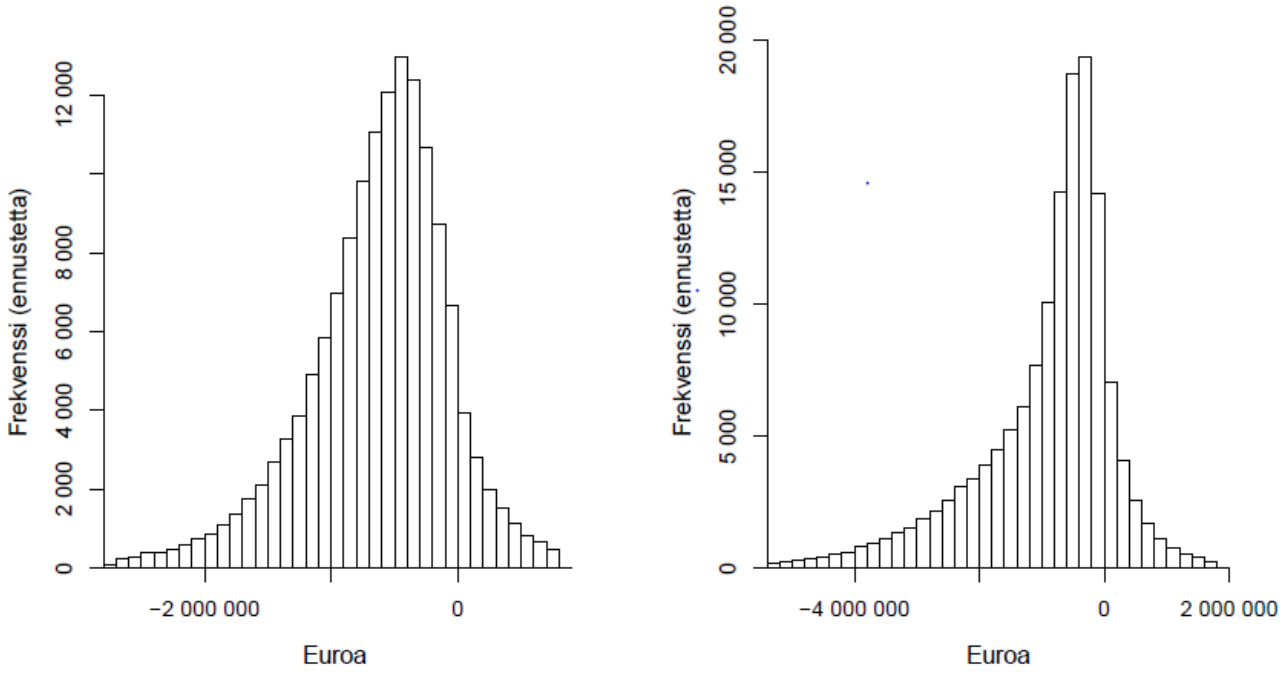
Chart 14, Finland:Net impact on public finances (euros, ages 20-62) in 2011 by regions of origin.



Source: (Salminen, 2015: 137)

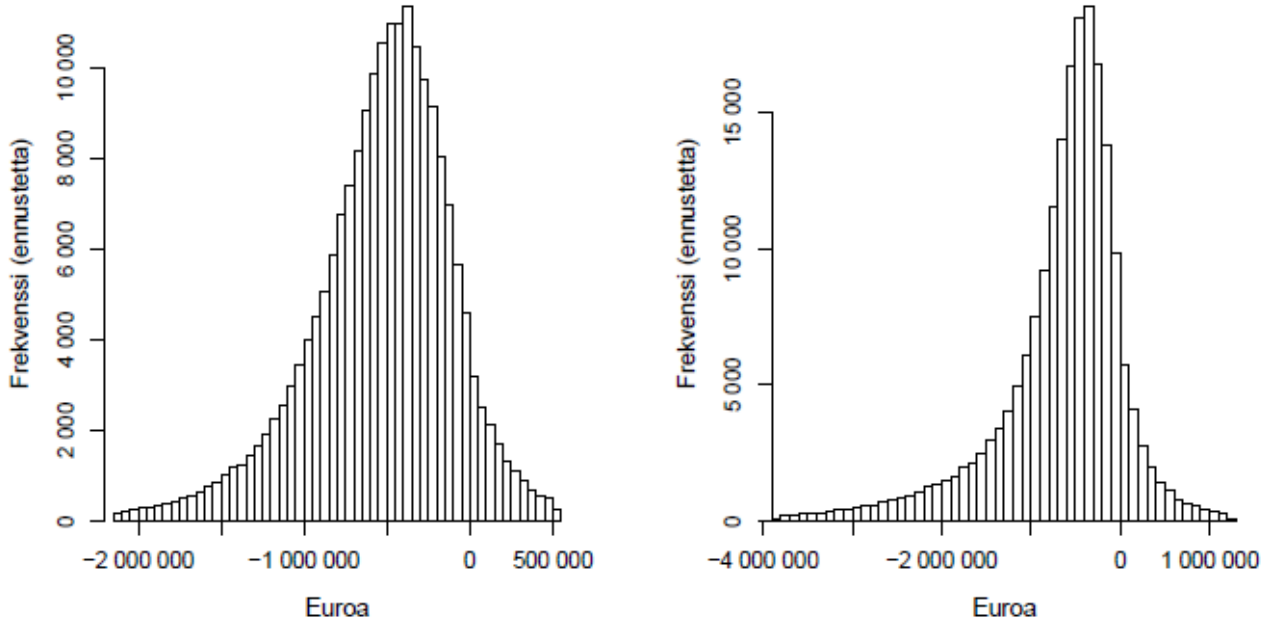
From the left: Finland, All foreign countries, MENA + Central Asia, Southeast-Asia, Sub-Saharan Africa, Latin America and other, Eastern Europe and Caucasia, East-Asia, Western countries.

Charts 15-16, Finland: The discounted life-cycle impact projection for frequencies of entire predicted Somali-born population; on the left without the effects of children, on the right including the effect of children. The top and bottom one percent have been removed to ensure privacy protection as stipulated in the Finnish constitution.



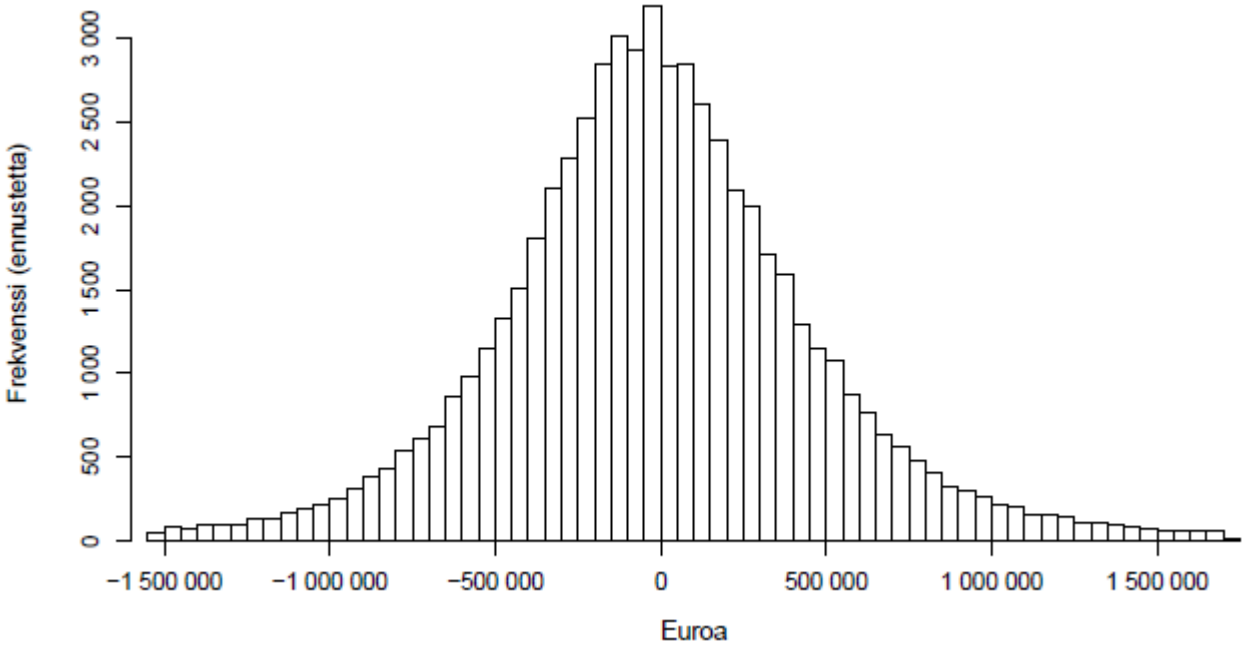
Source: (Salminen, 2019: 543)

Charts 17-18, Finland: The discounted life-cycle impact projection for frequencies of entire predicted Iraqi-born population; on the left without the effects of children, on the right including the effect of children. The top and bottom one percent have been removed to ensure privacy protection as stipulated in the Finnish constitution.



Source: (Salminen, 2019: 559)

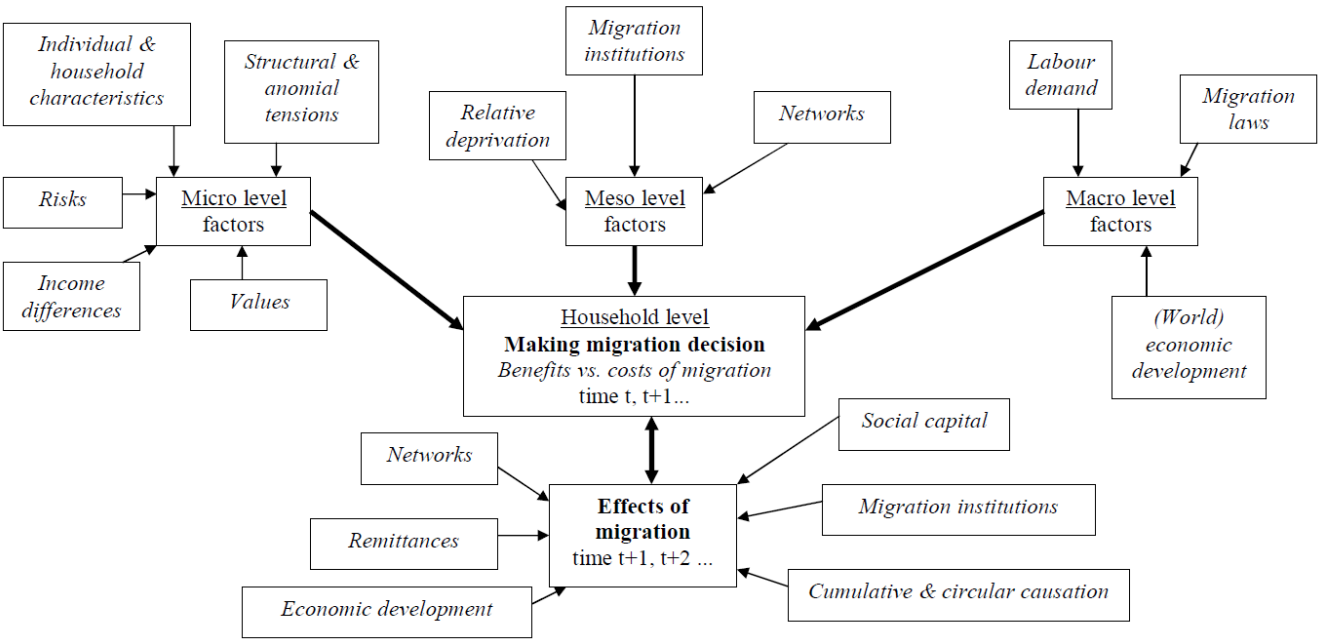
Chart 19, Finland: The discounted life-cycle impact projection for frequencies of entire predicted Finnish-born population. The top and bottom one percent have been removed to ensure privacy protection as stipulated in the Finnish constitution.



