



# THE ECONOMIC IMPACT OF ASYLUM MIGRATION IN SWEDEN

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## **Abstract**

This paper analyzes the economic impact that migration imposes on Sweden's economy. Previous research calculates various economic impacts of immigration on a country through multiple approaches, therefore a combination of fiscal factors from previous studies will serve as the basic method of research. After reviewing previous work, an analysis of current Swedish migration, including a breakdown of the scale and demography of the incoming immigrants, will serve to indicate relevant factors that could have an effect to total public costs. The 'demographic factors' identified in this population are then attributed to specific government programs that will incur the actual public cost to the Swedish economy. Finally, these factors are analyzed to determine the impact of migration to Sweden's economy in the form of government budgeting, labor status, the effect on GDP, and other macro indicators of Sweden's overall economic stability.

## I. Introduction

Sweden now receives six times the number of asylum applications each year than the total number of immigrants they allowed into the country in all of 1990 (Econ. Unit 2016). Asylum seekers cite war or oppressive government, family reconnection, or human rights violations as reasons for migration. Subsequently, the Swedish government has passed legislation to cease acceptance of asylum seekers. The steady increase in applicants and decline following the drastic halt in 2016 compared to their overall population are illustrated in Table 1.

**Table 1: Number of Asylum Applicants from 2015 to 2016**

Year	Population	Applicants	Percentage of Population (in %)
2010	9,340,682	31,850	.340
2011	9,415,570	29,650	.315
2012	9,482,855	43,855	.462
2013	9,555,893	54,270	.568
2014	9,644,864	81,180	.842
<b>2015</b>	<b>9,747,355</b>	<b>162,450</b>	<b>1.667</b>
2016	9,851,017	28,790	.292

(Eurostat 2016a, Asylum and first time asylum applicants—annual aggregated data)

Researchers disagree about the fiscal impacts that large scale asylum migrations have on a country. Low migrant labor force participation rates and government programs, including asylum supports, education, and healthcare, are commonly cited costs of asylum immigration. Other research claims that the aforementioned costs do not outweigh the benefits of asylum migration. Regardless, the public costs of immigration are heavily influenced by the demographics of the population migrating into the country. Asylum seeking migrants are the primary focus of this paper due to the drastic increased influx of these individuals leading up to 2015 and the subsequent political response that Sweden and all of Europe made toward the asylum-seeking system. Additionally, asylum seekers make up the largest influx of migrants entering Sweden; therefore, these individuals have a large economic effect.

Section II summarizes previous studies that determine the economic impact of immigration on a country through multiple approaches. Combined fiscal factors selected from this research will guide the current analysis of migration

into Sweden. Section III contains trends in migration, including a breakdown of the scale and demography of the incoming asylum-seekers. ‘Demographic factors’ are identified in section IV from this population and are associated with specific government programs that incur public cost to the Swedish economy in section V. Finally, the public costs identified in section V are analyzed to predict a potential effect to Sweden’s overall economic health in section VI.

## II. Previous Research

Scholars reach differing opinions regarding the economic effects of immigration. Employers believe immigrants contribute foremost through tax payments and to the economic growth and public revenue sector of Sweden’s economy (Johansson 2014 p.113). This positive relationship between an employer and their outlook of immigrant economic contribution points to a positive relationship where public costs are not increased. However, Economist Jan Ekberg suggests that the net contribution of immigrants entering the Swedish economy is less than 1% of Sweden’s total GDP for the year (Ekberg 2011, p.117). Ekberg’s results come from measuring the often overlooked figure of public expenses versus public revenues after the new population of immigration has been accounted for (Ekberg 2011). This suggests that immigration has a relatively insignificant cost when compared to the overall GDP of Sweden.

Robert Rowthorn, Professor of Economics at the University of Cambridge, developed a method to measure the net impact that large migration will have on a country. Rowthorn detailed one of his most recent versions of his advanced economic analysis in the *Oxford Review of Economic Policy*. The article, titled “The Fiscal Impact of Immigration on the Advanced Economies,” describes the relationship between the labor skill level of a migrant and their final contribution to the GDP of an advanced economy. Rowthorn eventually comes to the same conclusion as Jan Ekberg: immigration only affects a country by less than 1% of GDP (Rowthorn 2008, p.560). Although immigration can affect a country in some economic capacity, this research strongly indicates that the effect of immigration on the countries overall GDP will remain minimal. Kjetil Storesletten’s net present value model has cost predictions that outweigh the approaches of Ekberg and Rowthorn, however, and this highlights that the effect on the Swedish economy could have larger costs associated with incoming migrants of specific demographics. Storesletten’s cost projections indicate greater economic impact than previous research, especially because current data indicates asylum migration is at historic levels (see Table 1) and consists of demographics that are not conducive to positive economic stimulation.

