# WHAT IS THE EFFECT OF DECLINING DEMOGRAPHICS ON NATIONAL ECONOMY AND LABOR MARKET?

**Comparative Analysis: Hungary & Sweden** 

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#### **Abstract**

Immigration and economic growth in a contemporary scene yield intriguing data on the current state of EU's economy and more so, on the basis of the European Union. This papers strives to gather objective data and formulate a consensus on how integration of economic immigrants arriving in Europe preemptively aid EU's economy in the future as member state populations are rapidly aging. Methodology consists of analysis and evidence from previous studies dealing with, EU's current state of economy, population aging as a phenomena and economic effects of migration taking place globally. The purpose is to provide comparative analysis on Hungary and Sweden's labor markets and economic effects of aging demographics. Findings conclude that only swift economic inclusion of immigrants has the power of partly offsetting negative economic implications regarding immigration and demo- graphic aging with the help of progressive labor market policies.



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#### 1 Literature Review

#### 1.1 Introduction

The purpose of this research is to examine and analyse how the European Union and its common economy has been influenced by immigrants and refugees. The foundation of EU depends on a swift flow of workforce across its member states. As it stands immigrants and refugees have always generated different opinions on the matter of immigration and integration. Arguably the short-term costs involved in facilitating immigrants in a member state tend to strain fiscal budgets for number of reason varying from health care bills to welfare costs. As time progresses the long terms benefits of immigration tend over weigh the negative fiscal costs as immigrants integrate into their host countries society and more so into the economy. Therefore, this paper focuses on the economic implications of immigration flows and argues that the future of EU's economic is ever so dependent on immigration flows to fill in the demographic challenges which lie ahead. The aging population of EU already is depending on foreign labor to fill in the gap aging workforce is leaving behind. In order to fully understand and objectively portray the effects of immigration and lately refugee flows it require a deeper understanding of historic performance of immigration.

However, EU foreign policy and relations with its neighbouring countries are the essence why the union has been able to keep peace and security in the region for the longest consecutive time in the history of the continent. Yet as EU has been expanding steadily ever since it was founded, as EU battles ideologically between economic and societal progress. Member states have constantly argued for and against supranational policy making, which therefore sways the common narrative on immigration amongst other matters. Currently the trending xenophobia and and right wing politics especially shaking the political land-scape in the France, Germany and UK has effected the political atmosphere on EU level where a paradigm shift occurs towards protecting native EU workers from foreign labor. Hence, essentially this paper hopes to provide objective data on how this multifaceted immigration flows and economic integration of immigrants effect the state of the entire EU's economy so that political landscape would not be smeared with groundless opinions based on prejudice.



Historical data from migration provides plentiful of implications and analysis on how previous migrant flows have settled in European economies. For instance, the effect of Turkish immigrants residing in Germany has sparked debate on the failed integration of Turkish immigrants which has therefore contributed to rising un- employment and living of welfare. The creation of parallel society amongst the immigrants has proven to be increased by the exclusion and unequal treatment of Turkish immigrants in the labor force. As globalization accelerates international labor market competition, it sets incremental pressure on the labor force and more so on the ability of German economy to stay afloat during the intensification of competition. The declining demographics in Germany coupled with diminishing birth rates showcase just how paramount the inclusion of immigrants into the labor force is. Political will and narrative determines how successfully mechanism are put into place to improve the inclusion of Turkish populations, whom in turn provide higher birth rates and significantly younger population, both desirable factors contributing towards benefiting the economy as a whole (Neumeier, 2015).

The inclusion of immigration is one step among several other aspects, battling the shrinking of population and safeguarding the economic well being in the future, yet it remains unseen how much political will actually prevails and in which timeframe these implications will take place and how much of an impact can the Turkish population in this instance contribute to the overall GDP for example. Matters between immigration and demographic challenges are multidimensional and consist of variable aspects, which according to traditional economics are hard to alter in reality, for example the cultural barriers and xenophobia. Thus the responsibility for law makers alone does not act as an absolute guarantee to secure optimal inclusion of immigrants, however policy making is the backbone of providing fertile ground for economic prosperity while diminishing socio-economic barriers between the native population and immigrants and migrants.



#### 1.2 Aims of the Research

The aim of this research center around analyzing the current state of the EU's economy and the main reasons affecting the future growth and obstacles. Fundamentally the paper will focus on previous research and hopes to achieve a common census on the ramification or effects of the aging population and how immigration could fuel the future growth of the economy and alleviate the demographic crisis underway by providing adequate data quantifying the issues at hand. Additionally, this papers pursues to highlight the underlying reason for population aging in majority of the EU member states.

The essence of this study focuses on aiming at answering, how does migration affect EU member states' economy and the ageing populations in Europe? Governments ought to be promoting and pursuing swift economic integration of immigrants, since in order for migration to positively battle the effects posed by ageing populations in developed countries governments should act accordingly to facilitate immigration effectively.

### 1.3 Research Methodology

Predominantly this research will be based on secondary resources, since this study aims at forming a comprehensive analysis on the ramifications of immigration and demographic crisis in EU. Thus this paper a theoretical study and methodology will be based heavily on academic journals and papers published by credible sources such as EU commission, World Bank, IMF. Studies concerning aging populations are easily available and historical data from demographics and previous migration reports will be imperative for this study as well in order to draw valid conclusions. Limitations within the research lies in focusing on relevant data to serve the greater purpose of this research. In order to stay within the scope of the research and preserve the findings, this paper will not have in depth analysis on certain aspects concerning policy making on EU level especially. The abundance of available material, academic journals for instance, has improved the objectivity of this paper. However, it is worth mentioning that some of the individual publications used in this research have been written by several authors, however to remain objective it has been highlighted explicitly, had the author paraphrased an opinion or findings from another author, institution or report. Therefore, the aim of this research will be on labor market implications especially in the context of falling demographics in order for the scope to remain realistic and specified.



The challenge of the methodology and paper will be determined by the acute- ness of the on-going migration crisis and constant developing of EU policy making, since that dictates how relevant data will be available and how unbiased it will be. Furthermore, the most of the studies paraphrased in this paper are based in broad selection, since peer reviewed reports were unattainable which. Due to multifaceted implications the data available of immigration and economic effect is rather vast, which will be taken into account in order to preserve the objectivity of the research and its findings. There can be found certain common narratives presented in the light of both positive and negative aspects of immigration flows, which aids this paper in its quest to analyze thoroughly what has been previously researched and published. The methodology will additionally focus on EU's member states and re-ports published by their respective governments, in order to find local indicators pre-dominantly in the strongest economies which tend to attract immigration flows. Therefore, regionally differing economic phenomena's and symptoms can be analyzed and scrutinized more effectively from the standpoint of the entire economy.

## 1.4 Structure of the Paper

The study begins with an overview of statistical data and previous studies gathering evidence analyzing the effects of immigration by International Monetary Fund (IMF and European Investment Bank (EIB)) in accordance with few other studies. The purpose is to present arguments, analysis and causality between studies and showcase certain arguments which have been generally accepted as predominant arguments essential in this context.

The second part focuses on demographic developments and projected aging of population across the globe and more so in EU especially. These ramifications are presented in light of the future economic progress and prosperity in Europe. The aging of population raises fundamental questions and issues in the context of labor market implications and fiscal effects for future generations across the European Union. Therefore, parameters such as effects of migration affecting wages and employment exists in this research, due to the fact that previous studies had concluded most visible effects of both demographic decline and migration can be seen in employment and wages.