Source: (Salminen, 2019: 575)

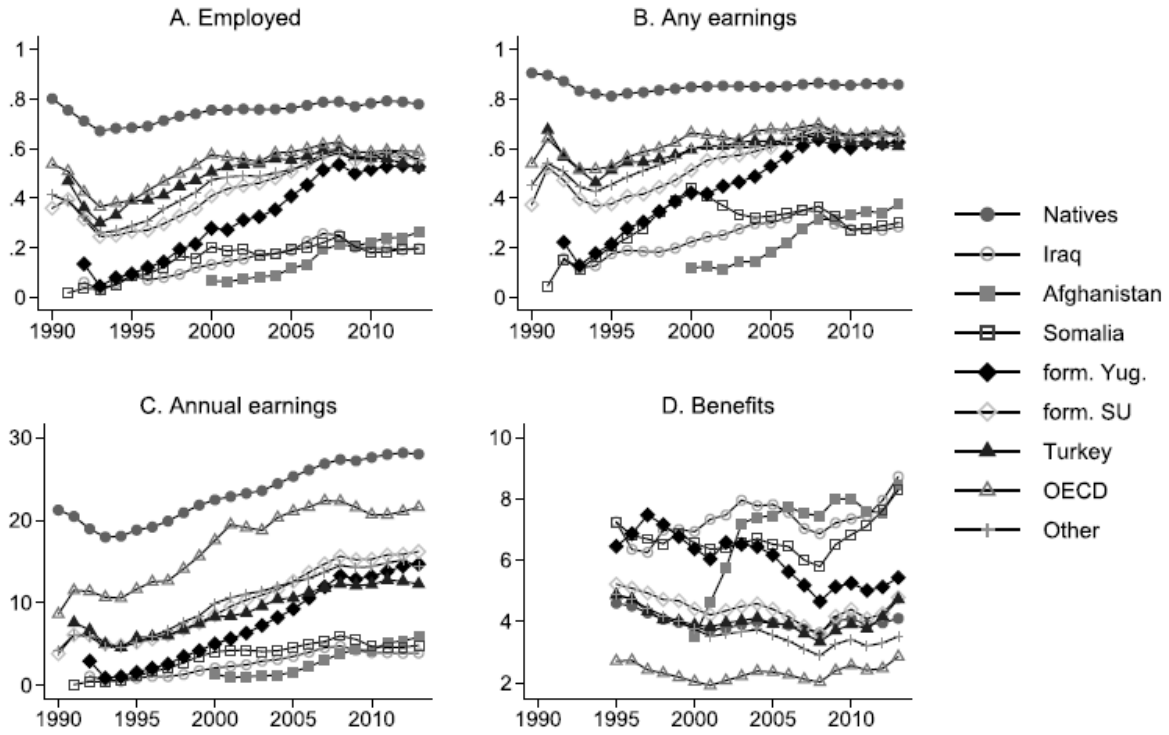
Figures

Figure 1



Source: (Hagen-Zanker, 2008: 19)

Figure 2, Finland: Employment rates, average earnings and average equivalence-scaled benefits by country of origin, 1990–2013

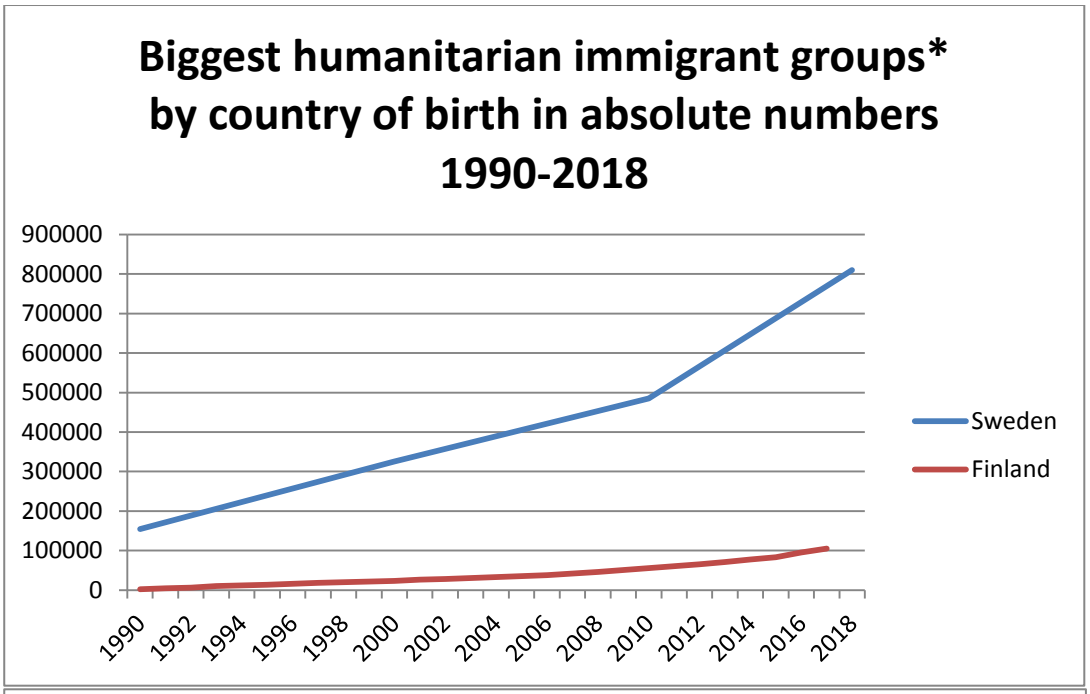


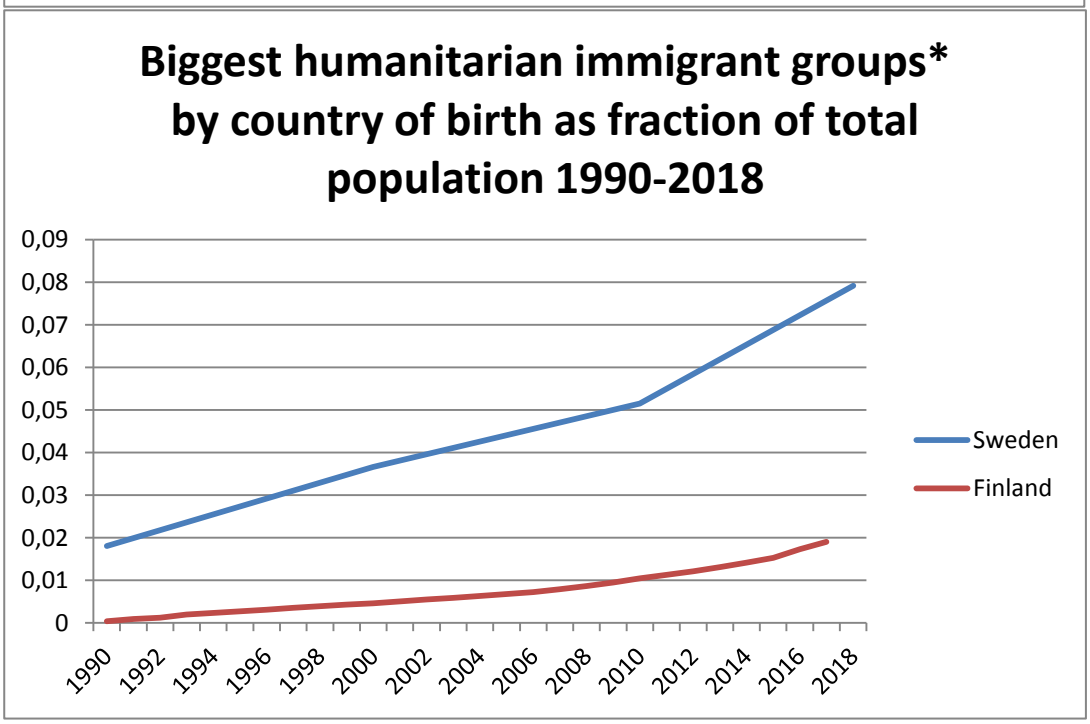
Note: This figure presents time-series for (a) employment rate at the end of the year, (b) share of individuals who have any earnings during a year, (c) average annual earnings (including zeros), and (d) average equivalence-scaled income transfers for 25–60 year old individuals who immigrated at age 18 or older. Earnings and benefits converted to 2010 euros using Statistics Finland's consumer price index.

Source: (Sarvimäki, 2017: 16)

Graphs

Graph 1 and 2



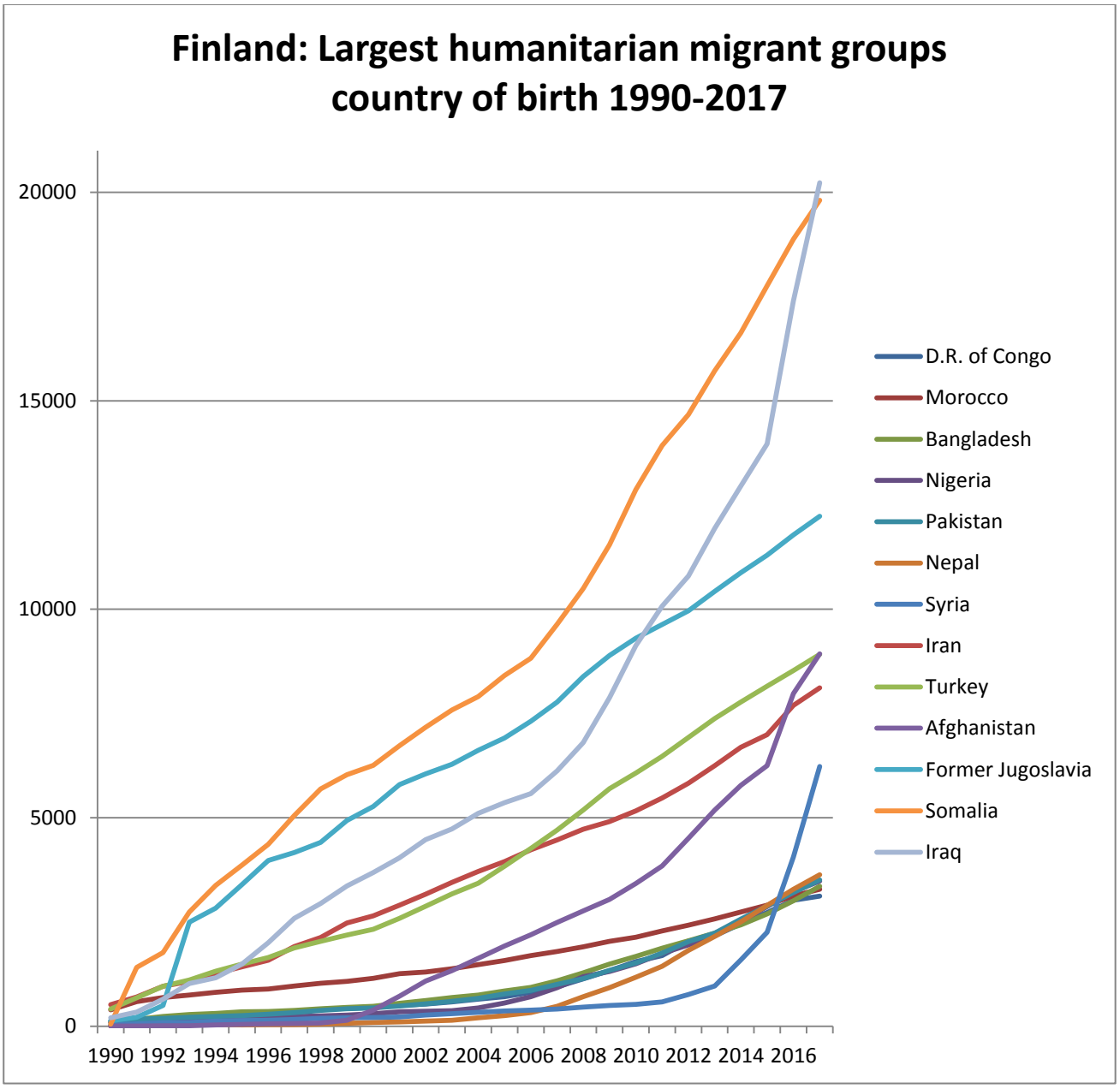


*Sweden (12 biggest combined): Former Yugoslavia, Turkey, Eritrea, Lebanon, Somalia, Afghanistan, Iraq, Iran, Pakistan, Ethiopia, Syria, Bosnia and Herzegovina