A set of ‘demographic factors’ that have been identified to incur economic effects have been developed and are as follows: age structure, temporal migration, fertility, and emigration. These factors, developed primarily from Rowthorn’s approach, have been attributed to specific government programs to analyze the public costs of immigration on Sweden. Rowthorn’s model is tailored towards data from the UK; therefore, Swedish data will be based on previous researchers Ekberg and Storesletten and external data sources, including OECD, The Official Statistics of Sweden, and the European Statistical System (Eurostat).

### III. Migration Trends

#### Defining an ‘immigrant’

Throughout this paper, the term asylum-seeker, migrant, and immigrant have all been used to describe members comprising the population influx into Sweden. Despite this, the nomenclature of “asylum-seeking” population of immigrants is distinct from refugees, migrants, and traditional immigrants because this group received legislative restriction after a historical number of asylum-seeking applications in 2015. This paper focuses on asylum-seekers, and, as such, it is vital to define the term separately. The Guardian published the distinctions between the variations of migrant as follows:

*Migrant*: “someone who moves from one place to another in order to live in another country for more than a year”

*Refugee*: “a person who has fled armed conflict or persecution and who is recognized as needing of international protection because it is too dangerous for them to return home”

*Asylum Seeker*: a special case of refugee in which “States are under international obligation to consider claims for asylum and not to immediately return asylum seekers to the countries they have fled from. The refugee convention states that they must be given access to fair and efficient asylum procedures and measures to ensure they live in dignity and safety while their claims are processed” (Travis 2015, p.1-3).

Despite past research suggesting that the effect of immigration on the overall country’s GDP is minimal, migration can still affect a country’s economy if it is occurring at an unprecedented pace. As such, it is crucial to determine whether the country is truly undergoing a migration boom. The European Statistical System (Eurostat) uses 2011 census results which suggest a large portion of Sweden’s population consists of immigrants. In fact, Table 2 shows that 1.3 million of Sweden’s 2011 population of 9.4 million are first generation immigrants (Eurostat 2011).

**Table 2: Census Data for Amount of Population That Has Migrated in Periods**

Period of Arrival	Amount of Population	Percent of Population
1980 to 1989	205,707	2.461
1990 to 1999	334,843	3.836
2000 to 2009	588,596	6.511
2010 to 2011 (Partial Date Range) *	186, 846	1.984%*
<b>Total (Resided abroad &amp; arrived from 1980-2011)</b>	<b>1, 315, 992</b>	<b>13.976%</b>

*(Eurostat 2011, Census Data on Time of Arrival into Sweden)*

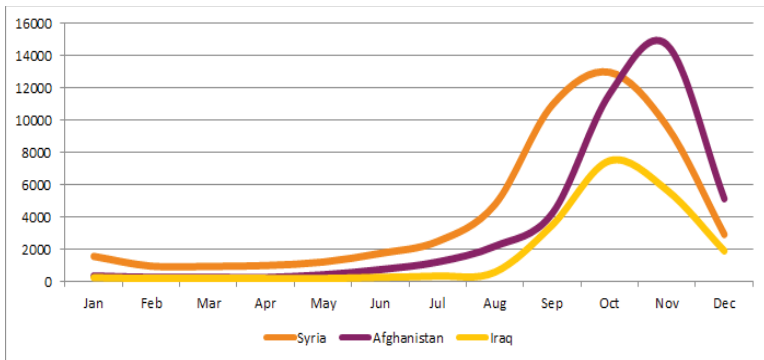
A report predicted the percentage of foreign born Swedish residents to increase from 13% in 2011, which is reflected in the chart above, to 18% by 2050 (Statistics Sweden 2006, p.72). The *Nordic Business Report* cited studies that poll public discontent with immigration at over fifty percent of the population in response to the increased influx of immigrants (2003). In addition to asylum-seekers, the total number of people immigrating in general to Sweden in the year 2014 was over 120,000, whereas the total number of people emigrating from Sweden was only 51,000 (Eurostat 2015a). This is one example of a way in which Sweden's population is being influenced by increased immigration, but it is necessary to note the previous numbers only reflect the standard immigration into Sweden—including highly qualified immigrants that have contributed to Sweden's welfare system for years and account for only  $< \pm 1\%$  of an effect on total GDP (Ekberg 2011, Rowthorn 2008).