In order to provide realistic implications of immigration and its economic effects, third part of this paper consists of a comparative analysis between Sweden and Hungary since they inherently have economic similarities worth comparing. Both countries economies and demographics are similar, which therefore provide quantifiable contrast and analysis on how migration and aging demographics have evolved in both states. Additionally, Sweden and Hungary's foreign and immigration policies are rather contradicting in the current political climate. Reasons contributing to the choosing Hungary and Sweden for comparative analysis lie in the similar size of population, which in both Hungary and Sweden is nearly 10 million (World Bank, 2015). Birth rate in Hungary in 2016 was estimated to stand at 9.1 births per 1000 people, while in Sweden the same rate stood at 12 (MIP). Similar death rate in Hungary in 2016 was estimated to be 12,8 and in Sweden the respective rate was 9,4 (MIP). Additionally, Sweden and Hungary has conflicting migration policies within the context of EU. Swedish migration policy emphasizes the importance of addressing and promoting labor based migration with close proximity and cooperation with EU's migration policy (Government Offices of Sweden, 2016). Whereas, evidently current Hungarian administration shows resistance to cooperate with EU's policy objectives and guidelines. Since 2004, Hungarian administrations have been struggling to form a strategy for especially long-term migration (Attila et al., 2015). Main justification for choosing especially Hungary and Sweden as comparative countries is dictated by the contradicting migration policies and the similarity in their demographic indicators.

Factors limiting the outcome of comparative analysis, between these two countries, centers around the availability of unbiased and relevant sources published in appropriate time frame and reports concerning the factors taken into comparison. Comparative factors consist of labor market composition, current trends in labor market, history of demographics and demographic effects of immigration. However, limitations additionally in this research exist due to lack of similar comparable parameters *per se* which might effect the findings of the comparative research.

Lastly, the paper aims to summarize and conclude the own perspective of the writer and the keys issues as population aging progresses. Thus conclusion offers insights on how EU policy making ought to respond, direct and empower migration flows towards helping the labor markets and demographic decline in EU with a swift economic integration of migrants.



# 2 Demographics

#### 2.1 Global Overview

When demographic projections are examined, it is difficult to emphasize the uncertainty which haunts theses estimates. Thus, the interpretation of even academically acceptable studies and approximations needs to take into account that they are barely estimations based of data depending on multifaceted variables. Fertility and mortality rates and migration may differ greatly in reality from the forecast. For instance, world population might peak already in 2070 instead of 2100 which reflects in possibly lower population growths as imagined. Prior studies and trajectories have been gravitating towards an upward biased estimates than what was actually realized (Benedict et al., 2015). Therefore, assumptions of demographic changes ought to be benchmarked with scrutiny and criticism, since such long term calculations tend to distort what the reality in 50 to 100 years from now might be.

As fertility rates on average across the globe are experiencing a progressive decline, populations in the developed countries especially, begin to shrink during the next decades. IMF estimates that world's population will peak by 2100 and from there it will begins to dive. In developed countries populations are shrinking more rapidly than elsewhere in the globe, by the end of the current century 70% of developed countries will experience shrinking populations and 65% of developing countries will experience similar effects as well (Figure 1.1).

Steadily, as the portion of old age people in relation to younger population increases, hence the ratio as seen in Figure 1.2 indicates that the old-age dependency ratio seems to be growing across the globe from over 10% in 2015 to potentially three folding figures by 2100. The aging of population is growing fast in less developed countries which account for 83% of the world populations nowadays. In more developed countries this ratio could possibly double by the end of the century (Benedict et al., 2015). Hungary and Sweden are equally experiencing the similar effects aging populations imply globally. Figure 1.3 compares the developments in each countries ratio and despite similar alignments in population size Sweden's ratio in 2015 was nearly 31% while Hungarian labor force seems to age a tad slower with a ratio of 26%.



# Countries with Declining Population, 2015-2100

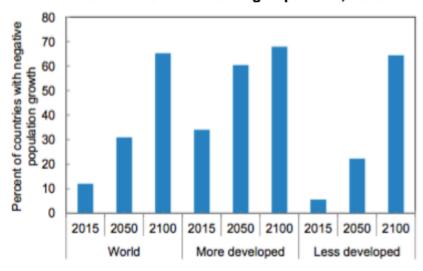


Figure 1.1 Source: International Monetary Fund (IMF), 2015

# Old-Age Dependency Ratio, 2015-2100

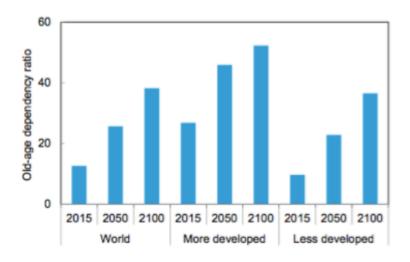


Figure 1.2 Source: International Monetary Fund (IMF), 2015



# Old-Age Dependency Ratio, 1960-2015

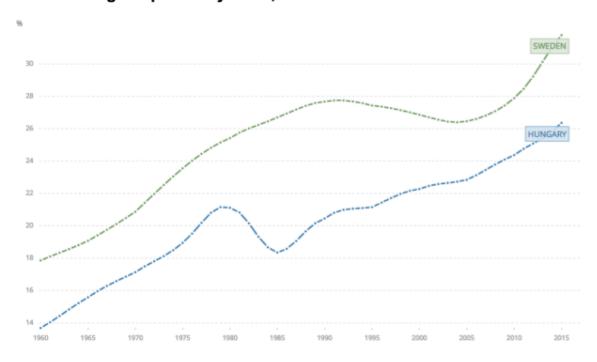


Figure 1.3 Source: World Bank, 2017

# 2.2 EU's Demographic Challenges

# Total Population (EU-28, million people)

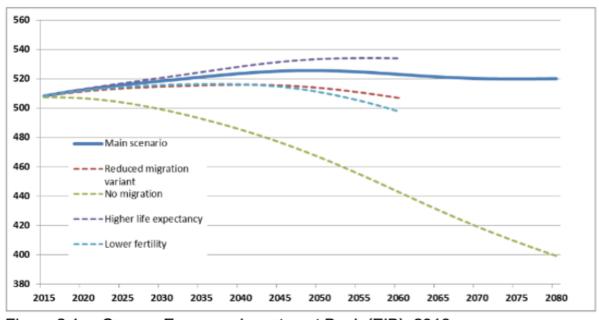


Figure 2.1 Source: European Investment Bank (EIB), 2016



Demographic projections ought to be interpreted cautiously, since previous mortality and fertility ratios have proven to decline even faster than anticipated, hence the fiscal remarks in turn can be distorted excessively (Benedict et al., 2015). The demographic projections in all EU states project a gloomy future outlook in the foreseeable future. As Figure 2.1 from EIB (2016) illustrates a scenario where the population growth in EU-28 countries will increase from 508 million to 526 million by 2050, however by 2080 it will decrease to 520 million. Figure 2. additionally, weighted the assumed impact of fertility, migration and life expectancy on the the forecasts. Hypothetically if migration contributes are non existent, EU could potentially report 20% decrease in its population by 2080. On the other hand, Figure 2.2 presents a similar estimate on working age population as Figure 2.3. Figure 2.2 concludes a decline in population from roughly 325 million in 2015 to 285 million in 2080 with an estimation, with zero migration, the working age population in EU would shrink by 70 million.

# Working age population (EUR-28, million people)

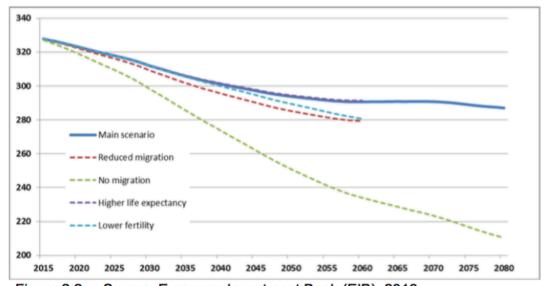


Figure 2.2 Source: European Investment Bank (EIB), 2016

Meanwhile, the aging population of EU possess yet another threat to the economic well being in Europe. According to United Nations Population Fund (UNFPA, 2016), EU could face a situation coined demographic dividend. During demographic dividend countries experience growing working age population and dwindling fertility ratios, while the economic and demographic dependency ratios surge. Predominantly this opportunity persists for 20 to 30 years during which the economic growth inclines (Bernabè et al., 2016).



The life expectancy in the EU continues to grow while the number of births is falling stunningly below the level of replacement. EIB (2016) suggests that constant fertility rate which would keep fertility at a neutral state stands at 2.1. The existing EU average is 1,6. Except France and Ireland reports levels closing near 2,1. Models project a rise from 1,59 in 2013 to 1,68 in 2030 ending at 1,76 in 2060 in EU. This fact alone fails to illustrate an ending to the aging trend in the EU, since it falls short from the benchmarking fertility rate of 2,1. Only way of ensuring healthy ratios would be through several decades of fertility over 2,0 (Bernabè et al., 2016).