*Finland (13 biggest combined): Former Jugoslavia, Turkey, Morocco, Nigeria, Somalia, Afghanistan. Bangladesh, Iraq, Iran, Nepal, Pakistan, D.R.Congo, Syria

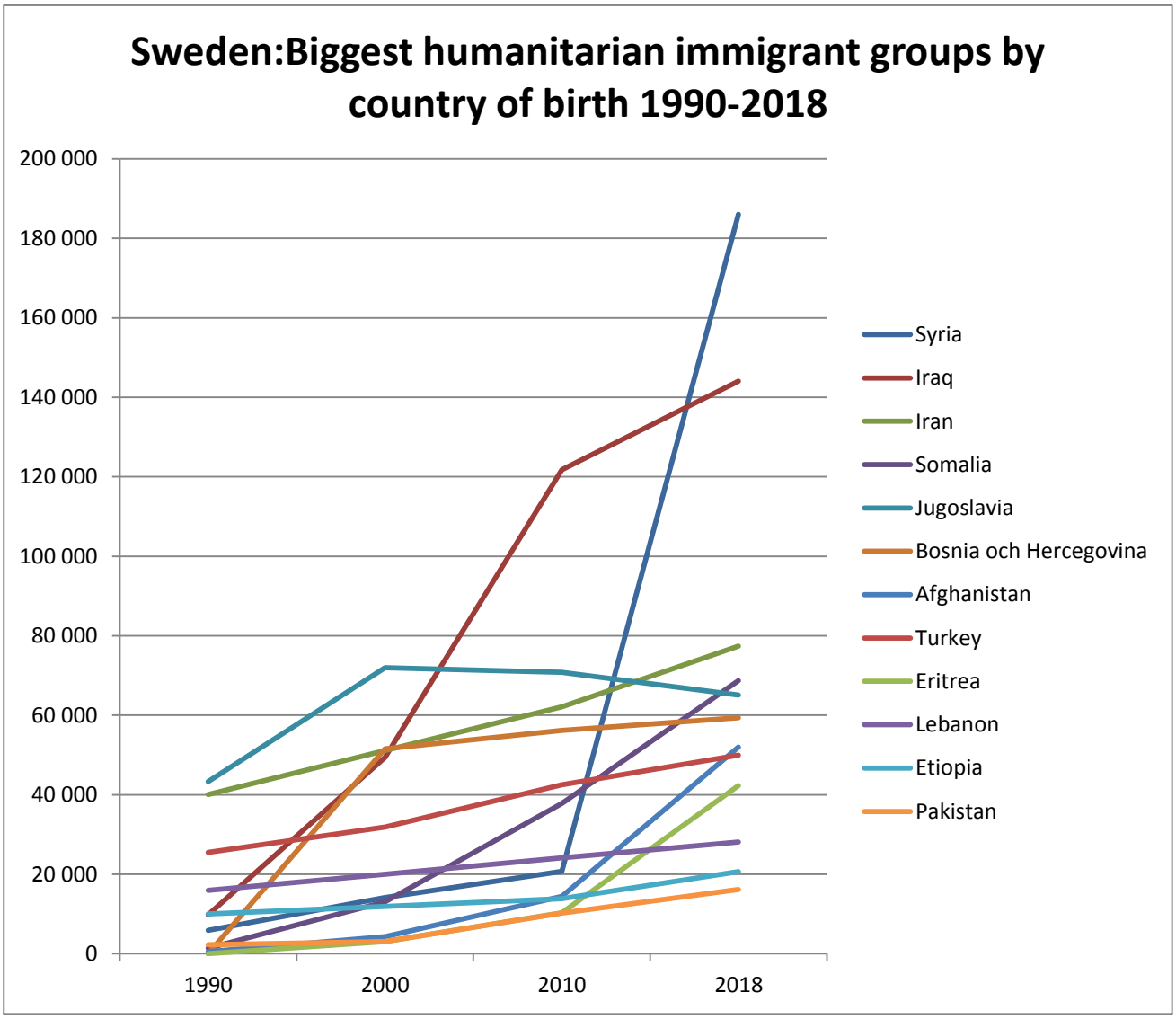
Source:(SCB, 2018; Tilastokeskus, 2019e)

Graph 3



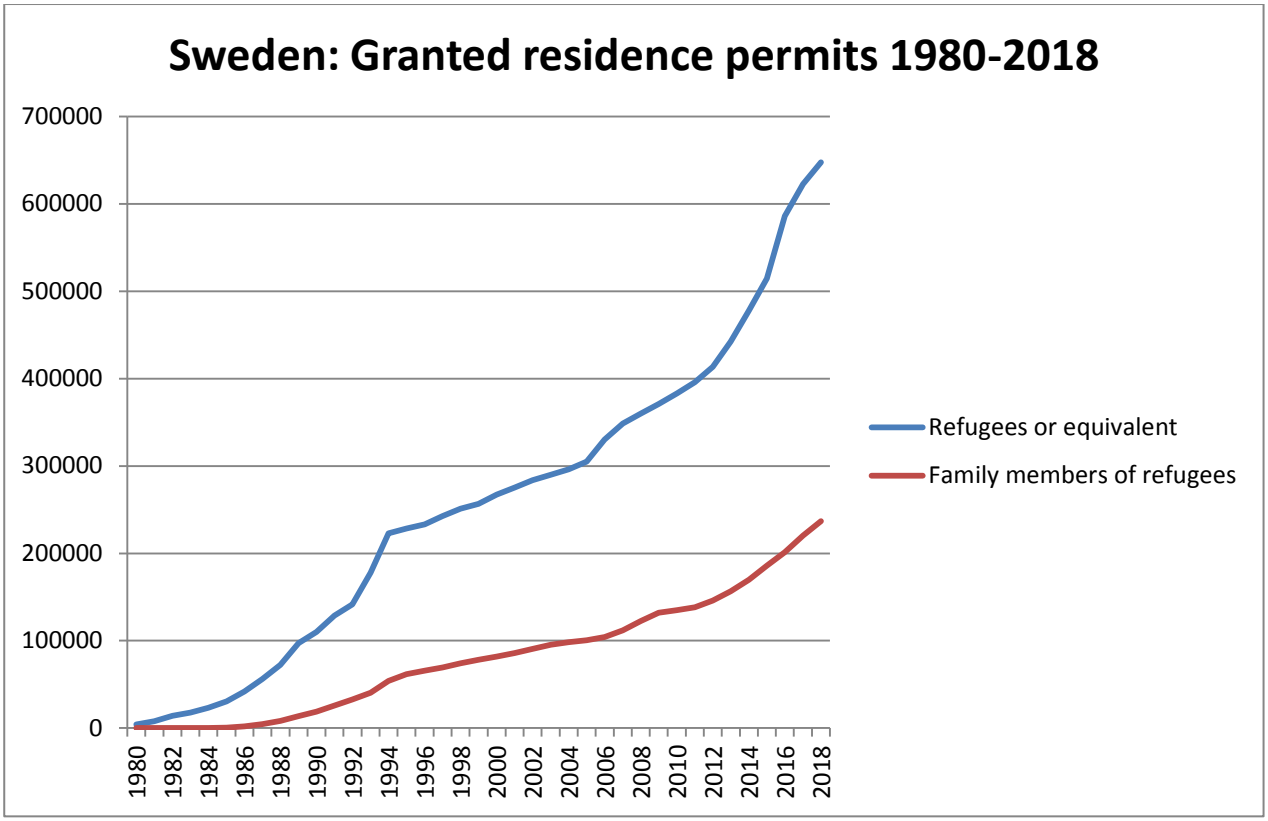
Source: (Tilastokeskus, 2019e)

Graph 4



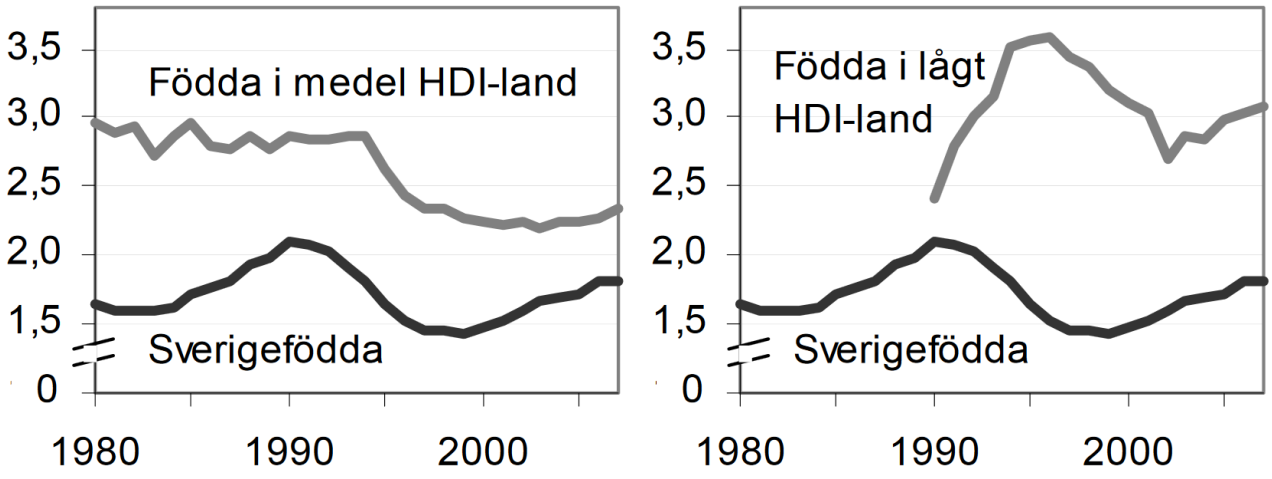
Source: (SCB, 2018)

Graph 5



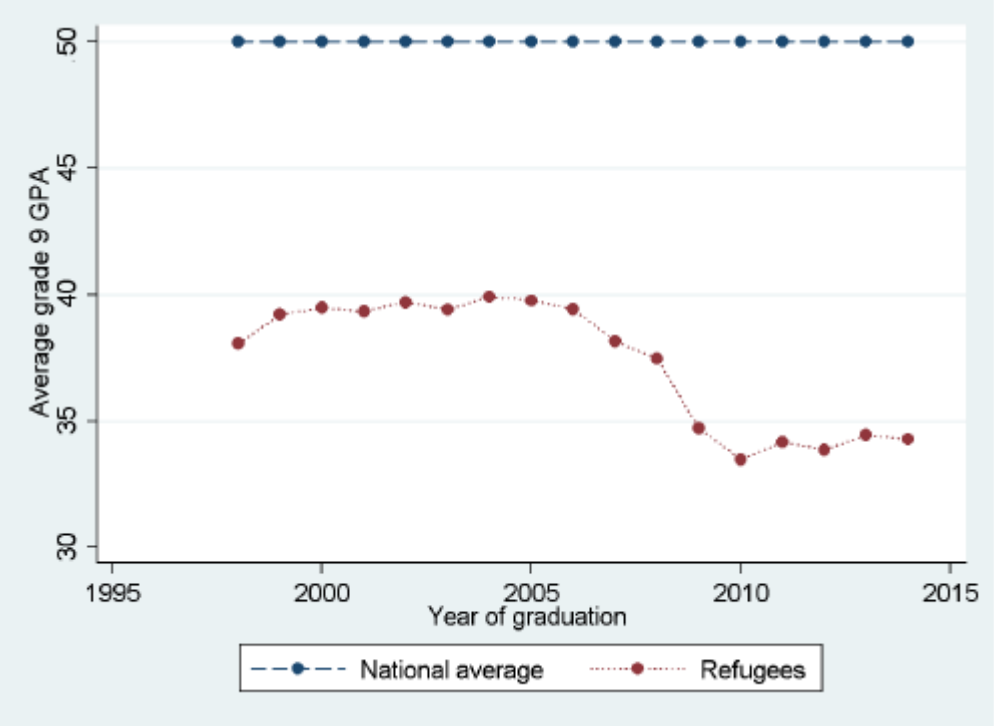
Sources: (Migrationsverket, 2019c)

Graph 6, Sweden: Total Fertility Rate for Swedish-born and women born in medium-HDI countries (graph on the left) as well as low-HDI countries (graph on the right) 1980–2007. Children per woman.