As previously stated, a new wave of migrants called “asylum-seekers” poses significant public costs to Sweden's economy due to their aggressive influx pace in relation to the population of Sweden. The Swedish Migration Agency, Migrationsverket, reported that 163,000 people sought asylum in Sweden in 2015 (Migrationsverket 2016a). These figures make Sweden the most demanded European country for asylum-seekers in absolute numbers. A detailed breakdown of the number of asylum applicants over the past 5 years in Sweden is included in Table 1 and demonstrates a drastic increase in asylum applications.



It is important to notice a few demographic factors of the 163,000 seeking asylum to Sweden in 2015. In 2015, 35,250 of these applicants were minors; this is an increase from 7,045 in 2014 (Eurostat 2016b). This is important because it relates to the contribution of the migrant population to the labor market; children are unlikely to contribute to the labor market of a country if they are unaccompanied and carry additional costs, such as access to Sweden’s comprehensive education system. To further compound the problem, a study in Denmark published that 72% of asylum-seekers claiming to be minors were over the age of 18 (Carlqvist 2015). The additional factors accompanying minor asylum provisions are greater than that of a typical asylum seeker, and fraudulent applications that lead to increased incentives causes unforeseen costs. Additionally, 43,000 immigrations stated ‘family reunification’ as their migration reason, making it the most common factor for allowing entry (Migrationsverket 2016a). This means that more than half of migrants cite ‘family reunification’ as their reason of entry (Eurostat 2016b). The concentration of asylum applicants from areas of conflict increased drastically towards the end of 2015. The countries of Syria, Afghanistan, and Iraq had noticeable jumps in the number of asylum applications, as demonstrated in Graphic 1 (Migrationsverket 2016a).

**Graphic 1: Amount of Asylum Seekers Entering Sweden in 2015 by Country (Monthly)**



(Migrationsverket 2016a, Most common nationalities among asylum-seekers in 2015 by month)

The Swedish Migration Agency (Migrationsverket) published a detailed report of the asylum application process. This report revealed that of the 149,028 applicable asylum applications in 2015, only 34% were rejected (Caritas Sweden 2016). Of the incoming applications, Syria represented the greatest number of applicants by a large margin with 48, 276 asylum-seekers; a minimal

6.3% were rejected in 2015 (Caritas Sweden 2016). Although Rowthorn and Ekberg have shown immigration to have a minimal, 1% effect on a country's GDP, with levels of migration that top Europe and double historical data, the full effect of asylum-seeking migration into Sweden may have a significant economic effect.

## Demographic Factors

Robert Rowthorn (2008) details four demographic factors that need to be accounted for when calculating impact of immigration on a country's economy. These factors are as follows:

- i. Age structure
- ii. Temporary Migration
- iii. Emigration
- iv. Fertility

These factors are important because they will affect specific government programs that affect the Swedish economy.

### Age Structure

The average age of a population relies on the birth and death rate of the country. This age often indicates how younger populations can contribute positively to the labor force and therefore have more 'high skill' workers (Rowthorn 2008, p.561). One factor which needs to be considered when calculating the average age of a population in Sweden is how the wave of 163,000 asylum applications consists of 35,400 unaccompanied minors; this is not including the over 40,000 asylum applicants that came as part of a family (Migrationsverket 2016a). These migrants will be far from 'high skill' workers and unless they leave the country prior to using governments assistance, they will negatively affect the fiscal status of Sweden in the short run. Sweden is currently experiencing a labor shortage, with job vacancy per available employee well over 1 for the past year, and as high as 2.5 openings per potential employee in 2015 (Eurostat 2016c). This is partly since the age of the population of Sweden has been increasing steadily and does not appear to be slowing down. Jan Ekberg predicts that the percentage composition of Swedish citizens 65+ to increase from 20.5% in 2015 to 22.4% in 2025 (Ekberg 2011, p.109). Additionally, the Official Statistics of Sweden predicts similar trends, indicated in Graphic 2.