The age dependency ratio which in turn illustrates the age structure of a population, moreover it conveys the amount of individuals who are expected to be de-pending on the support of others (young and elderly) in relation to those individuals whom are providing this support (Eurostat, 2013). This dependency ratio has the potential to double while the total working age population is expected to diminish by 0,3% on a yearly basis until 2060. Rendering to the same study working age population decreases from 64% to 44% by 2060. This data is quite integral for the EU's hypothetical economic growth since the working age population implies the capabilities of the labor force in relation to the entire population (Bernabè et al., 2016).

# Demographic Changes by EU Member State (2015-2060)

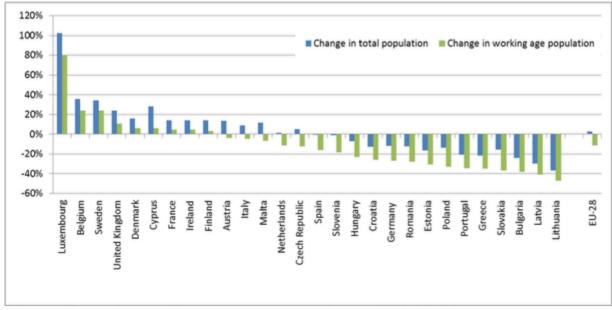


Figure 2.3 Source: European Investment Bank (EIB), 2016



Figure 2.3 shows that the demographic decline will affect 19 countries (Austria – Lithuania) in the EU by 2060. Especially Luxembourg, Sweden and Belgium are expected to disclose a rather noteworthy increase in working age population. On the contrary Slovakia, Bulgaria and the Baltic region are expected to experience detrimental fall in working age population. Evidently, none of the countries show- cased in this figure have working age population growth more than the total growth of population (Bernabè et al., 2016).

The main sources of economic growth in the long run for the EU region stem from increased productivity and employment of the labor force. However, migration has the prospective to boost the the aforementioned facts by an increase in the demand for skills evolution in the labor market. As the employment is gravitating towards a more dynamic environment in the near future, in composition with the demographic imbalances potentially offer immigrants a prosperous basis to fulfill the gaps in EU's economic progress. The optimism is shadowed by certain projections that even if the entire labor sources are employed, for instance women, inactive people aged 16-65 and unemployed, with the addition of the supposed employment growth of 1% annually, the total employment growth would decline regardless, by 2032 (Bernabè et al., 2016).

Overwhelmingly, even according to the most optimistic scenarios in regard to the demographic developments, the decline in the working age population will sup- press the economic growth possibilities. According to EIBs (2016) calculations, the labor market has to attract and register 61 million people more by 2030 and a whop- ping 230 million by 2060 in order to keep the ratio of working age population to total population stable. The impact of migration to EU demography is expected to stand at 14 million by 2030 and 67 by 2060 in EU. Naturally some member states will suffer the burden of demographic imbalances more than others, since the migration tends to channel into countries with a dynamic labor market and low unemployment, rather than towards regions with aging population. Meanwhile the contribution of migration will depend significantly on how proficiently migrants will react towards particular skills requirements and labor demand from the labor market (Bernabè et al., 2016).



# 2.2.1 Fiscal Implications of Shrinking Demographics

Naturally, the shrinking of populations will affect the public spending quite noticeably. The increasing number of elderly people will raise the spending on public government programs for instance pension and health care. Spending related to aging in developed economies are expected to rise roughly 8,5% percentage points by 2100. Mainly consisting of health care, while related spending of pension would have a limited effect due to prior pension reforms. The implications in longer run pose a threat to the fiscal stability of developed nations. Health spending for in- stance in developed nations could burden the public debt ratios over the next 85 years. The current value of the projected increase of the health care spending stands 57% of the GDP in 2015 over the course of 2015-2100 (Benedict et al., 2015).

# 3 EU: Economy & Migration

#### 3.1 Overview

The foundation of European economy lays upon the principle of free movement of good, capital and labor each one complimenting the existence of the Union itself. Consequently, EU's mission is complicated. The purpose of uniting 28 countries and counting, for economic prosperity and maintaining peace across Europe has been a road accompanied with several triumphs and losses. Yet the rocky road has proven how common consensus and democracy has evolved into the the longest streak of peaceful times since World War 2. In order to maintain friendly relations with surrounding states while protecting the common free market area remains a paradoxical mission of the Union, while its economies and states are ever so de- pendent on foreign labor and economic immigrants. Alone in 2015 there were 1,2 million people seeking refugee in the EU, excluding economic immigrants, from its peripheral non member countries. Main drivers for migration flows are war, climate change, demographic challenges and poverty (Bernabè et al., 2016).



In the light of refugee crisis concerns arising from the economic effects and integration outlooks have caused differing opinions in Europe. The division has called upon to be questioned by several member states. Are these people arriving seeking economic mobility rather than seeking asylum from a humanitarian disaster? Since majority of the arriving people are on route towards economically most viable countries on the continent it has shaped the political views on how to deal with the current crisis. Germany and UK amongst few share the idea of a humanitarian crisis whereas Hungarian prime minister argues in favor of labeling refugees as migrants seeking to improve economical status. This political divisiveness amongst member states seeks to deepen the political crevasse and narrative. Due to 1951 Refugee Convention the distinction between a migrant and refugee is imperative to recognize. People fleeing the war atrocities and seeking refuge in foreign country are subject to different treatment than a person seeking to improve one's living standards and economic prosperity (Diaconu, 2015).

The trending consensus and implications in Europe centering around multiculturalism is under going paradigm shift towards a nationalistic approach while the underlying reasons are debatable, economic hardship in the post 2008 financial cri- sis has dried several public and private budgets. Previously immigration friendly countries such as Sweden and the Netherlands, have tighten their immigration policies and quotas, affecting not only the status of host country immigrants but the hardship of many arriving (Collett, 2011).

Even economic viewpoints beg to differ the economic consequences of alien people residing in foreign country. However, the current inflow of refugees has the potential to facilitate Europe's economic and social environments, since the fertility rate in Europe has decline overwhelmingly while the life life expectancy has in- creased by 12 years from 1950. Additionally, the lack of working age population would have shown observably worsening symptoms in the demographic spectrum, however much obliged by migration the current state isn't as gloomy as it could be. On the other hand, opposing economists argue that the negative presence of refugees could be seen varying from land and food outbreaks, wage competition, over- strained healthcare capabilities to hike in criminal activities. Lastly, refugees and migrants arriving from less developed states according to critics tend to strain the economy with supplying excess of under educated workforce in comparison to natives, which impacts the outlook of sustainable economic development and growth of the entire economy (Diaconu, 2015).



In order to fully understand the multifaceted aspects of the immigration and asylum seeking in EU it requires a scrutinized analysis on different socio-economic ramifications brought by immigration. The current political atmosphere and common census in European politics is filled with polarization of opinions. Either one supports immigration or is fundamentally against it. Short term costs, political and economical, are undoubtedly involved with immigration yet analysis suggests to gaze in the horizon for long term benefits, both fiscal and macro economical, seem promising if migrants and refugees are equipped with education and employment. It is safe to assume that both forced and economic migration flows will have an upward trend in the future of EU due to the surrounding conflicts in EU's peripheral regions fueling economic hardship and poverty. (Bernabè et al., 2016).

# 3.2 Refugees, Migrants & Immigration

### 3.2.1 Refugees

According to 1951 Convention and Protocol Relating to the Status of Refugees: "A refugee, according to the Convention, is someone who is unable or unwilling to return to their country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion.". Therefore, the external reasons behind a person fleeing one's home country define forced migration. Thus a common understanding and definition between nations has to exists in order to safeguard the well being of people fulfilling the criteria to be labeled as refugees. If these people are to be returned to their home country, there might be fatal consequences, meaning that their home country and government is lacking to provide sufficient protection. The definitions and rights of refugees are laid in 1961 Convention and OAU Refugee Convention (Edwards, 2016).