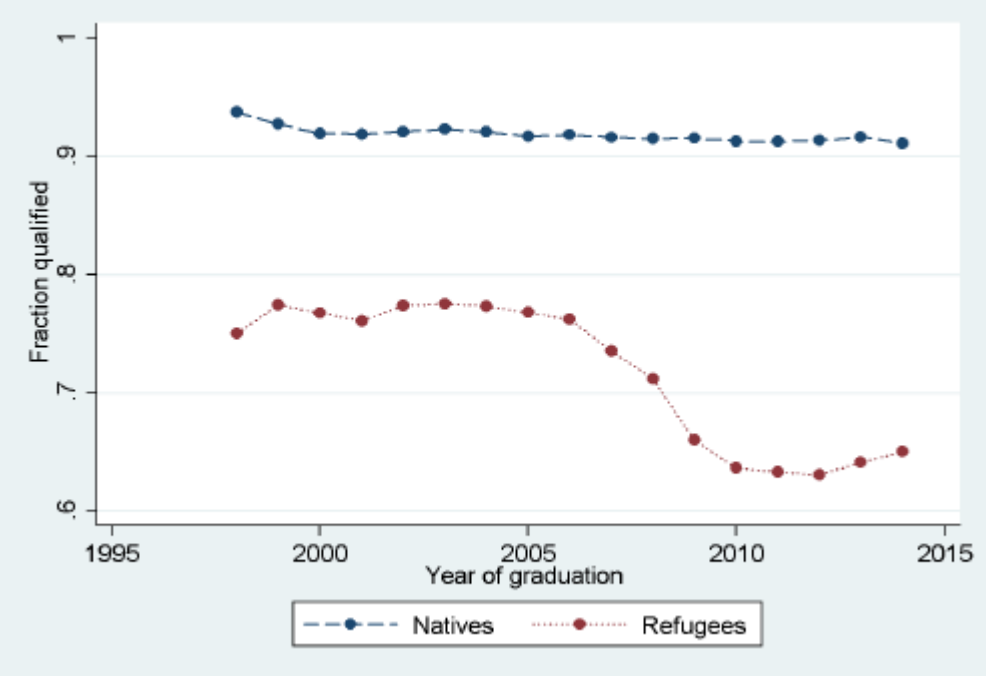
Source: (Persson, 2008: 21)

Graph 7, Sweden: Development of GPA over time



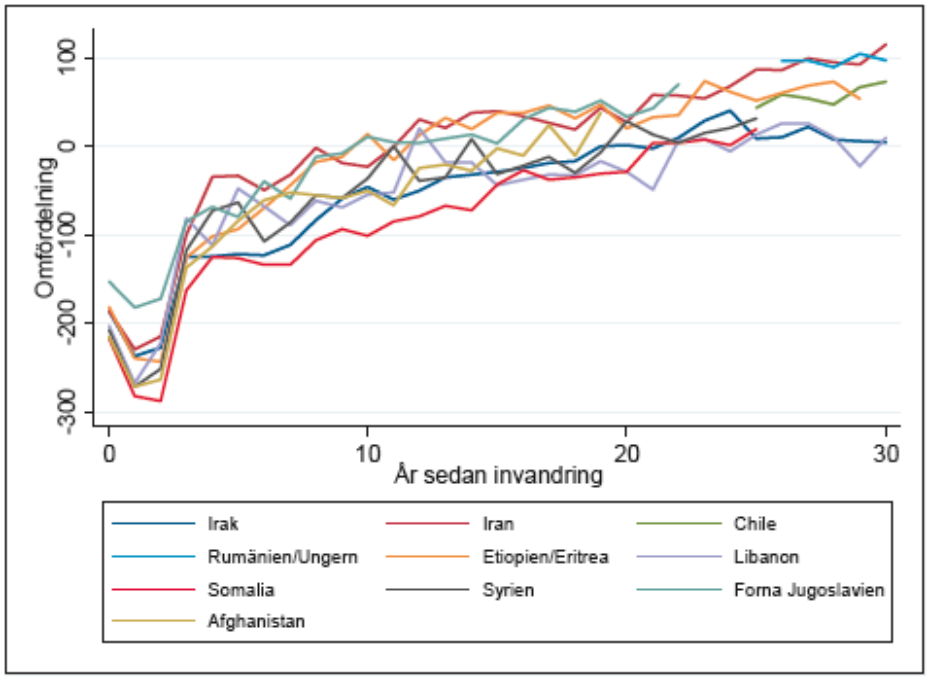
(Grönqvist and Niknami, 2017: 170)

Graph 8, Sweden: Development of the upper secondary school qualification rate over time



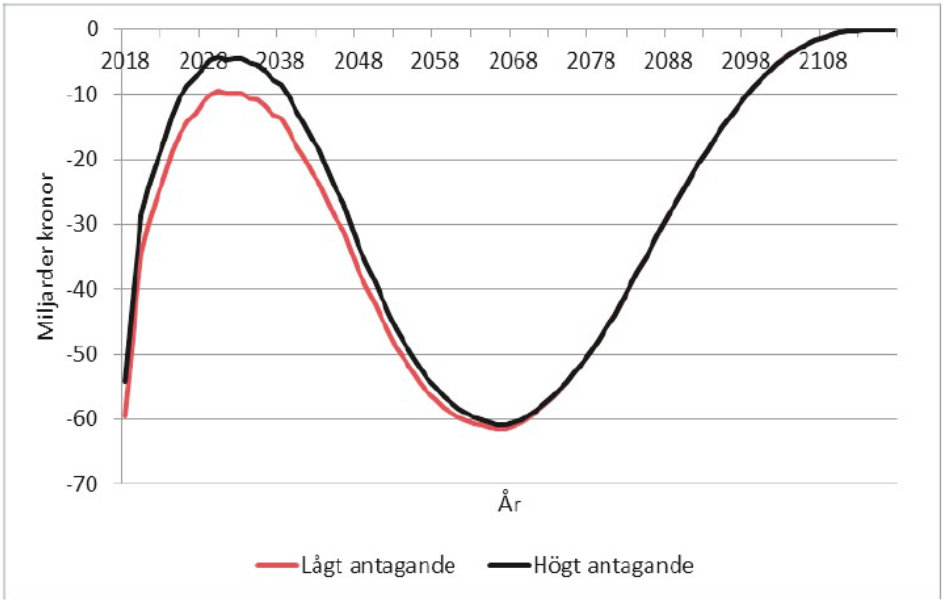
(Grönqvist and Niknami, 2017: 172)

Graph 9, Sweden: Annual public finance net distributions in 2015 per refugee by country of origin and years since immigration. X-axis: years since immigration, Y-axis: redistribution in 1,000 SEK.



Source: (Ruist, 2018: 74)

Graph 10, Sweden: Prognosticated annual public finance net distributions of year 2018 refugee population. Red line: low estimate, Black line: high estimate.



Source: (Ruist, 2018: 82)

Tables

Table 1, Sweden: Number of male and female asylum seekers, and sex ratio 1995-2018

Year	Men	Women	Sex Ratio
1995	5515	3532	1,56143828
1996	9090	5710	1,59194396
1997	15109	9353	1,61541751
1998	23110	14196	1,62792336
1999	30202	18335	1,64723207
2000	40178	24662	1,62914605
2001	55196	33159	1,66458578
2002	75955	45416	1,67242822
2003	96075	56651	1,69591005
2004	110891	64996	1,70612038
2005	122087	71330	1,71157998
2006	138021	79718	1,73136556
2007	163149	90797	1,79685452
2008	179074	99225	1,80472663
2009	194794	107699	1,80868903
2010	214600	119712	1,79263566
2011	233540	130420	1,79067628
2012	261285	146562	1,78276088
2013	296048	166058	1,78279878
2014	350865	192542	1,82227774
2015	465593	240691	1,93440137
2016	482945	252278	1,91433657
2017	498580	262309	1,90073539
2018	511509	270882	1,8883093

Sources: (Migrationsverket, 2019a; Migrationsverket, 2019b)

Table 2, Sweden: Combined number of 12 largest humanitarian immigrant groups divided by sex

Year	Men	Women	Sex Ratio
2000	171621	153874	1,11533462
2001	177604	159895	1,11075393
2002	184325	166154	1,1093624
2003	189734	171953	1,10340616
2004	193008	175582	1,09924708
2005	196638	178981	1,09865293
2006	208939	187508	1,11429379
2007	222327	196902	1,12912515
2008	233382	207569	1,12435865
2009	245509	219805	1,11694002
2010	256388	228550	1,12180267
2011	265130	235698	1,12487166
2012	276030	245451	1,12458291
2013	294610	261957	1,12465023
2014	319334	279482	1,14259237
2015	346035	299242	1,15637177
2016	389052	328961	1,18266907
2017	418161	352335	1,18682788
2018	439592	370243	1,18730671

Source: (SCB, 2019a)

Table 3, Finland: Combined number of 13 largest humanitarian immigrant groups divided by sex

Year	Men	Women	Sex Ratio
1990	1680	398	4,22110553
1991	3517	973	3,61459404
1992	4660	1612	2,89081886
1993	6837	3287	2,08001217
1994	7812	4075	1,91705521
1995	8812	4970	1,77303823
1996	9873	5994	1,64714715
1997	11106	7048	1,57576617
1998	12123	7935	1,52778828
1999	13218	8906	1,48416798
2000	14052	9726	1,44478717
2001	15430	10909	1,41442845
2002	16669	12014	1,38746462
2003	17717	13040	1,35866564
2004	19055	14067	1,35458875
2005	20604	15133	1,36152779
2006	22211	16237	1,36792511
2007	24707	17627	1,40165655
2008	27590	19285	1,43064558
2009	30662	21165	1,4487125
2010	34048	23147	1,47094656
2011	37021	25214	1,4682716
2012	40124	27460	1,4611799
2013	43528	30036	1,4491943
2014	47015	32987	1,42525844
2015	50766	35771	1,41919432
2016	58172	40299	1,44350976
2017	63676	44803	1,42124411

Source: (Tilastokeskus, 2019e)

Table 4, Sweden: number of men, women, and sex ratio of Sweden's entire population 1990-2018

Year	Men	Women	Sex Ratio
1990	4244017	4346613	0,97639633
1991	4270623	4373496	0,97647809
1992	4294585	4397428	0,97661292
1993	4320954	4424155	0,97667329
1994	4356254	4460127	0,97671075
1995	4366071	4471425	0,97643838
1996	4369717	4474782	0,97652064
1997	4371913	4475712	0,97680838
1998	4375619	4478703	0,97698352
1999	4380118	4481308	0,97741954
2000	4392753	4490039	0,97833293
2001	4408445	4500683	0,97950578
2002	4427107	4513681	0,98081965
2003	4446656	4529014	0,98181547
2004	4466311	4545081	0,98266918
2005	4486550	4561202	0,98363326
2006	4523523	4589734	0,98557411
2007	4563921	4619006	0,98807427
2008	4603710	4652637	0,98948403
2009	4649014	4691668	0,99090856
2010	4690244	4725326	0,99257575
2011	4726834	4756021	0,99386315
2012	4765905	4789988	0,99497222
2013	4814357	4830507	0,99665667
2014	4872240	4875115	0,99941027
2015	4930966	4920051	1,00221847
2016	5013347	4981806	1,00633124
2017	5082662	5037580	1,00894914
2018	5142438	5087747	1,01074955

Source: (SCB, 2019b)

Table 5, Finland: number of men, women, and sex ratio of Finland's entire population 1990-2018