**Graphic 2: Swedish Population Composition by Age with Extrapolation**

**Number of people in different age groups 2005. Projection 2006-2050.  
Thousands**

Year	0-19 years	20-64 years	65-79 years	80 and over	Total
2005	2 159	5 323	1 078	487	9 048
2006	2 164	5 356	1 091	489	9 099
2007	2 163	5 370	1 116	489	9 139
2008	2 156	5 383	1 149	491	9 179
2009	2 145	5 390	1 192	490	9 217
2010	2 127	5 403	1 236	491	9 257
2011	2 111	5 414	1 281	491	9 296
2012	2 097	5 425	1 323	491	9 336
2013	2 089	5 432	1 366	488	9 376
2014	2 087	5 440	1 404	488	9 418
2015	2 094	5 443	1 435	488	9 460
2020	2 195	5 429	1 531	525	9 680
2030	2 288	5 457	1 540	763	10 048
2040	2 288	5 514	1 653	811	10 267
2050	2 329	5 696	1 566	912	10 502

(Statistics Sweden 2008, p.11, population projections by age)

An increase in age of the population indicates increased fiscal responsibility of the Swedish government in the long run. An aging population also suggests a reduction in the labor force participation rate; both of these factors negatively impact the economy of a country experiencing increased levels of migration and a labor shortage (Statistics Sweden 2008, p.9). Eurostat data indicates that 71,890 of the 162,450 asylum applications are under the age of 17 or over the age of 65, with a rate of 44.25% non-labor force composition. Just under 70,000 minors make up the asylum-seeking population. According to this data, it is primarily minors entering Sweden; this will incur a significant cost to the comprehensive education system of Sweden.

### **Temporary Migration**

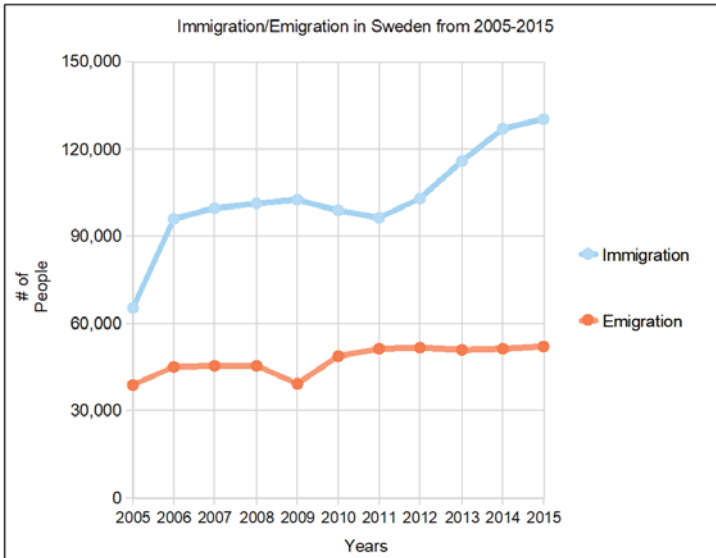
If a migrant returns home or moves out of the country before they begin to draw government assistance greater than their fiscal contribution to the economy, they are not a significant burden to the overall GDP of a country (Rowthorn 2008, p.563). Eurostat data indicates that only 19,161 of the total 51,237 emigrants out of Sweden in 2015 are Swedish Nationals (Eurostat 2015a). This indicates that there are many foreign-born citizens who emigrate out of Sweden after only living there for a specified time. These migrants have far less of an effect on the economy in the long run because they draw on government assistance for a smaller amount of time than traditional immigrants. Although emigration and temporary migration are low in Sweden, they incur costs by eliminating workers who pay into public taxes and stimulate

economic growth. These contributors are typically high-skilled workers who are either educated or specialized. The low number of temporary migrants that are Swedish nationals thereby indicates their tax contributions are low.

### Emigration

Data indicates that emigration has remained steady in Sweden, around 50,000 since 2010 (Eurostat 2015a). This is alarming, because data indicates that traditional immigration into Sweden has increased from 98,801 in 2010 to over 130,000 in 2015, while emigration only increased by around 2,000 (Eurostat 2015a). The immigration/emigration trends in Sweden from 2005–2015 are plotted in Graphic 3 (Eurostat 2015a).

**Graphic 3: Immigration and Emigration in Sweden from 2005–2015**



(Eurostat 2015a, Emigration and Immigration Statistics for Sweden)

As the above chart demonstrates, immigration in Sweden has trended upwards, whereas Swedish emigration has remained relatively constant. This supports data indicating that Swedish population is increasing due to immigration; the percentage of population that have migrated during their lifetime support this. Data indicates that of the 55,830 who emigrated out of Sweden, less than 3,000 were over the age of 65; this implies that retired Swedish citizens are a small portion of the citizens leaving the country (Eurostat 2016d). Although emigration out of Sweden may seem like a valve to release the pres-

sure of Asylum-seekers, the population exiting is comprised of a working-aged as opposed to the age group represented by asylum-seekers. These emigrants are desperately needed for the labor force, thereby causing a labor shortage in Sweden.