Migrants on the other hand are distinguished to be people whom voluntarily choose to move and improve their lives mostly due to economic reasons. Meaning, migrants have the free choice and will to decide in comparison to refugees. They aren't suppressed by external reasons such as war or famine. Most importantly they have the right and the possibility to return to their country of origin and their domestic government will able to provide them with protection (Edwards, 2016).

## 3.2.3 Immigration

Due to EU level diverse politics, many member states foster the term refugees or immigrants in the same context since it enables countries to prop their own agenda. Specifically, this terminology of immigration potentially affects the lives of number of people in vulnerable positions, since merging and mixing these terms has the power of waning the responsibilities governments need to assess over the people it affects the most (Edwards, 2016).

In light of the current migration crisis the question is who are these people migrating in Europe. As this bachelor paper will examine the collective influence of immigrants and refugees to certain parts of the European economy and also for measurable and interpretive reasons they will be regarded as one collective segment in the economy. However, for clarification it is imperative to understand the difference of division between migrants and refugees and immigrants for legal rea- sons. Within the realms of the current migration crisis, Europe is affected by both refugees and migrants according to (Edwards, 2016). Largely people arriving in Greece and Italy are from conflict affected regions, hence they regarded as refugees. However, proportionally smaller part of these people shoring could be regarded as migrants where these aspects are coined under the term immigration.

All in all, the interpretation between migrants and refugees is highly divisive according to general conventions, yet several humanitarian crises behind immigration flows are proven to blur the lines of refugees and migrant to be regarded differently. Therefore, the measurable impact of immigrants to an economy is simpler to be regarded as a common factor for instance in the labor market.



#### 3.3.1 Labor Market

A recent study from Diaconu in 2015 examines the impact of refugees in relation to host countries economic growth between 1962-2012. The results persisted that there exists two main ways the arrival of refugees affects the economic growth and perpetual prosperity. Firstly, it affects the overall size of the labor force by growing the amount of people participating in that sector, which in turn shrinks the growth of the income per capita in the host country. Secondly, refugees bring talent and human capital to the market which already exists and therefore saturates the labor market even further. Therefore, the study concludes that in the short run refugees tend to suppress the economic growth and in the long run they merely have sizeable effect on economic growth (Diaconu, 2015). This study underlines only arriving refugees yet it delivers arguable conclusions, which have to be taken accounted for. Since the integration of migrants is paramount to safeguard economic growth and prosperity it must be stated that EU's migration policy and economic growth de-pends on migration regardless of the root cause of migration as long as the current declining demographic trend prevails. European Investments bank (EIB) concludes in their study, Migration and the EU: Challenges, Opportunities, the role of EIB (2016), that numerous economists assess migration as phenomena where a shift exists in lower workforce productivity to regions with higher workforce activity. Resulting in uneven distribution of workforce amongst the economic region. Moreover, the cultural and social ramifications are immeasurable against the economic breadth of migration. Migration leaves the country of origin with a brain drainage and more so social imbalance scars the future demographics and state of the society long in the future (Bernabe et al., 2016).



Until recently, the effects of migration were considered positively across many European states. Study from OECD states that between, 2001 and 2011 immigrants demonstrated 70 % of the increase in workforce in Europe alone. Even though migration and workforce needs do not fully correlate, immigrants were found to participate in both dynamic and waning sectors of the economy, meaning they were dispersed across the economy and labor force (Diaconu, 2015). Another study concluded by OECD implied that during the first half of millennium, 15 % of the entries made my immigrants were made in sectors such as Science, Mathematics and Engineering amongst few other sectors. All the while 24 % of the counted labor market entries by immigrants, were in declining industries e.g. machine operators and assemblers. Positively immigrants were more willing to accept work in these fields usually considered unappealing by many native workers (Diaconu, 2015). Therefore, the impact of immigration cannot be seen myopic, since it clearly pro-vides great basis for the economy to thrive in the future by supporting certain unattractive fields with adequate workforce participation rates.

Immigrants however experience hardship in integrating to the host countries economy as the absorption into the labor market is rather slow. In Europe especially the participation rates, employment and wages are on average lower in comparison to the natives. Especially the employment and earning gaps are noticeable in the next few years of the arriving to the receiving country. As time passes employment and earnings gap fades as their language skills and job experience increase (Aiyar et al., 2016). In addition to the previous, Immigrants from advanced economies tend to outperform ones coming from developing economies while female migrants suffer the most in the short run employment (Aiyar et al., 2016). After the slow recovery of the 2008 economic crisis, many immigrants suffer longer lasting economic consequences if the state of the economy they enter is weak, meaning the unemployment is high and the wages are low (Aiyar et al., 2016).



# 3.3.2 Migrants Education

Some studies propose that the education level of migrants arriving from North Africa have in general lower education level than individuals born in European countries (Diaconu, 2015). Furthermore, the study quoted here argues that third of the people whom have entered Europe in the last 15 years are tertiary educated and another third has not finished upper secondary education even if majority of these people are over 20 years old (Diaconu, 2015). In 2014 by Eurostat, EU states which have drawn largest portion of highly educated non-EU migrants were Ireland, Luxembourg and the UK with tertiary educations percentage standing at 64%, 53,2% and 53,1%. On the other end of that spectrum is Slovenia 10%, Greece 11,9% and Italy with 12,1% with the least amount of tertiary education amongst the non-EU- born migrants. Italy, Greece, Spain and Belgium house the highest shares of non- EU-born residents with only preprimary, primary and lower secondary education (Diaconu, 2015).

### 3.3.3 Global Effects of Migration on Employment and Wages

IMF (2016) has concluded three main ways migration affects wages of native workers. Firstly, there exists a labor supply effect which presumes that if the arriving migrants have similar prerequisites and skill levels as the native workers it leads to an unfavorable effect on the labor employment and existing wages in sectors mi- grants are supplying. Hence, if migrants' skill levels complement the natives level meaning that lesser overlapping there is in between natives and migrants subse- quently the pressure of displacing natives out of their jobs while wages diminish is lower (Aiyar et al., 2016).

Secondly, macro economics use a term called aggregate demand effect, which in turn depicts the event where an increase in population occur in relation with greater demand for goods and services needed resulting in a growing output by companies which thus increases the overall labor demand. In longer run this effect should boost more investments as well as stabilize the opposing effects of the labor force expansion (Aiyar et al., 2016).

Thirdly, immigration might be a reason to changes in the mix of produced goods and services hence the allocation of resources, product mix and technology effects might take place. Potentially it can affect the alignment of occupations and industries within a nation and improve technologies concerning production (Aiyar et al., 2016).



According to IMF (2016) despite the aforementioned effects of migration to native workers, the implications usually remain rather insignificant. Most significant migration waves both in Europe have been proven to have very limited effect on the wages especially. Arguably migrants and natives work in different segments in the labor force hence their influence to one another is inconsistent and the compatibility between these two groups is quite low. Interestingly, some research quotes that in Europe the displacement of native workers by migrants is higher than in the US for instance (Aiyar et al., 2016).

The size of the effects listed above is often determined by few different factors in place. Firstly, the substitutability of skills between natives and migrants plays an important part, since the influx of migrants displacing lower wage jobs can be of the essence. Meanwhile immigration might affect the poorest working class the most, while higher paid workers can in turn gain from this effect. This has been proven to take place in Switzerland and Spain for instance (Aiyar et al., 2016). Interestingly empirical data exists from Germany by EIB (2016) to further support this argument. Indication exists that 1 % increase in in labor force with interior migration increase the the unemployment rate of immigrants by 1,16 % while it suppressed the wages by 1,09 % thereby the wages of the native born increase and unemployment falls. To summarize, this study implies that the wages amongst natives tend to increase with the expense foreign workforce. High skilled workers have better chance of benefiting more than less skilled and finally, older workers benefit more than younger employees.

Additionally, labor market flexibility plays and imperative role as well. During the acts of war in 90s in the Balkans, Bosnians and people from Kosovo displaced native workers in countries with relatively higher employment protection and inelastic wages (Aiyar et al., 2016). Lastly, the size and current state of the economy in addition to the magnitude of the immigration flow defines greatly how much direct effect it has in displacing lower wage sector jobs (Aiyar et al., 2016).