Year	Men	Women	Sex Ratio
1990	2426204	2572274	0,94321367
1991	2443042	2585960	0,9447331
1992	2457282	2597700	0,94594526
1993	2470196	2607716	0,9472642
1994	2481649	2617105	0,94824205
1995	2491701	2625125	0,94917423
1996	2500596	2631724	0,95017411
1997	2509098	2638251	0,95104598
1998	2516075	2643571	0,9517713
1999	2523026	2648276	0,95270508
2000	2529341	2651774	0,95382978
2001	2537597	2657304	0,95495171
2002	2544916	2661379	0,9562396
2003	2552893	2666839	0,95727301
2004	2562077	2674534	0,95795268
2005	2572350	2683230	0,95867667
2006	2583742	2693213	0,95935301
2007	2596787	2703697	0,96045785
2008	2611653	2714661	0,96205493
2009	2625067	2726360	0,9628468
2010	2638416	2736860	0,96403031
2011	2652534	2748733	0,96500242
2012	2666622	2760052	0,96614919
2013	2680364	2770906	0,96732404
2014	2691863	2779890	0,96833436
2015	2701490	2785818	0,96972954
2016	2712327	2790970	0,97182234
2017	2719131	2793999	0,973204
2018	2723290	2794629	0,97447282

Source: (Tilastokeskus, 2019c)

Table 6, Finland: Total Fertility Rates of foreign born by country of origin 2000-2016

Year	2000-2003	2010-2013	2011-2014	2012-2015	2013-2016
Somalia	5	4	4,2	4,2	4,3
Morocco	..	4,1	3,9	3,7	3,9
D.R. of Congo	..	3,6	3,5	3,1	3,3
Turkey	3,4	3,2	3,1	3,1	3,1
Iraq	3,9	3,2	3,1	3,1	3
Former Yugoslavia	2,6	2,7	2,7	2,7	2,8
Afghanistan	2,4	2,7	2,7	2,7	2,7
Ethiopia	..	2,2	2,4	2,5	2,7
Sweden	2,1	2,3	2,2	2,1	2,1
All Foreign born	2,2	2,1	2,1	2	2
All Finnish born	1,7	1,8	1,8	1,7	1,6
Entire population	1,7	1,8	1,8	1,7	1,7

Source: (Tilastokeskus, 2019d)

Table 7, Finland: Annual number of live births by country of origin 2000-2017

Year	Nepal	Syria	Nigeria	Pakistan	Bangladesh	D.R. of Congo	Morocco
2000	2	7	2	15	23	12	30
2001	3	12	5	10	25	17	40
2002	6	8	4	22	26	17	25
2003	6	9	2	22	21	12	41
2004	8	11	6	13	20	17	49
2005	5	11	8	16	18	16	52
2006	5	8	11	16	26	20	49
2007	5	11	10	25	34	24	60
2008	5	15	17	28	28	31	44
2009	7	17	13	31	35	41	47
2010	12	6	24	24	31	41	48
2011	15	13	32	36	26	53	64
2012	12	13	41	43	47	51	54
2013	16	18	54	57	52	56	55
2014	45	29	74	64	49	70	57
2015	39	59	83	70	77	59	63
2016	63	92	118	86	72	95	85
2017	68	159	116	82	72	91	64

Year	Iran	Afghanistan	Turkey	Former Jugoslavia	Somalia	Foreign Origin Total	Finnish Origin Total
2000	41	4	40	113	268	2381	54361
2001	29	12	38	118	287	2633	53556
2002	41	14	58	116	224	2696	52859
2003	47	30	56	121	268	2825	53805
2004	52	25	61	151	250	2959	54799
2005	44	35	98	166	230	3220	54525
2006	79	40	83	181	258	3516	55324
2007	81	59	93	175	278	3690	55039
2008	57	78	78	166	289	3923	55607
2009	85	73	96	203	316	4290	56140
2010	88	89	133	219	329	4760	56220
2011	78	95	129	200	381	4969	54992
2012	68	103	132	228	443	5415	54078
2013	89	125	147	222	478	5625	52509
2014	85	145	163	257	512	6219	51013
2015	111	166	164	244	532	6363	49109
2016	92	185	177	269	611	6700	46114
2017	130	206	160	266	589	6725	43596

Source: (Tilastokeskus, 2019a)

Table 8, Finland: Employment rates by place of birth and educational attainment (25-64)

Eudactional Attainment	Total		Low		Medium		High	
Place of birth	Foreign	Native	Foreign	Native	Foreign	Native	Foreign	Native
2000	51,2	73,5	39	59,7	67,3	75,2	48,5	84,6
2001	63,9	74,6	52	58,4	65,4	76	70,7	86
2002	66,4	74,7	48,8	58,9	69,7	75,7	77,8	85,8
2003	65,1	74,4	52,5	58,7	71,6	74,9	65,8	85,4
2004	62,7	74,1	49,3	57,2	63,5	74,5	72,1	84,8
2005	62,1	75,2	47,7	58,5	65,1	75,8	69,8	84,4
2006	65,6	75,8	54,7	58,6	67,1	75,8	72,2	85,7
2007	70,7	76,2	54,1	58	74,6	76,5	76,5	85,6
2008	72	77	59,6	59,3	76,2	76,8	77,2	86,1
2009	69,1	75,2	58,4	55,8	68,2	74,9	77,3	84,5
2010	68,7	74,6	57,5	55,9	68,7	73,8	76,5	83,9
2011	65	75,9	56	55,2	64,8	74,8	73,4	85,3
2012	67,6	75,7	58,4	54,1	70	74,6	71	84,8
2013	69,6	75,3	57,8	54,4	70,5	73,7	76,9	84,2
2014	63,9	75,6	54,4	53,4	67,1	73,5	68,4	84,3
2015	62,5	75,6	52,3	53,2	64,6	73,2	68,7	83,9

Source: (OECD, 2019a)

Table 9, Sweden: Employment rates by place of birth and educational attainment (25-64)

Educational Attainment	Total		Low		Medium		High	
Place of birth	Foreign	Native	Foreign	Native	Foreign	Native	Foreign	Native
2000	60,9	81,3	49,8	69,8	66,1	82,6	69,7	87,7
2001	65,5	82,8	51,4	72,3	69,9	83,6	75,6	89,1
2002	66,4	83,1	51,5	71,8	69,5	84	76,6	89,5
2003	66,7	82,7	52,3	71,4	69,1	83,4	77,2	89
2004	66,2	82,4	50,7	70,9	68,9	82,8	76	88,8
2005	65,5	83	51,7	69,6	68,2	83,3	74,7	89,5
2006	66,1	83,7	52,8	70,9	68,4	84,1	75,1	89,5
2007	67,7	84,8	51,5	71,1	69,9	85,2	78,3	90,5
2008	68,3	85,2	50,4	71,4	70,8	85,3	78,9	91,3
2009	66,3	84,1	47,5	70,3	68,5	83,5	76,5	90,6
2010	65,6	84,2	45,9	70,1	68	83,5	75,3	90,6
2011	67,1	85,5	46,8	71,7	70,2	84,9	76,1	91,3
2012	67,9	85,9	52,5	72	73,3	85,9	76,7	91,7
2013	68,1	86,4	51	71,3	72,8	86,4	78,6	91,9
2014	68,9	86,5	51,8	71,3	74	86,3	78,3	91,9
2015	69,5	87	52,3	71,2	75,2	86,6	78,3	92,4

Source: (OECD, 2019a)

Table 10, Finland: Employment, unemployment and participation rates by place of birth and sex 2000-2017

Rates	Employment rate						Unemployment rate					
Gender	Men		Women		Total		Men		Women		Total	
Place of birth	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born
2000	49,9	71,2	39	65,3	45,2	68,3	36,6	10,3	21,3	12	31,7	11,1
2001	66,9	71,8	47,5	67,1	57,4	69,4	21,1	9,7	27,4	10,4	23,8	10
2002	64,5	71	56,7	67,5	60,6	69,3	20,5	10,5	17,9	10	19,3	10,3
2003	65,9	70,4	52,3	67,5	58,6	69	18,3	10,9	20,3	9,7	19,3	10,3
2004	65,5	70,5	47,1	66,8	55,7	68,7	21,3	9,9	25,1	10,2	23,1	10,1
2005	61,7	71,2	49,7	68	55,4	69,6	22,4	9,3	22,7	9,4	22,6	9,3
2006	66,5	71,9	53,4	68,6	59,8	70,2	16	8,6	20,4	8,9	18,1	8,7
2007	69,8	72,2	57	68,7	63,5	70,5	12	6,5	17,4	6,9	14,5	6,7
2008	73,1	73	58,4	69,3	65,5	71,2	10,9	6	19	6,3	14,8	6,1
2009	66,2	69,5	62,7	67,9	64,4	68,7	17,9	8,7	14,5	7,4	16,3	8,1
2010	69	68,9	59,9	67,2	64,4	68,1	16,4	8,9	10,5	7,6	13,8	8,3
2011	65,7	70,9	58,6	67,9	62,1	69,4	14,7	8,3	13,3	6,9	14	7,6
2012	68,9	70,6	59,1	68,6	63,8	69,6	14,5	8,1	13,8	6,8	14,2	7,5
2013	68,9	70	58,2	68,4	63,4	69,2	14,5	8,7	15,2	7,2	14,8	8
2014	66,1	69,7	55,2	68,8	60,7	69,2	16,5	9,1	17,2	7,5	16,8	8,3
2015	65,2	69,6	53,9	68,7	59,3	69,2	17	9,7	18	8,4	17,5	9,1
2016	66,4	70,8	51,9	68,8	59	70	15,1	8,9	19,7	8	17,6	8,7
2017	68,4	71,5	52,9	69,7	60,3	70,6	14,3	8,8	17,5	8	15,8	8,4

Rates	Participation rate					
Gender	Men		Women		Total	
Place of birth	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born
2000	78,7	79,4	49,5	74,2	66,1	76,8
2001	84,8	79,4	65,4	74,9	75,3	77,2
2002	81,1	79,3	69	75,1	75,1	77,2
2003	80,7	79	65,6	74,8	72,6	76,9
2004	83,3	78,2	62,9	74,5	72,5	76,4
2005	79,5	78,5	64,3	75	71,6	76,8
2006	79,2	78,7	67,1	75,2	73	77
2007	79,3	77,1	69,1	73,9	74,2	75,5
2008	82,1	77,7	72	74	76,9	75,8
2009	80,6	76,1	73,3	73,3	76,9	74,7
2010	82,6	75,7	66,9	72,7	74,7	74,2
2011	77,1	77,3	67,6	72,9	72,2	75,1
2012	80,5	76,9	68,5	73,7	74,3	75,3
2013	80,5	76,6	68,6	73,7	74,4	75,2
2014	79,2	76,7	66,6	74,4	72,9	75,5
2015	78,5	77,1	65,7	75,1	71,8	76,1
2016	78,2	77,7	64,6	74,8	71,6	76,7
2017	79,8	78,4	64,1	75,7	71,6	77,1

Source: (OECD, 2019b)

Table 11, Sweden: Employment, unemployment and participation rates by place of birth and sex 2000-2017

Rates	Employment rate						Unemployment rate					
Gender	Men		Women		Total		Men		Women		Total	
Place of birth	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born
2000	51,6	75,8	48	73,2	49,8	74,6	13,5	5,1	11,2	4,3	12,4	4,7
2001	66,5	77,5	57,1	74,8	61,8	76,2	10,4	4,4	9,5	3,8	10	4,1
2002	65	77,1	59,2	74,8	62,1	76	11,5	4,5	8,7	4,1	10,2	4,3
2003	64,6	76,5	60	74,4	62,3	75,5	12,7	5,2	9,5	4,4	11,1	4,8
2004	63,6	75,7	59,1	72,9	61,3	74,3	14,2	6,2	12,6	5,2	13,5	5,7
2005	63,7	76,2	58,4	72,6	61	74,4	15,1	7	13,7	6,9	14,4	6,9
2006	65,6	77,1	58	73,1	61,6	75,1	13,6	6	13,3	6,4	13,4	6,2
2007	68,1	78	58,6	74,3	63,1	76,2	11,7	5,1	12,6	5,5	12,1	5,3
2008	69,9	77,9	58,7	74,5	64	76,3	11,5	5,1	12,9	5,5	12,2	5,3
2009	66,7	75,6	58	72,8	62,1	74,2	16,2	7,5	14,5	6,9	15,4	7,2
2010	67	76	55,9	72,8	61,2	74,4	16,1	7,6	16,8	7	16,4	7,3
2011	67,5	77,5	57,8	74,4	62,5	76	16,6	6,3	15,9	6,2	16,3	6,3
2012	67,5	77,4	58,4	75	62,8	76,2	16,9	6,7	15,1	6,3	16,1	6,5
2013	67,4	78,3	58,5	75,9	62,9	77,2	17	6,6	15,8	6,4	16,4	6,5
2014	68,1	78,5	59,3	76,8	63,5	77,7	16,6	6,6	16,2	5,9	16,4	6,2
2015	67,7	79,3	60,7	77,7	64,1	78,5	16,5	5,7	15,9	5,3	16,2	5,5
2016	68,7	79,8	61,3	78,8	64,9	79,3	16,6	5,3	15,1	4,5	15,9	4,9
2017	70,4	80,4	62,4	79,4	66,3	79,9	15,8	4,8	15	4,2	15,4	4,5