### **Fertility**

Fertility determines whether a country is growing at a rate that it can withstand. The replacement fertility rate (birth rate required to keep a steady population) in Sweden is currently 2.1 children, and the fertility rate was calculated in 2005 to be only 1.77 (Statistics Sweden 2008, p.35). This means that without immigration, the population of Sweden will decrease. The fertility rate is important for understanding how immigration replenishes Sweden's population. Data on the demographics of the immigrant population coming into Sweden from 2013 suggests that of the 120,000+ traditional non-asylum-seeking immigrants, roughly 12% are females from age 20-30 (Eurostat 2015a). Additionally, of the asylum-seekers entering Sweden, only 29.2% are women (Caritas Sweden 2015). The unintended consequences of allowing a large population of asylum-seekers consisting of primarily males, specifically from regions of conflict, are unknown. A shortage of women could amplify problems in the short run if many asylum-seekers who apply under 'family reunifications' now intend for their families to join them in Sweden. This is cause for concern because it is supported by the large number of males and unaccompanied minors comprising the asylum-seeker applications.

## **V. Public Costs**

The demographic factors developed affect spending on specific governmental programs. The net effect asylum-seeking migration has on these programs will be reflected by the overall Swedish economy.

### **Education**

The current policy in Sweden states that asylum-seeking children have full access to education and to 'great extent' are integrated into school (Caritas Sweden 2015, p.44). Data indicates that the number of applicants under the age of 14 applying for asylum application increased from just over 15,000 to over 34,000 applicants from 2014 to 2015 (Eurostat 2015c). This is an indication that the public cost of education in Sweden will rise in the short run in response to the rapidly increasing number of asylum-seeking children entering their education systems. A report in 2008 determined that the total number

of students enrolled in compulsory school was 962,349 for a total cost of SEK 74,056 million, or 2.85% of GDP (Sweden Abroad 2008). This does not include preschool, upper secondary school, or adult education, which would bring the total portion of GDP to just under 5%. Additionally, the report states that the cost of placement and education for a student attending compulsory school is around SEK 112,000 (Sweden Abroad 2008). This creates an additional public cost of SEK 3.8 billion for the 34,000 new asylum-seekers that are under the age of 14 and require some amount of compulsory school. Even if they do not require a complete compulsory school experience, this is offset by the higher preschool, adult education, and upper secondary education costs that are available to asylum-seekers but not currently being included in the estimation. The additional public costs associated with providing asylum-seeking children are enormous due to the large influx of asylum-applicants that Sweden experiences. The report also mentions that 68% of funding for Sweden's education system comes from tax revenue, while another 16% comes from government grants and the rest from fees and other revenues (Sweden Abroad 2008).

### Asylum Accommodations and Compensation

The Asylum Information database published Sweden's report for 2015 and included a table to compare the amount of money allocated to asylum-seekers entering the country vs. Swedish nationals on welfare, outside of education costs. The results are reproduced in Graphic 4.

**Graphic 4: Costs of Asylum Seekers in Comparison to Swedish Nationals**

Category	Asylum seekers	Swedish nationals on social welfare
Single adult	2,130 kr / €226	3,880 kr / €412
2 adults	3,660 kr / € 388	6,360 kr / €675
1 adult 1 child (aged 2)	3,240 kr / €344	5,970 kr / €634
1 adult 2 children (aged 2-5)	4,530 kr / €481	9,080 kr / €964
2 adults 2 children (aged 5-12)	6,160 kr / €654	11,630 kr / €1,235
2 adults 3 children (aged 2-5-12)	7,020 kr / €745	13,830 kr / €1,469
2 adults 4 children (aged 12-14-15-17)	8,160 kr / €867	19,450 kr / €2,066

(Caritas Sweden 2015, Asylum-seeker Government Allowance vs. General Welfare)

It is clear from this data that the number of subsidies that asylum-seekers receive is less than the cost of social welfare for a Swedish National by an estimated 50%. The Swedish Migration Agency has published three direct government costs allocated to asylum-seeker as daily compensation, accommodations, and special allowances (Migrationsverket 2016a). The amount that

Sweden must subsidize incoming asylum-seekers negatively affects the Swedish economy in the short run until that immigrant or their family contributes further through tax revenue or economic stimulus.