#### 3.3.4 Short and Medium Term Fiscal Ramifications

Migration touches many aspects of economic growth and development which differs amongst the stages of development within a state. History proves evidence that short and medium term migration flows have integral fiscal dimensions. EIB (2016) and European Commission highlight through their studies that fiscal costs during the recent refugee crisis are short-lived and thus balanced by benefits of integration carried out in the medium term. EIB continues to argue that their study coincides with IMF findings: In the short run fiscal costs are equivalent of 0,1% of European GDP between 2015-2017, meanwhile the EU GDP will grow marginally according to estimates by +0,13% by 2017. However medium term projections possess more positive outlook for growth in total, especially for countries with higher migration inflows. Evidently these calculations depend on prompt labor market integration, migrants' skills and age dispersion. Lack of integration has the potential of decreasing the GDP per capita and while increasing the unemployment rate (Bernabe et al., 2016).

## 3.3.5 Labor Market Policies in European Union

EU consistently pursues the promotion and enhancement of unified labor market policies addressing for instance employment standards, labor mobility and social progress across its member states. Strategies such as, The European Employment Strategy (EES) provides guidelines and employment programs such as Employment and Social Innovation (EIS) which is an integral aspect in cherishing the future well-being of EU's common market place. Despite the supranational efforts of promoting inclusive and sustainable labor market in EU in a coordinated manner, according to Amsterdam Treaty of 1997, the ability of implementing employment and labor market policies remains solely on member states ability and sovereignty to do so. This reason ale, justifies a further examination of comparative analysis on two member states equaling in size and population with different approaches on labor market and migration policy in order to cross reference the differences and provide analysis on shortcomings and successes of each respective state and its implemented policy (Kraatz, 2016).



# 4 Sweden

#### 4.1 Labor Market

#### 4.1.1 Overview

Sweden's labor market is flourishing in terms of the labor force expansion which has been complimented by rapid inclusion on female workers. Solid growth in employment has contributed greatly to Sweden's economy and thus placing Sweden high in the OECD rankings for lowest unemployment rating standing at roughly 7% from an average of 8 % in 2012-2014. Additionally, Sweden has one of the highest employment ratings amongst other OECD member states (IMF, 2015).

Despite exemplary unemployment and labor force strength in Sweden, the participatory rates and unemployment figures showcase how segregated the market in reality is. Especially among the low skilled and people of foreign background indicate unbalanced employment figures. Unemployment stood at 19% during 2014 with a 16% representation from foreign-born workers. In contrast to the absolute unemployment in Sweden, the break down of these statistics is off the essence to fully examine the health of the entire labor market (IMF, 2015).

Swedish policy makers have passed labor market reforms consisting of re- defining the unemployment eligibility, lowering the effective taxes on low income earners and tightening the sickness benefit requisites which in turn has been pivotal for inclination in participation rates amongst the youngest, oldest and foreign descendant. Current influx of migration has had a noticeable effect in the labor supply, while the composition of migrant labor force consists mainly of asylum seeking refugees. (IMF, 2015). Unemployment amongst the people in disadvantaged positions (mainly, elderly and disabled) were projected to rise from 70% in 2015 to 75% in 2016. (Swedish Public Employment Service, 2015). Therefore, IMF (2015) argues that, as the labor force composition evolves, it creates difficulties for Sweden to adapt and maintain its strong workforce base, in addition with surging migration, the current unprecedented employment numbers give reason to believe demographic challenges lie a head regardless of the current state of labor force



#### 4.1.2 Labor Market Trends

The increase in labor supply, and better yet employment amongst workers with medium and high skill set, has served them well with falling unemployment ratings. On the contrary low skilled labor force has experienced negative correlation in comparison to medium and high skilled labor. Unemployment tends to rise while employment reduces despite the annual growth of the aggregate employment which has averaged 1,4% from 2010 to present day. Especially foreign labor has under-gone a decline in employment regardless of their boost in rising employment figures, due to the fact that the broad presence of foreign workers in the labor market often offsets the growing employment. Unfortunately, an additional division in skill levels has gapped the labor force structure even further and its casting clouds in the horizon of Swedish labor market (IMF, 2015).

According to Swedish Public Employment Service (2015), the entire increase in the workforce in 2015 was contributed by people born foreign to Sweden. For 2015 and 2016 the projected increase stood at 110,00 people between the age of 16-64. Since the fertility rates are falling, Sweden is currently more than ever de-pendent on the future labor supply growth of foreign labor. High demand for labor remains at growing figures. As stated before the forecasted employment demand until 2016 was 110,00 workers, which consists of a demand for 50,000 people to be employed in ages between 16-64 in 2015 and 60,000 in 2016, totaling workforce in Sweden at 4.7 million (Swedish Public Employment Service, 2015). This upward sloping trend remains promising for migration to gap the needed workforce. Additionally, employment growth is expected to grow amongst all age groups, however young people are expected to benefit the most. This is mainly due to an employment increase in sectors demanding lower education and work experience. Lastly, temporary employment as well contributes greatly towards growth in employment particularly within younger generations (Swedish Public Employment Service, 2015). The positive outlook for Swedish labor market is rather promising for migration to substitute and support the workforce base, which in turn speeds the economic and social integration of migrants and supports the shrinking populations.

Swedish Public Employment Service has mechanisms is place which have boosted immigrants earlier entries into the labor market. Growing rates of migration due to the refugee crisis in Europe, has led the agency to believe that immigration paves the way to unlock a future potential in migration as a valuable asset as the country enters into a yet competitive global labor force market and shrinking fertility rates (Swedish Public Employment Service, 2015).



The outlook for employment for migrants remains complicated. In Sweden migrants tend to receive high rates of employment yet the process of integration remains rather prolonged. Historical data by IMF (2015) suggests that migrants are able to reach 50% employment rate after 5 years of arrival and 60% rate after 10 years of integration in comparison with native swedes employment at roughly 78%. After 20 years of integration migrants might achieve employment rate of up to 73%. Event though the employment rate stands at exemplary heights, the rather tiresome integration process in Sweden presents an issue with rising employment gaps higher than in any Nordic country especially with low-skilled labor. This issue troubles the native population as well (IMF, 2015).

As Sweden's economy demands an annual growth of 1,25% in labor force, the growing migration poses many threats in regard with sustained employment. IMF (2015) presents alarming figures, since majority of immigrants in Sweden are asylum seekers, meaning that according to IMF data, for asylum seekers it requires relative more time to integrate economically which translates to potential increase in unemployment.

# 4.2 Demography

# 4.2.1 History of Sweden's Demographic Developments

For the past century Sweden has undergone a gradual and continuous in- crease in population aging. The share of elderlies has more than doubled thus distressing the already frail health care system in place for elderly citizens. Pivotal moment in Sweden's demographic developments, contributing to current aging populations, is better known as generation of baby boomers born after WW2. The era contributed unprecedented birth rates which in turn accelerated the population growth. Regardless of the post-war era fertility, baby boomers are currently becoming a liability and remarkable burden for Sweden's demographics as they are aging rapidly. Hence workers entering the labor market are in relation vastly smaller than the generation of baby boomers, creating an imbalanced population pyramid and raising concerns of the outlook for economic future of the state and its citizens (Bengtsson & Scott, 2010).



The percentage of population over 65 in Sweden has increased from 8% to 17% during the 20<sup>th</sup> century, marking a definitive change in the developments concerning population aging. The pyramid in 1900, where each population interval is showcased in percentage and left side depicts males and right side females (Figure 3.1), illustrates a classical shape consisting of a broad base of young population which flattens evenly as the age progresses. Typical phenomena across all agricultural societies across the globe. In 2000 the structural changes were substituted with a wider age dispersion shown as a small base and widening top. The amount of elderlies is forecasted to push the shape of the pyramid to an even more rectangular shape in future (Bengtsson & Scott, 2010).