Rates	Participation rate					
Gender	Men		Women		Total	
Place of birth	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born	Native-born
2000	59,7	79,9	54	76,6	56,8	78,3
2001	74,2	81,1	63,1	77,8	68,7	79,4
2002	73,5	80,8	64,9	78	69,1	79,4
2003	74	80,7	66,4	77,7	70,1	79,3
2004	74,1	80,7	67,7	76,9	70,8	78,9
2005	75	81,9	67,6	77,9	71,3	80
2006	75,9	82	66,8	78	71,2	80,1
2007	77,1	82,2	67,1	78,7	71,8	80,5
2008	79,1	82,1	67,4	78,9	72,9	80,6
2009	79,6	81,7	67,8	78,2	73,4	80
2010	79,9	82,3	67,2	78,3	73,2	80,3
2011	81	82,7	68,7	79,4	74,6	81,1
2012	81,3	82,9	68,9	80,1	74,9	81,5
2013	81,1	83,8	69,5	81,1	75,2	82,5
2014	81,7	84,1	70,7	81,6	76	82,9
2015	81,1	84,1	72,2	82,1	76,5	83,1
2016	82,5	84,2	72,2	82,5	77,1	83,4
2017	83,6	84,5	73,4	82,9	78,4	83,7

Source: (OECD, 2019b)

Table 12, Finland: Labour force, unemployed, and unemployment rate by region of origin 2000-2017

Year	Finland			Europe (excl. Fin)		
	Labour force	Unemployed	Unemployment rate	Labour force	Unemployed	Unemployment rate
2000	2473104	304184	0,122996849	29181	8915	0,305507008
2001	2477135	299927	0,121078181	32097	9360	0,291616039
2002	2471823	288457	0,116698081	33264	8775	0,263798701
2003	2475778	289371	0,116880835	34484	9086	0,263484515
2004	2484998	284626	0,114537718	35740	9093	0,254420817
2005	2487872	269123	0,108173974	37861	8692	0,229576609
2006	2493220	234926	0,094225941	41252	8114	0,196693494
2007	2509869	205465	0,081862838	45606	7530	0,165109854
2008	2523270	219018	0,086799272	49936	8306	0,166332906
2009	2496348	280701	0,112444659	52936	11108	0,209838295
2010	2491943	248584	0,099755091	56073	10831	0,193158918
2011	2497840	236140	0,094537681	61670	11233	0,182146911
2012	2498003	258261	0,103386986	66939	13000	0,194206666
2013	2498981	300902	0,120409879	71219	15482	0,21738581
2014	2498603	331917	0,132841032	74665	17447	0,233670394
2015	2489692	342841	0,137704182	76949	18391	0,239002456
2016	2484420	323287	0,130125744	79142	17853	0,225581866
2017	2467856	268157	0,108659906	78534	15024	0,191305677
Year	Africa			America		
	Labour force	Unemployed	Unemployment rate	Labour force	Unemployed	Unemployment rate
2000	2779	1222	0,43972652	1604	247	0,153990025
2001	3013	1358	0,450713575	1736	265	0,15264977
2002	2996	1267	0,422897196	1835	315	0,171662125
2003	3120	1396	0,447435897	1844	304	0,164859002
2004	3405	1548	0,454625551	1875	327	0,1744
2005	3898	1656	0,424833248	1980	355	0,179292929
2006	4412	1639	0,371486854	2158	351	0,162650602
2007	5268	1678	0,318526955	2351	343	0,145895364
2008	6030	1716	0,284577114	2546	375	0,147289866
2009	6769	2371	0,350273305	2660	509	0,191353383
2010	7358	2659	0,361375374	2761	517	0,187250996
2011	8068	2760	0,342092216	2920	546	0,186986301
2012	8310	2876	0,346089049	3159	692	0,219056664
2013	8497	3254	0,382958691	3269	819	0,250535332
2014	8682	3635	0,418682331	3425	954	0,278540146
2015	8678	3624	0,417607744	3591	1004	0,279587859
2016	8826	3593	0,407092681	3768	1035	0,274681529
2017	8600	3070	0,356976744	3857	889	0,230490018

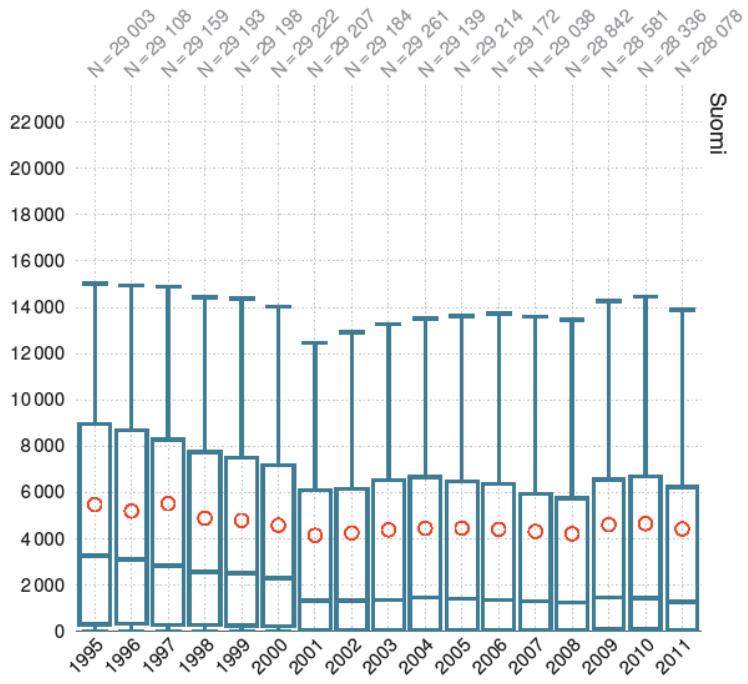
Year	Asia			Other or unknown		
	Labour force	Unemployed	Unemployment rate	Labour force	Unemployed	Unemployment rate
2000	5523	2159	0,390910737	1015	342	0,336945813
2001	6289	2539	0,403720782	974	323	0,331622177
2002	6531	2424	0,371152963	861	262	0,304297329
2003	6952	2564	0,36881473	912	292	0,320175439
2004	7506	2738	0,364774847	806	251	0,311414392
2005	8467	2910	0,343687256	826	245	0,296610169
2006	9497	2933	0,308834369	868	242	0,278801843
2007	11094	2895	0,260951866	945	222	0,234920635
2008	13021	3253	0,249827202	1038	232	0,223506744
2009	14728	4277	0,29039924	1079	305	0,282669138
2010	16613	4734	0,284957563	1125	328	0,291555556
2011	18647	5166	0,277041883	1159	319	0,275237274
2012	20060	5721	0,285194417	1223	375	0,306623058
2013	22004	6975	0,31698782	1317	430	0,32649962
2014	23920	7756	0,324247492	1405	489	0,348042705
2015	25443	8184	0,321660182	1432	490	0,342178771
2016	28184	9099	0,322842748	1517	497	0,327620303
2017	30402	8644	0,2843234	1552	407	0,262242268

Source: (Tilastokeskus, 2019b)

Box charts

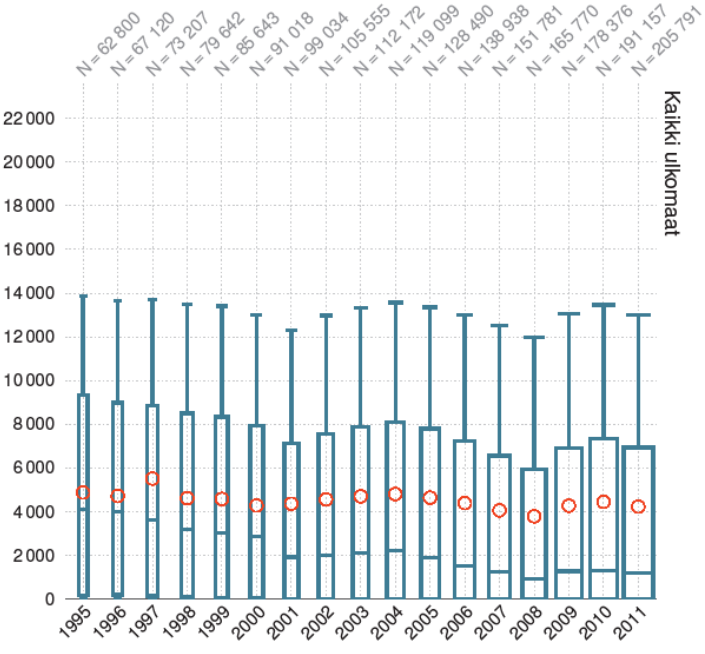
Box charts 1-5, Finland: Received total income distributions (euros, ages 20-62) the years 1995-2011 by country of birth. Divided into 90th percentile, upper quartile, median (red dot), lower quartile and 10th percentile.

Box chart 1, Finland



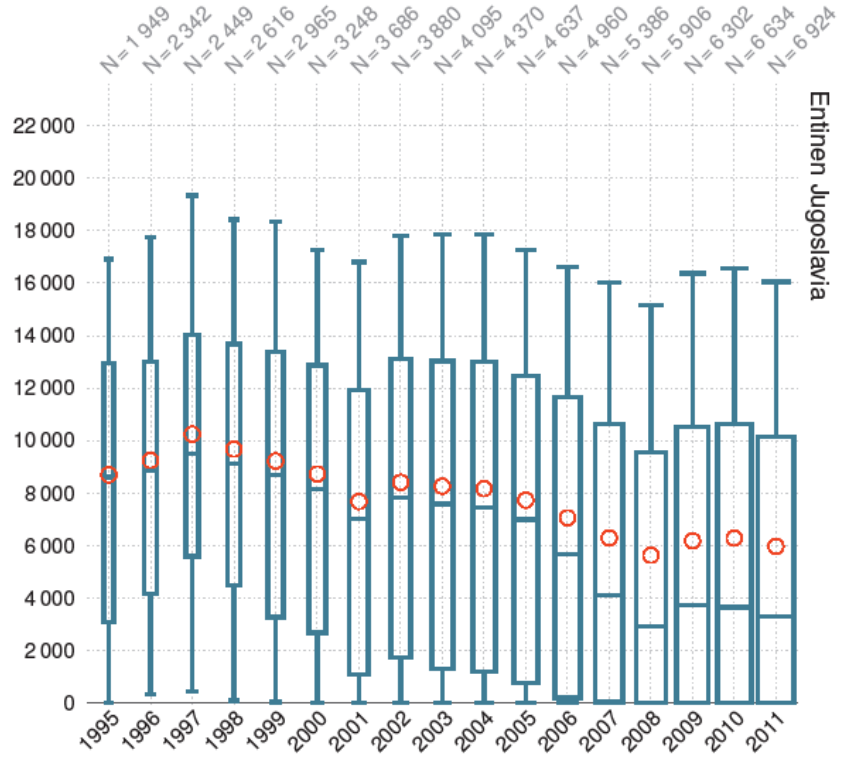
Source: (Salminen, 2015: 25)