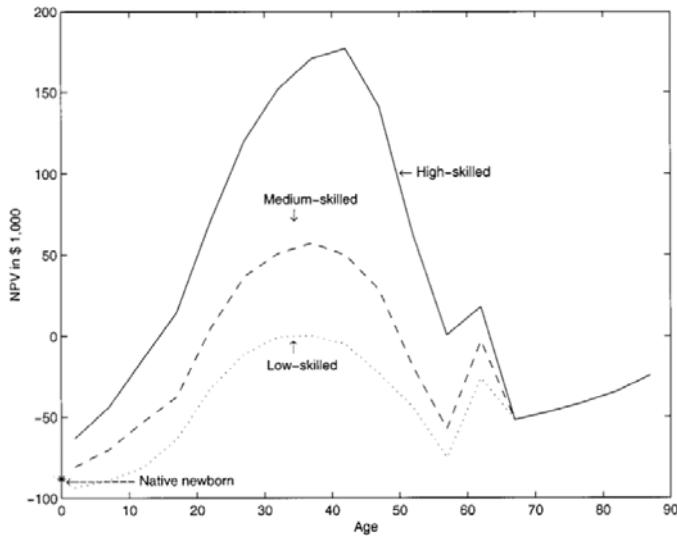
The age of the incoming 163,000 asylum applicants has become a controversial issue. As previously stated, of the 163,300 asylum applicants, 34,500 are unaccompanied minors. However, many of these ‘unaccompanied minors’ are actually not the age that they claim to be. In fact, a survey in Denmark found 72% of asylum-seekers claiming to be minors were over the age of 18 (Carlqvist 2015). Similar numbers were reported in Finland and Norway, where an estimated 66% of applicants are claiming to be children, but are actually over 18 years old (Carlqvist 2015). Asylum-seekers are falsifying their applications due to higher levels of government assistance for minors, reduced chance of deportation, and higher rates of application success. Because asylum-seekers are minors, and cannot live in refugee accommodation, their total cost to the Swedish government is estimated around 5000 kr per person per day (Carlqvist 2015). This is significantly higher than the projections released by the *Asylum Information Database*, which cites the cost of a single non-minors to be only 2130 kr for the entire month. It is important to recognize the true concentration of children in the migrant population when calculating the impact of this immigration to the fiscal burden on the Swedish government as well as when accounting for the full costs these children will have on Swedish asylum support.

## VI. Effect on the Swedish Economy

### Effect of Immigration on GDP

Jan Ekberg calculated the net impact of immigration to Sweden’s GDP to be -0.9% using a model that accounted for an aging Swedish population. Ekberg calculated the net contribution to the public sector as a percentage of Swedish GDP by subtracting the net contributions that immigrants made to the public sector by the sum of public expenditures and divided by the current GDP (Ekberg 2011, p.116). This is considered a ‘cash-flow’ approach in which the direct costs and contributions of immigrants are accounted for, then compared to GDP.

Kjetil Storesletten of the University of Oslo uses a net present value approach that calculates the expected net gain of an additional average immigrant depending on their potential contribution to the labor force (Storesletten 2000, p.315) Storesletten’s model works on the incremental scale to account for workers as they age and is featured in Graphic 4.

**Graphic 4: Storesletten's NPV Relationship Between Value and Skill**

(Storesletten 2000, NPV and worker skill in *Chicago Journal of Political Economy*)

Storesletten accounted for a difference in each immigrant's potential based on their skill level.

The results reveal dramatic differences in fiscal impact across these groups: the net government gain of new immigrants ranges from (-\$94,000) for an infant immigrant, conditional on being low-skilled during her entire life, to (\$177,000), or 7.0 times annual GNP per capita, for a 40–44-year-old high-skilled immigrant.

Storesletten's Net Present Value approach measures the government cost of adding one additional immigrant while considering a full range of skill levels and ages. Storesletten found the most frequent age range for a Swedish immigrant would equate to a sizeable loss of SEK -175,000 (Storesletten 2003, p.500). This cost is significantly higher than calculated cost per immigrant using Ekberg's data, where the cost of an immigrant is only around SEK -20,000 (Storesletten 2003, p.501). When Storesletten's used Ekberg's estimations for per immigrant cost, total immigration equates to a burden of SEK 17 billion. This equates to 1.1% of Gross National Product is consistent with Ekberg and Rowthorn's previous 'cash flow' approach (Storesletten 2003, p.501). However, Storesletten suggest that the cost per immigrant, when measured using the NPV model and given parameterization for age and skill level, is a net loss of SEK -175,000 (USD 20,500) per immigrant. If we were to multiply the cost