# Population Pyramid, Sweden 1900 & 2000

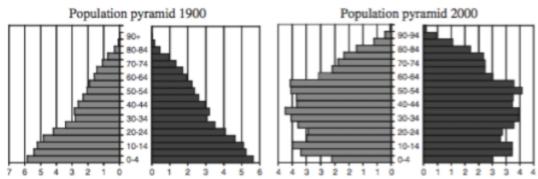


Figure 3.1 Source: (Bengtsson & Scott, 2010)

#### 4.2.2 Population Aging in Sweden

Population aging begun as a phenomenon across the developed world from the last century with ramifications felt in present time, yet Sweden felt the effects worse than other countries. Evidently the main reason for shrinking populations and increased share of elderlies, lies in fertility rates and and increased life expectancy. In Sweden life expectancy ratio has risen in the past century remarkably, while similar developments have been recorded in many parts of the world as well. Sweden among few other states, has experienced a constant growth in female life expectancy ratio. From 1840 to 2010 the ratio has inclined 3 months annually for females and males the same rate has been slightly lower. This rate has resulted in earlier generations to live on average 9 years older than their predecessors. The gained progress in life expectancy has been vanguard, however there has been no indications that the rate will decelerate, but it is bound to do so at certain point (Bengtsson & Scott, 2010).



The predominate reason affecting population growth from 20<sup>th</sup> century to pre- sent day, despite the growing life expectancy ratio, are declining fertility in Sweden. Interestingly Bengtsson & Scott's (2010) cited data from and American demographer Ansley Coale, yields the following. Had the fertility rates remained constant the age structure would have had very limited impact from 1860 to 1950, even if the life expectancy had increased. The study continues to conclude that even if mortality remained untouched at levels resembling 1860, and had fertility rates developed as if they realistically did, the outcome in 1950 had close resemblance in comparison to the actual age structure. Therefore, the population aging was solely due to the declining fertility rates. As seen on Table 3.2. another comparative study concluded by Bengttson and Scott (2010) argues that the declining fertility rates affected population growth throughout the 20<sup>th</sup> century just as they did in the mid 1950s.

In 1920s a stable population theory was introduced to illustrate the correlation of fertility and mortality rates. The time need in order for a population to reach equilibrium (steady age structure) is dependent on the relation of mortality and fertility rates. In Sweden this theory is forecasting a constant yet less beneficial age pyramid in the near future. Fewer and fewer people will be engage in the working age population while majority will shift into age groups of older age, except this theory fails to account immigration as a contributing factor (Bengtsson & Scott, 2010).

Additionally, a noteworthy aspect influencing the population aging in Sweden is population momentum. In the early years of 20<sup>th</sup> century Sweden experienced a positive population momentum, meaning the previous generation were smaller than the following generation. Positive population momentum was fueled by high fertility rates which in turn would perpetually increase and therefore grow the number of people being born. In contrast, if population momentum is negative the population can be excepted to decrease over time (Bengtsson & Scott, 2010). The latter seems to prevail since the 1960s in Sweden.

Furthermore, another fact contributing negatively in Sweden is the relative generational spacing. Generational spacing is calculated from mother's age as she gives birth to her middle child. In Sweden this has declined roughly since 1870. In 1960s the span was on average 26 years in comparison to 2010, the same span stood at 30 years. With a constant fertility rate, population growth is evidently corre- lating with generational spacing. Diminishing spacing conveys a favorable effect on population growth concludes (Bengtsson & Scott, 2010).



As argued earlier in the paper, a healthy fertility rate of 2.0 according to Bernabè et al., (2016) further demonstrates that the fertility rate of 1.6 in 2000 and the current standing of 1,9 in 2014 (World Bank 2014) depicts a rather gloomy fore- seeable population growth for Sweden, meaning as the old-dependency ratio will grow, Sweden is facing difficulties substituting their workforce with foreign labor.

# Swedish Population 1750-2050

	1750	1900	2000	2050
Age structure				
0-19 years	42%	42%	24%	22%
20-64 years	52%	50%	59%	54%
65 + years	6%	8%	17%	24%
Average age		29 years	39 years	43 years
Life expectancy at birth:				
Men	35 years	51 years	77 years	83 years
Women	38 years	54 years	82 years	86 years
Life expectancy at age 65:				
Men	10 years	12 years	17 years	21 years
Women	10 years	13 years	20 years	23 years
Average age at first marriage:				
Men	27 years	28 years	33 years	
Women	25 years	26 years	31 years	
Share of 40 year old women who	are:			
Unmarried	16%		20%	
Unmarried and not cohabiting	15%		10%	
Total fertility rate	4.8	4.1	1.6	
Total marital fertility rate	5.7		ca. 1.8	

Table 3.2 Source: (Bengtsson & Scott, 2010)



## 4.3 Effect of Immigration on Population Aging

Immigration has been often offered as a counter measure to substitute aging populations. Migrants usually are represented in abundance in lower working ages, which therefore offers a positive boost in the working age population. However, this setting is more complex than it sounds (Bengtsson & Scott, 2010).

25% of Swedish population were either born outside the country or either one of their parents is foreign born, raising concerns how the age dispersion would look like without migrants. Immigration indeed has controlled the share of elderly population, with limited success. If Sweden had not experienced immigration, the population above 65 would stand in 2010 at roughly 20% instead it effectively was roughly 17% according to (Bengtsson & Scott, 2010). Even though these calculations took into account the immigration fertility, immigration had a quantifiable yet mild effect on aging (Bengtsson & Scott, 2010). Another noteworthy fact is that immigration should happen with compounding rate, since aging immigrants themselves contributed to population aging as well, and if immigration is to compensate for population aging it should happen incrementally. Immigrants arriving in Sweden are in their most fertile and childbearing years as they often have more children than natives. This figure often distorts the truth. Even if fertility rates tend to vary among women with different nationalities, evidently women arriving in Sweden from countries with higher fertility rate, they tend to adapt into Swedish society and its declining fertility rates, argues (Bengtsson & Scott, 2010).

Stable population theory in recent history has been adapted to account the influence of migration. Several studies conclude that immigrations effects on age structure can vary widely reliant on migrants' fertility, yet results make it apparent that the effective impact of migration is heavily dependent on the post migration fertility that remains (Bengtsson & Scott, 2010). Bengtsson and Scott (2010) discuss the effectiveness of immigration since the impact of immigrants will not yield remark- able shifts in alleviating shrinking population. Bengttson and Scott (2010) proceed to argue that in order for migration to effectively contribute to demographic crisis ahead, an imperative prerequisite stands above all. Migrants must integrate properly and in a swift manner into the Swedish workforce in order for migration to outweigh its negative consequences. Unemployment as well, amongst immigrants tends to be higher in Sweden. In 2001 men with foreign background had an effective employment rate of 78% in comparison to 86% for Swedish men. Thus the real unemployment stood at approximately 30% for men with immigrant background and 18% for the natives

(Bengtsson & Scott, 2010).

## 4.4 Summary

Swedish labor market has realized the problems affiliated with population de- cline and despite their proactive policies and flexible tax system and economic integration of immigrants. Fertility rate and life expectancy in addition with baby boomer generation is considered to be the main driver of population aging in Sweden. As the Swedish population continues to age, their saturated labor market composition offers signs that policy makers have realized the potential of immigrant workforce to aid in closing the gap in labor market demand. However, signals indicating labor market participation amongst immigrants is rather low, while the labor market is quite divided in terms of high skilled and low skilled workforce suggesting that the Swedish labor market has not been as swift in its integration of immigrants. The fact remains that for immigration to substitute labor demand, the rate for net immigration must continue to rise in order for immigration to ease the fiscal imbalances created by the growing share of older population. Considering the decreasing fertility rates and demographic imbalance of baby boomers, evidence suggest that as previously fertile immigrants begin to integrate into Swedish society, fertility rates fall accordingly, which contribute towards falling rates across the country. The fact that after 10 years of integration data from IMF (2015) suggests that 73% of immigrant employment rate remains rather low after a decade of integration which implies that integration process in Sweden is rather slow. All in all, the labor demand in Sweden is growing annually and already immigrants have been able to integrate and meet the labor market demands. Sweden has mechanisms in place aiding immigrants towards employment, which in turn means Swedish labor market in context of EU could be characterized as rather flexible and adaptive. contributing positively to- wards migrants swift and proper economic integration which arguably is the fastest way to provide sustained economic effects of migration.