Box chart 2, All foreign countries



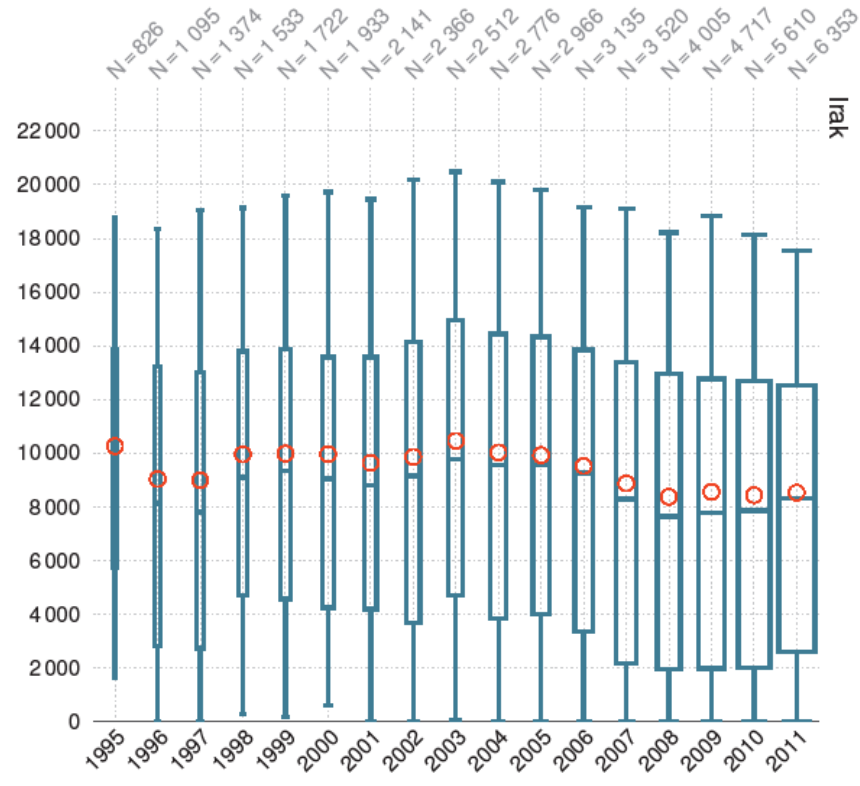
Source: (Salminen, 2015: 25)

Box chart 3, Former Yugoslavia



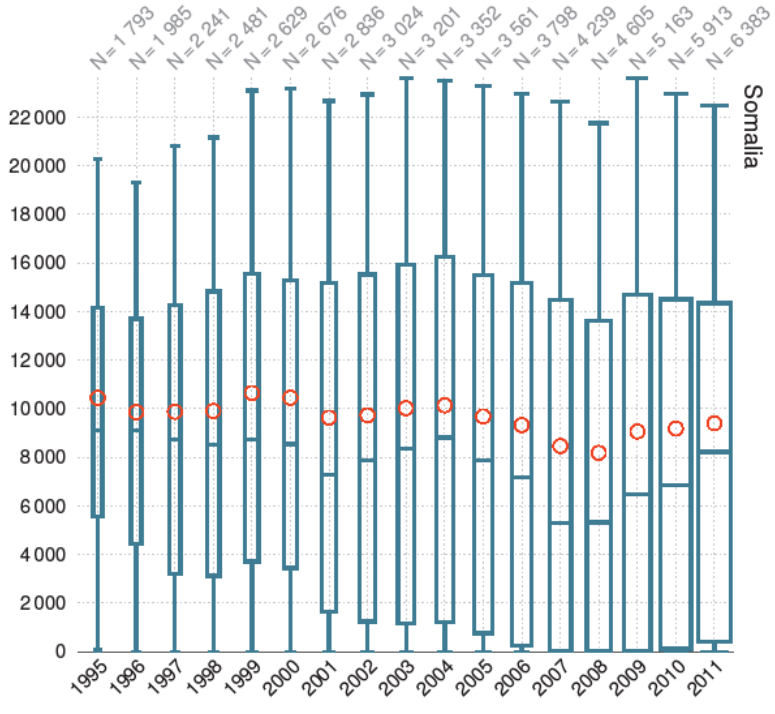
Source: (Salminen, 2015: 25)

Box chart 4, Iraq



Source: (Salminen, 2015: 25)

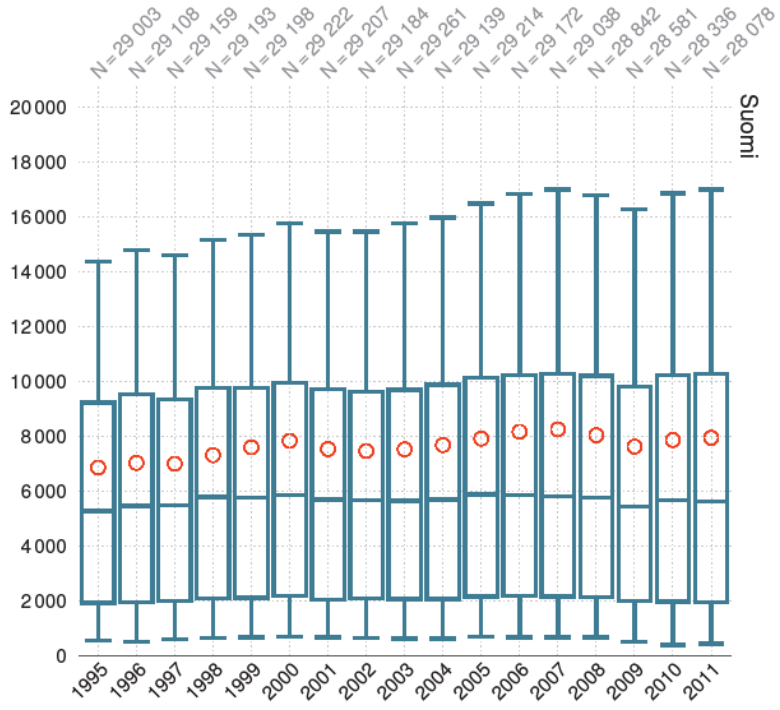
Box chart 5, Somalia



Source: (Salminen, 2015: 26)

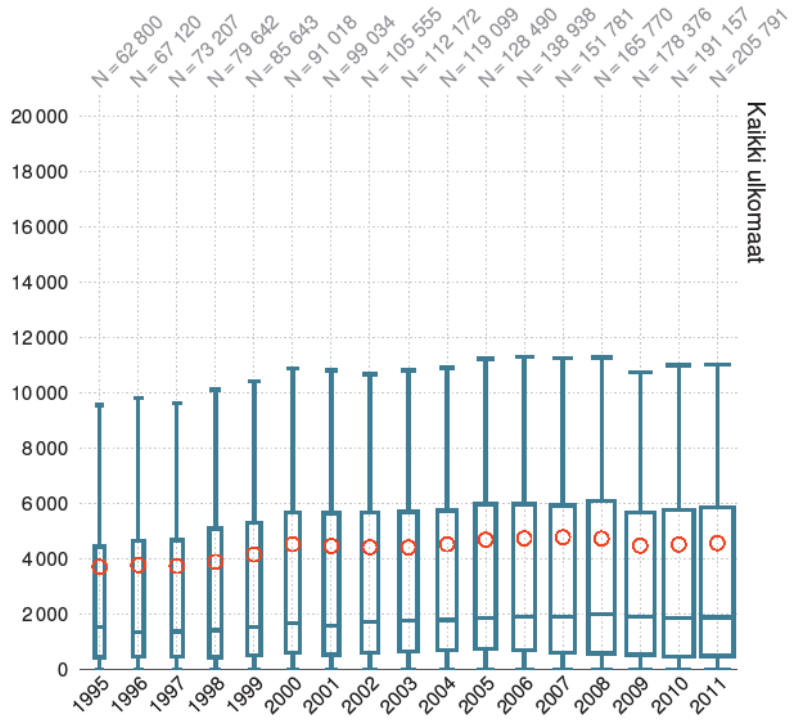
Box charts 6-10 Finland: Paid direct taxes and similar payments (euros, ages 20-62) the years 1995-2011 by country of birth. Divided into 90th percentile, upper quartile, median (red dot), lower quartile and 10th percentile.

Box chart 6, Finland



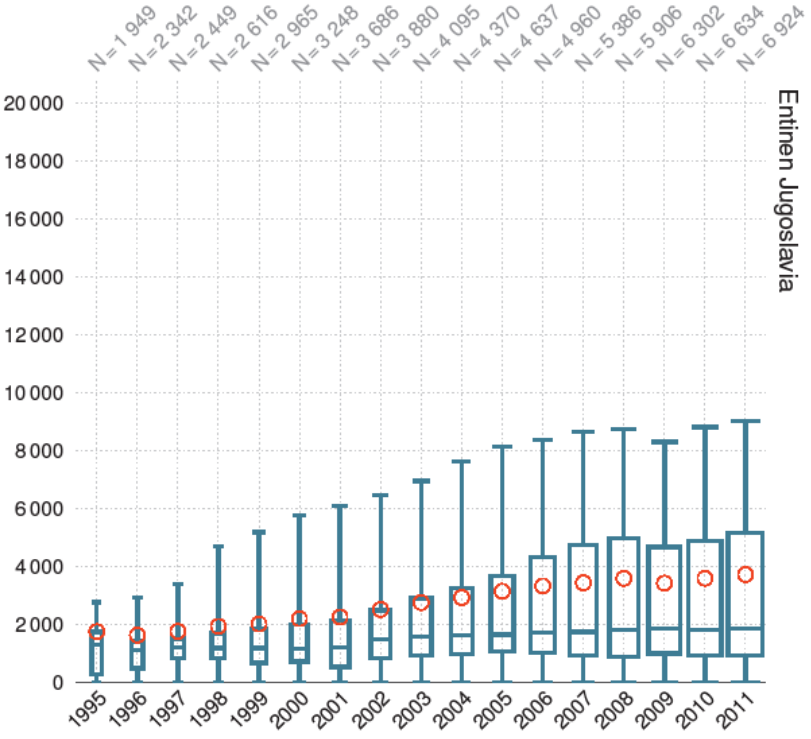
Source: (Salminen, 2015: 39)

Box chart 7, All foreign countries



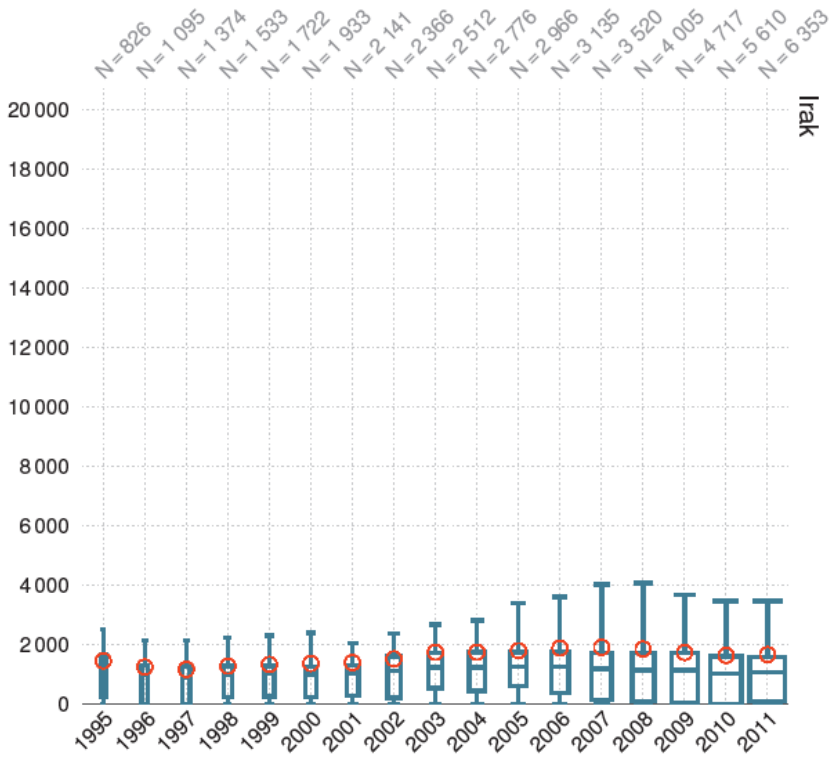
Source: (Salminen, 2015: 39)