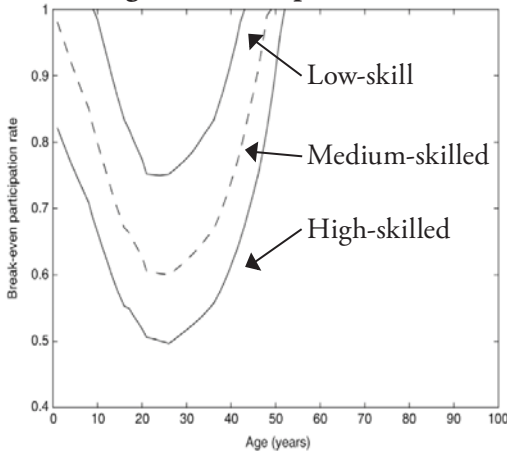
of an average immigrant given by Storesletten's approach by the number of asylum-seekers entering Sweden according to Asylum Information Database (roughly 133,000), we have an estimated total public cost of SEK 23 billion for the asylum-seeking migrants alone (Storesletten 2003, p.501).

This paper is not aimed at detailing the net effect of immigration on Sweden's GDP, but it should be noted that asylum-seeking applicants could contribute a potential public cost in 2015 that is SEK 6 billion higher than the total cost of immigration in 1995. This demonstrates the scale of asylum-seeking migration in Sweden and highlights potential underestimations by Ekberg and Rowthorn's previous work. If asylum-seeking migration carries a potential cost (using Storesletten's NPV approach) that is greater than the entire cost of immigration when Ekberg and Rowthorn calculated it to only affect GDP by <1%, then it can be assumed that the total effect on GDP is greater today than these estimations.

### **Labor Status**

Sweden, along with Belgium and Bulgaria, leads progress globally on asylum employment policy, mainly because they currently have no restrictions for asylum-seekers looking to enter the labor market (Caritas Sweden 2015). Kjetil Storesletten and Robert Rowthorn both detailed the importance of labor force participation as a major factor determining immigrant cost. Storesletten's approach uniquely accounts for accepted asylum applicants labor force participation rate and whether they will reach the breakeven participation rate, or the rate at which the net present value of an immigrant is zero. Another way to define the breakeven participation rate is that it is the required labor force participation rate of the incoming migrant population that yields no cost for the Swedish government (Storesletten 2003, p. 501). Storesletten defines the 'break-even' rate of immigrant labor participation to be as low as 61% for an immigrant population aged 20-30. A participation rate of over 100% would be required if the immigrant population is over 50 years of age (Storesletten 2003, p.501). This is graphically detailed by Storesletten in Graph 5.

**Graphic 5: Storesletten's Relationship Between Age and Participation Rates**



(Storesletten 2003, participation rate and worker age in Chicago Journal of Political Economy)

According to Storesletten's graphic, if the asylum population entering Sweden is of the optimal age range (20-30), they will need to be employed at roughly 0.6 or 61% based on their skill level; the dashed line represents an aggregate of skill levels that correspond to participation rates that will incur zero cost to Sweden's economy (Storesletten 2003, p. 501). Graphic 5 shows the relationship among different skill levels of workers at all ages, and allows us to infer that low skill workers will always have a negative impact on the economy after the age of just 40. This age is 50 in comparison for high skilled workers and represents the maximum age at which the population of workers can be employed to achieve a break-even participation rate of 1 and incur a zero net cost.

A report stated that fewer than 500 of the record-high 163,000 asylum-seeking population from 2015 had found a job (Fallenius 2016). This indicates that asylum-seekers have a negative effect on Sweden's economy due to low labor force participation rates. This effect is most notable when referencing the similar costs among asylum-seekers and Swedish Nationals on welfare. Although their costs are similar, the Swedish National has a much higher likelihood for participating in the labor force in the future. In 2015, the employment rate for native Swedish citizens was over 78% compared to the foreign-born employment rate of only 64.2%, despite both rates' increase over time (Eurostat 2015b). Additionally, the employment rate of citizens over 50 that have immigrated during their lifetime is only 51.1%, far below the required rate to 'break-even' using

the NPV approach of determining immigrant cost. Swedish citizens who have immigrated during their lifetime have a harder time entering the labor market and remaining employed; therefore, they are more likely to have a negative impact on Sweden's economy.