4.4.1



# 5 Hungary

#### 5.1 Labor Market

#### 5.1.1 Overview

The Hungarian labor market has undergone structural changes in labor market demands in the past decades. OECD (2016) emphasizes that restructuring has lead to a surge in demand of higher skilled labor which in turn suppress the low skilled workforce. The shift in Global value chains (GVCs) is due to globalization, which has accelerated the restructuring of value chains across the globe. Companies in technology sectors have influenced the Hungarian labor market deeply. Pre- dominant trend in OECD countries is shift towards more technology oriented sectors in the economy which has begun to affect the labor market in Hungary as well. GVCs are expected to generate positive job opportunities in Hungary as the demand for high skilled labor continues to create a sustained demand for educated workforce. Skill demand and wages are thus expected to rise. However, the booming demand for educated workers has had an adverse effect on gap between skilled and low skilled workforce and thus unemployment is expected to rise rapidly among low skilled workers, argues OECD (2016). Technical professions such and ICT related jobs have have made an unforeseen impact in the labor market resulting in in- creased demand in educated and skilled labor (OECD, 2016).

Structural reforms have impacted the educational level to a deep extent and the adjustment of educational sector has been rather inconclusive. Hence labor shortages in the labor market have become an issue. Shortages have become more common in manufacturing due to lack of competency. Such symptoms are mainly due to misalignments in educational output, hence inflating the youth unemployment (OECD, 2016).



The lack of employment possibilities among the low and high skilled labor force is within the highest in OECD countries. Typically, low skilled laborers suffer from 50% long-term unemployment rate after being absent for more than one year from the labor market while, regional differences impact employment considerably as well states OECD (2016). Workers suffering from long-term unemployment are often assimilated with incompetent skill set, highlighting the importance of adequate educational opportunities at older age. Figure 4.1 shows how the labor shortages are reaching highest levels in OECD countries. Labor shortages are shown as a percentage of firms employing upwards of 10 or more employees. Meaning approx. 47% of all accounted firms in Hungary employ 10 or more employees (OECD, 2016).

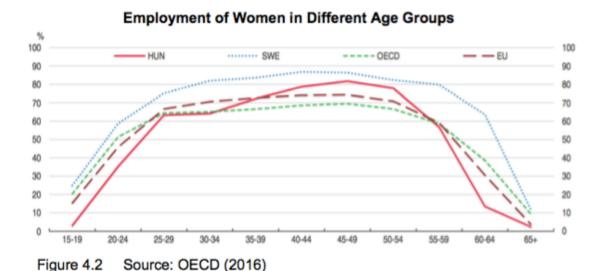
# Percentage of firms employing upwards of 10 employees 70 60 50 40 30 20 10

Figure 4.1. Source: OECD (2016)

Hungarian labor market lacks of utilizing women's skills to remarkable extent. Despite the labor demand and employment opportunities for instance in service sector, women have not been able to harness these job possibilities. OECD (2016) draws the conclusion that females represent 2/3 of the graduates in tertiary education, showcasing the importance of female participation in the labor market. Figure 4.2 underlines that the unemployment of females happens especially at both ends of the age spectrum. In comparison to EU average, Hungary is aligning quite well, however the inclusion in Sweden seemingly excels Hungary and EU28 countries. Tightening legislation was introduced in Hungary which forced older age and disabled women to participate in labor market as a measurement the to fight the aging of population. Hungarian women are often faced with either parenthood or employment which aids the division amongst females wanting to engage in the labor market (OECD, 2016).



Lastly, Hungarian government has shown initiative to alleviate labor market inconsistencies by implementing active labor market policies (ALMPs), mainly via public works programs. However, OECD (2016) states that ALMPs have very limited effect on addressing the skills shortage. Spending concerning labor market policies has doubled in size to 0,8% of GDP in 2013 from the past decade, while spending on education and training is lower than in the past decade.



# 5.1.2 Contemporary Developments in Employment

According to a Hungarian Labor Market report by (Zsuzsa & Karoly, 2016) there was a decrease in the core labor force between ages of 15-64 of 60,000 peo- ple from 2015 to 2016 which constituted much of the demographics implications. An immediate and popular reaction to increase the labor force is focused on raising the official retirement age which in Hungary has maintained 150,000 workers in the labor market (Zsuzsa & Karoly, 2016). Hungary exceeded the pre-financial crisis level of labor force in 2013, however in 2014 the workforce expanded by 208,000 workers according to a Central Statistical Office (CSO) survey cited by (Zsuzsa & Karoly, 2016). In 2015 the number of people in employment increased by 110,000 to 4,2 million in total, showing record breaking numbers since 1992. Employment rate in 2015 was nearly 64% which in contrast increased by 9 percentage-points from 2010. The Hungarian Labor Market report finds causality due to three major factors.



Firstly, the domestics labor market expansion has become integral in the developments of the labor market growth. CSO has reported an 62,000 people incline in people employed in 2015 from 2015. Government statistical institutions have re- ported and increase of 54,000 registered employees, with companies of upwards from 5 employees (Zsuzsa & Karoly, 2016). Manufacturing accounts as the back- bone of economic activities in Hungary, and employment in this sector grew to 626,000 people with conflicting changes existing in ratios of employment in different sectors of manufacturing. For instance, car industry increased by 7,4% while textile industry declines significant losses in employment ratios. Another high growth contributor was accommodation and tourism sector employment grew 6,6% while technical and scientific sector grew slightly more, 6,9%.

Secondly public works were another driving force in employment in 2015 and continues to have a sustained effect on the Hungarian work force. Zsuzsa & Karoly (2016) reports an average of 212,000 people working in government funded projects in 2016, which is an increase of 36,000 from 2015. Over a third, 36,2% of the registered unemployed workforce were involved in the public works program, leaving the ratio of unskilled employees at 40% (Zsuzsa & Karoly, 2016).

Thirdly, employment growth considering people employed abroad is the last concluding factor facilitating growing numbers of employment in Hungary. CSO survey estimates that 111,000 people were working full-time outside Hungary, mostly of these people residing in Austria, and majority of the people commute from Hungary to Austria on regular basis (Zsuzsa & Karoly, 2016).



Zsuzsa & Karoly (2016) provide conclusive evidence that Hungarian economy suffers from a noticeable under educated and unemployed youth. Unemployment amongst youth rate declined from 20,4% in 2015 to 17,3% in 2016. Despite three percentage point decline, practically one out of five under 25 is unemployed. The main cause of unemployment affecting youth unemployment, lies in high rates of school interruptions and dropouts. Consequently, searching a job is prolonged. Regardless of decrease in youth unemployment, lion share of unemployment is due to NEET (Young People Not in Employment, Education or Training) which remains relatively high. The share of unemployed with a secondary education as primary education, are mainly referred to as unskilled, barely decreased from 2015 to 2016. Meanwhile the percentage of vocational school certificated decreased by 13,000 and students finishing secondary school the number fell by 10,000 people. Graduates with vocational diploma benefitted the most in terms of employment since they had the greatest share of employment as a share of the young workforce (Zsuzsa & Karoly, 2016).

OECD (2016) a club of 34 richest countries in the world, reportedly underline the importance of structural changes affecting the Hungarian economy during the past decades. The enrollment for secondary education has grown with a healthy pace and increase of 28 percentage points can be observed from 1993 to 2013 in school enrollment rates. Due to recent developments, the share of uneducated people amongst the older generations haunts the labor market. The share of people pursuing undergraduate's degree quadrupled from 1995 to 2013. As uplifting as it may sound the amount of people graduating was 23%, however it remains lower than the OECD average. Yet the unemployment rate for graduates stood at merely 3,7%. Despite the surge in people participating in educational sector, the phenomenon is rather new as the educational level with older generations is rather marginal, concludes OECD (2016).