Box chart 8, Former Yugoslavia



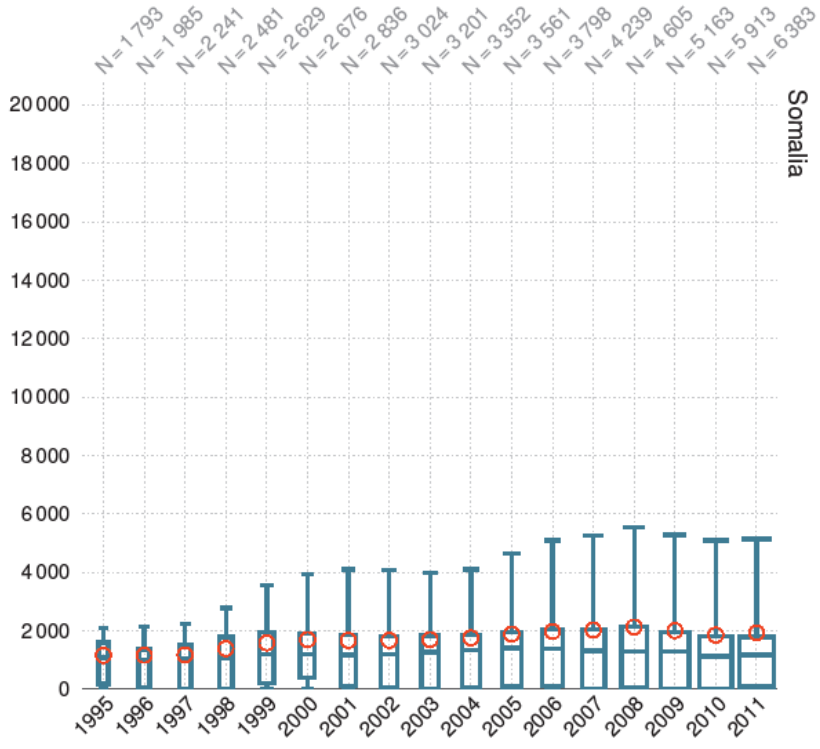
Source: (Salminen, 2015: 39)

Box chart 9, Iraq



Source: (Salminen, 2015: 39)

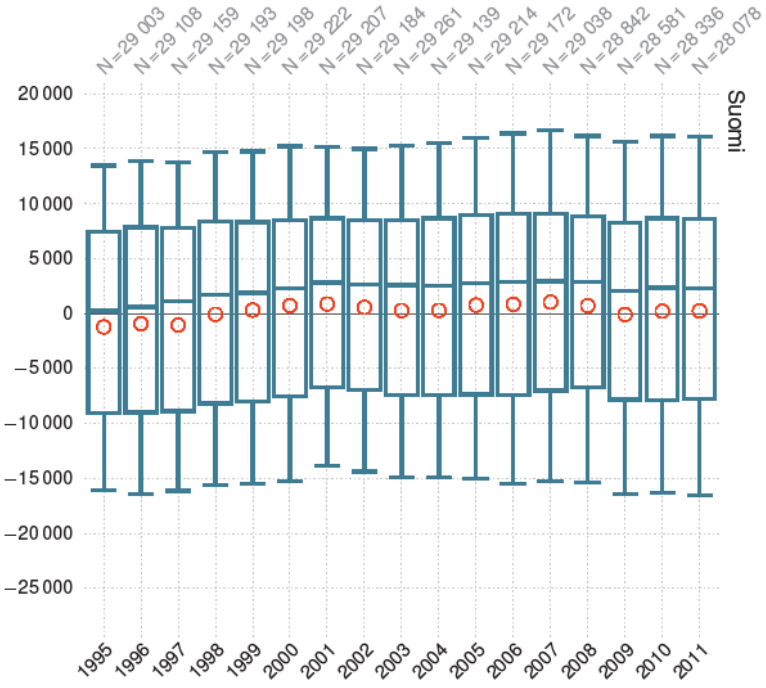
Box chart 10, Somalia



Source: (Salminen, 2015: 40)

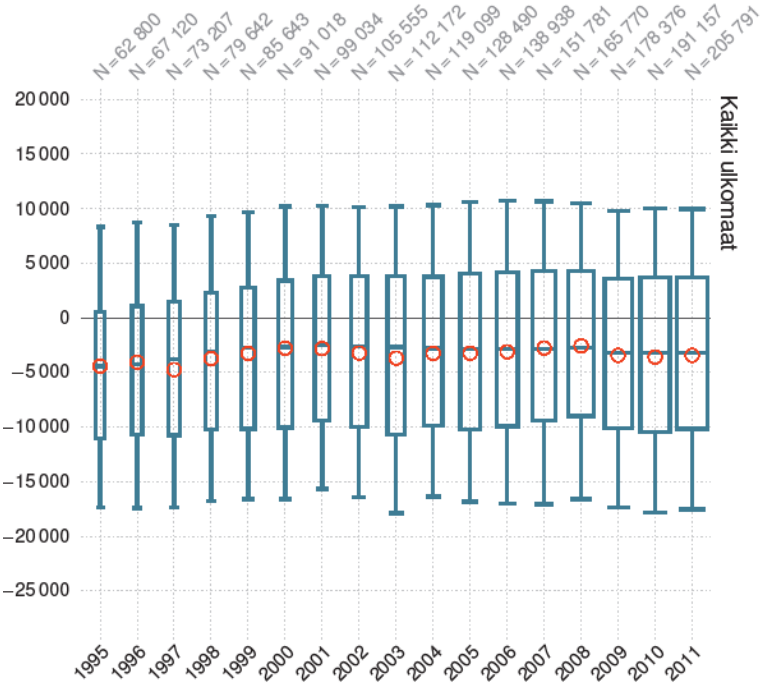
Box charts 11-15, Finland: Net impact on public finances (euros, ages 20-62) the years 1995-2011 by country of birth. Divided into 90th percentile, upper quartile, median (red dot), lower quartile and 10th percentile.

Box chart 11, Finland



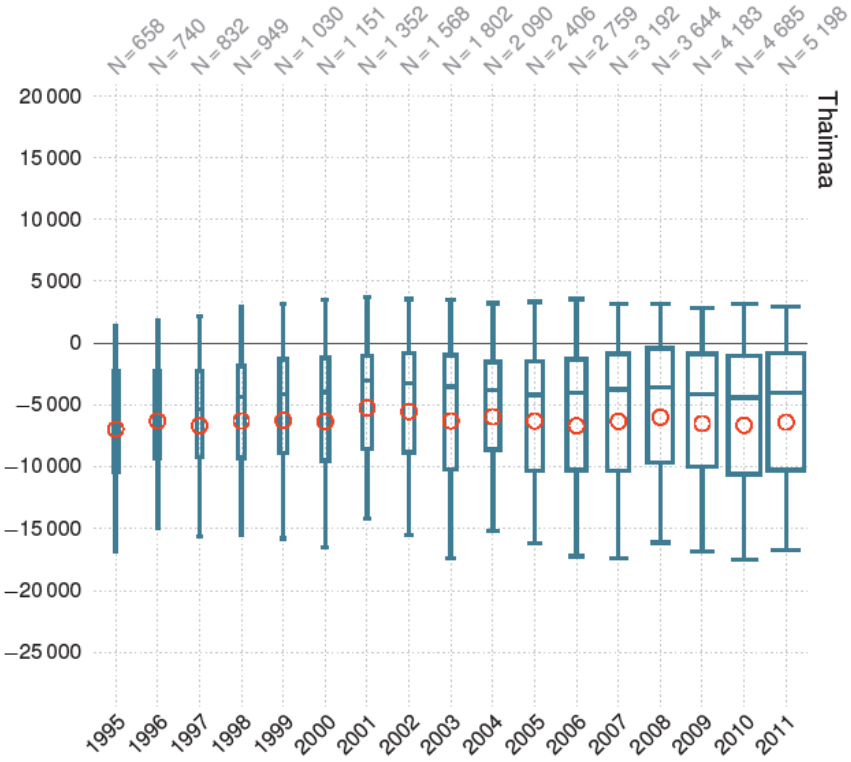
Source: (Salminen, 2015: 134)

Box chart 12, All foreign countries



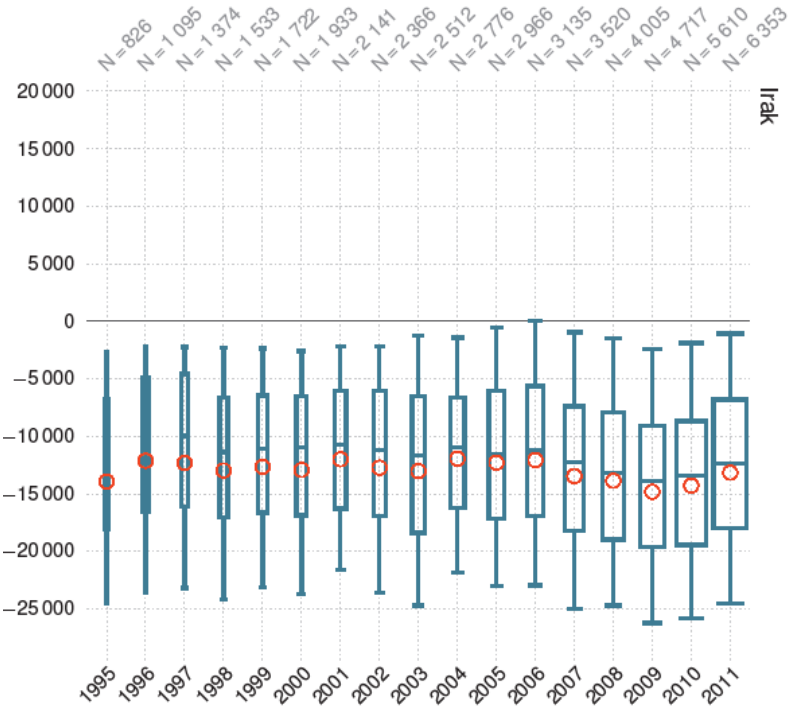
Source: (Salminen, 2015: 134)

Box chart 13, Thailand



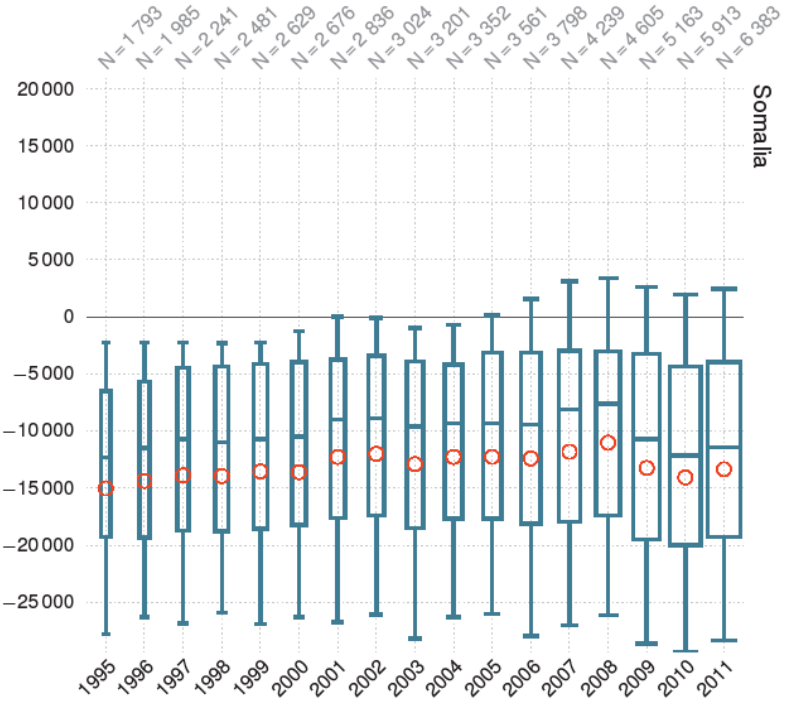
Source: (Salminen, 2015: 135)

Box chart 14, Iraq



Source: (Salminen, 2015: 134)

Box chart 15, Somalia



Source: (Salminen, 2015: 135)

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