### **Policy Changes**

Sweden has already begun to feel the effects of this increasing immigration. Asylum-seekers are growing tired of long processing times, and the Swedish government has implemented policies beginning in 2013 that offer as much as SEK 38,000 to individuals who will voluntarily return to their country of origin (England 2016). Additionally, Swedish Immigration will accept fewer asylum-seeking applications moving forward, which, combined with longer processing times and a shortage of accommodations, should serve to decrease the number of immigrants (Migrationsverket 2016b). This indicates that Sweden is feeling the negative effects of large scale immigration and is making policy decisions to counteract the effects. These policy decisions are incredibly significant to the asylum-seeking debate because it is effectively validating all the Swedish citizens who expressed concern of recent immigration by having the government publicly end asylum based entry. Additionally, the Swedish government believes that accepted asylum-seekers will have a negative effect of at least SEK 38,000; this confirms that the impact surrounding asylum-seekers is significant.

The first pushbacks from Sweden's parliament were felt in July of 2016. Swedish Parliament passed a 3-year law that grants future asylum-seekers temporary residence permits instead of full residence, placing more stringent conditions on family reunification (Migrationsverket 2016c). This is because 'family reunification,' as previously stated, is the most commonly cited reason for asylum entry.

## **VII. Conclusion**

The effect that increased asylum-seeking migration has on a country's economy is determined by a set of demographic factors that define the scale and nature of the public costs associated. The demographic factors that compose the asylum population have been analyzed to determine specific government programs that will impact the Swedish economy. These government programs were then referenced to the overall status of Sweden's economy to hypothesize the effects.

Previous research claims that the effects of increased immigration to

a country's GDP are minimal (<1% of GDP). However, Sweden's unprecedented spike in immigration, specifically asylum-seeking migration, has raised questions about the true effect on Sweden's economy. The population of migrants is male dominated, with a large portion coming from areas of conflict (Syria, Afghanistan, Iraq). Specific demographic factors identified in the population of incoming migrants, including age structure, temporary migration, fertility, and emigration, were used to analyze the scale and cost associated with the increase in immigration. The sheer scale of the number of asylum-seeking applicants is a contributing factor as it has more than doubled from 2014 to 2015. This has led to a policy change suspending asylum entry acceptance until a legislative decision is made by the Swedish government. The number of unaccompanied minors making up the group has shifted the age structure down, despite rumors that many adults are applying as minors to increase application success. Sweden's ratio of immigration to emigration has consistently grown larger, with immigration dominating the latter; however, Sweden's low fertility rate indicates that immigration may be necessary for population stability.

The large wave of unaccompanied minors, coupled with a very young asylum-seeking population, suggests that Sweden's high education costs are only going to rise. Sweden's comprehensive educational programs have been tailored towards asylum-seekers and their inclusive nature will increase education costs in the short run by an estimated SEK 3.8 billion per year. The cost of education is in addition to the asylum supports granted – accommodations, compensation, and allowances. These are estimated to have costs around half that of a traditional Swedish national on Welfare. The scale of incoming asylum-seekers points to a large increase in the responsibility of Sweden's government continuing cost surrounding immigrant welfare despite their clamping down on migrant policy.

An analysis of the overall affect of asylum-seeking migration on the Swedish economy is as follows: While Rowthorn and Ekberg both concluded that the effect immigration can have on GDP is minimal, Kjetil Storesletten's Net Present Value (NPV) approach yielded individual immigrant cost higher than previous research indicated. If we use the NPV approach, each additional immigrant into Sweden's economy has a negative contribution of SEK -175,000, for a total public burden of SEK 23 billion in 2014 – this is only for the additional wave of asylum-seeking migrants. This suggests that the effect that the wave of migration that Sweden is experiencing is greater than previous research indicated. This is supported by Sweden's recent policy decision to end asylum-seeking permits until a more appropriate system can be implemented.

The labor force participation rate for historical immigration in Sweden is below the required amount to breakeven, and it has been reported that fewer than 1% of the asylum-seekers from 2015 are currently employed. In conclusion, the dismal labor force status of these immigrant's points to further financial burden to Sweden's economy.

Overall, demographic factors determine the long term public cost increases to Sweden's governmental programs, and these costs were then applied to hypothetical effects on Sweden's overall economy. Previous research makes a strong case for the economic benefits (or neutrality) of increased immigration into a country. Despite this research, however, the massive number of asylum-seeking applicants that have queued at Sweden's borders have caused enough of an economic impact that this assumption is likely wrong. This is supported by Sweden implementing their restrictive new policy.

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