The epidemic of youth unemployment and tertiary graduation rates creates justified concerns over the developments of the Hungarian labor force. Graduates with vocational education are associated with high unemployment figures, as wages are 25% lower in comparison to graduate with secondary degree diploma. Mean- while the gap between low-skilled and high skilled individuals deepens as low skilled suffer from increased unemployment rates. Since the shift in labor force is demand- ing increasingly more educated individuals the educational output is unable to meet the demands of the future according to OECD (2016).



Hungarian government's long-term spending is greatly affected by population ageing. OECD (2016) projections forecast short term spending to decrease until 2030 as the total spending will increase to 3,75% of GDP until 2060. The organization for economic cooperation and development boldly proceeds to argue the advanced state of population aging taking place in Hungary happens at faster rate than in any other country.

Hungary's population peeked in 1981 while the country posses the lowest fertility rate in Europe. Population in Hungary peaked in early 1980s at 11 million. OECD (2016) projects a downfall to 9,2 million in 2060, even though the relative decrease in the share of prime age population has been stable, however by 2060 the decrease would make the share of prime age population would be the smallest in Europe according to projections accounting in coming migration of 20,000 annually. Figure 4.3 estimates the prime age population (ages 25-54) of total population to shrink to 34% by 2060, placing Hungary amongst most severely affected countries of shrinking populations in Europe. Fertility rate in 2013 was additionally one of the lowest in Europe at 1.2 babies born for each women on average in their lifetime (Figure 4.4). Further studies by OECD argues a causality if income disparities maintain spreading apart, migration struggles to fill the void in labor market while emigration from Hungary might

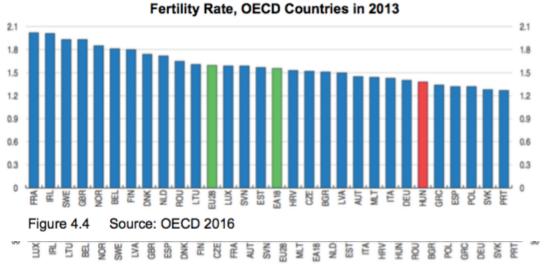


Figure 4.3. Source: OECD 2016

increase and further hamper the demographic outlook.

Age-related spending consisting mainly of health care expenses are rising faster than forecasted. Health care spending is currently at acceptable and sta-



ble rates according to OECD standards. As Hungarian wages are reaching the levels of other EU countries, meaning a noticeable increase in health care spending per capita is underway (OECD, 2016). Albeit, OECD (2016) reports a brain drainage in health care industry and doctors especially are emigrating the country already. The health care system has suffered from lack of investments and symptoms of a deteriorating system are observable, leaving long-term care mainly in the arms of immediate family for many Hungarians adds OECD (2016).

# 5.3 Effects of Migration on Population Aging

Since Hungary emerged into the EU as a member state, a new wave of emigration has had a considerable effect on Hungary. Hungary's net migration has remained at 20,000 or below from 2006, with the exception of 2006 when an observable peak was recorded over 35,000 migrants (European Liberal Forum, 2014). European Liberal Forum (2016) further argues that the effects of migration have affected the falling demographics in Hungary for extended periods of time. The level of net migration in Hungary was previously comparable with Western and Southern European countries rather than Eastern European countries which are prone to experience effects of emigration than migration.

Addressing the falling populations in Hungary has been underpinned by interesting and specific characteristics argues Anikó et al., (2009). As the total number of population is falling immigration has had its fair share in compensating the Hungarian population decline especially from 1990s to 2000s as the decline in population aging waned. However, Anikó et al., (2009) proceed to claim, that during 2001- 2007 population losses of 225,000 persons was compensated by immigration contributing of 100,000 people, totaling the loss at 155,000 people. Today the situation has presumably worsened according to the same study due to acceleration in population aging. The effects of immigration on Hungarian demographics are highly limited by the success in fostering long-term migration, regardless of the circular type of migration dominating immigration (Anikó et al., 2009).



Census from Anikó et al., (2009) on potential sizes and age distributions of immigration from 2001-2050 substituting for population loss, suggests best case scenario of 10,000 net immigrants annually on average remains realistic. Addition- ally, the same projection, estimates long-term immigration to exceed 20,000 people topped with 2,000-5,000 in net emigration. Combining the effects of aging populations and the forecasted net immigration, Hungary has potential to partly compensate aging populations with the combination of immigration and emigration if the projections prevail. On the other hand, abrupt immigration of possible younger work- force may forcibly affect the native labor market negatively, argues Anikó et al., (2009). However, exaggerated interpretation of previous migration patterns and assumptions has potential to distort the outlook of actual future inflows of migration adds, Anikó et al., (2009).

Notably consistency in movements in migration within Hungary are regional discrepancies, creating imbalances and regional pressures on the local governments and age structure. Immigration is highly concentrated in the central regions of Hungary, especially in Budapest and areas near Serbian border (Anikó et al., 2009). Indicators conclude that immigration outside Budapest has slowly declined, with North-Western regions receiving barely noticeable share of immigrants. Both naturalization and work permits have similar regional tendencies as the immigration flow towards Budapest underlines its regional importance, suggests (Anikó et al., 2009).



## 5.4 Summary

Hungarian demographic decline is happening faster than anywhere in Europe. The government has very limited effort in implementing sufficient policies and mechanisms in place to address the issue except the ALMPs. Hungarian labor mar- ket is comprised of relatively high amount of uneducated work force, the share of low skilled in relation to high skilled workforce is rather high. Consequently, labor shortages of highly educated is causing problems in the labor market which has lead to problems in employment rates. Labor market in Hungary can be characterized by relative share of emigrating workforce rather than settling immigrants. Regional differences regarding immigration are noticeable across the nation. Unfortunately, the low share of completion of tertiary education fuels the low skilled workforce and fuels the growth of uneducated youth in Hungary. Women inclusion into the labor market is shockingly low, which in turn deepens the issues in labor market composition and covering the fiscal imbalances of population aging which is happening at staggering rates in comparison to other EU member states. Fundamentally Hungarian labor market experiences variety of domestic issues with uneducated and unemployed youth which evidently forces the policy makers to prioritize their labor market policies to promote youth inclusion and education in order to sustain the labor market short- ages, meanwhile, emigration and immigration remains a topic affecting labor market fundamentally while the inclusion of immigrant workforce remains unknown.



#### 6 Conclusion

Demographic decline and aging populations is a global phenomena affecting economies with compounding and long term consequences. Thus measurement of fiscal and labor market effects is hard to grasp in short term economic developments. Regardless of the reasons why people decide to immigrate, whether its forced migration or economic migration, the macro economic effects of migration are arguably, positive. An Increase in demand and consumption results in more in-vestments and employment suggests IMF. More there are people consuming in a society the consumption results in a growing GDP. However, structural hardship succeeds in the long run as demand for skilled workforce grows leaving native and immigrating workforce to collide since evidence suggests that migrants tend to flow towards stronger economies rather than weak ones. Migrants bring talent and hu- man capital to labor market which already exists and therefore saturates the labor market even further, fueling the labor market challenges and structural problems. However, the economic inclusion of migrant's workforce is imperative since the labor demand in the future is surging and many low skilled migrants are willing to partake in jobs natives are not, such as manufacturing implies OECD studies. Structural unified labor market policies across member states provide fertile ground to develop the Pan-European labor market, since structural labor market issues between mi- grants and natives will increasingly affect employment and economic inclusion for everybody.

Global declining demographic trend is ubiquitous, with far reaching with only speculative consequences available concerning the macro economic effects and labor market implication globally. In developed countries populations are aging fastest compared to developing countries. EU member states will need to sustain increasingly more migrating labor force in order to provide economic growth and healthy fiscal balances suggesting that migration has major potential to act as mean to bridge this gap in workforce demand if educational possibilities are aligned with realistic educational outcomes and possibilities for all labor force participants.



Member states in Europe enjoy significant power in determining their immigration policies and especially labor market policies. EU supports cohesive and coherent measures taken to protect the single common market place of 28 member states. Therefore, active measurement and dedication from each member state to unify and protect the single economy remains integral in addressing the economic hardship provided by demographic crisis. Through effective analysis, unilateral immigration and labor market policies on both national and supranational level should be addressed in order to fulfill the future demand of foreign labor as European economies are facing dramatic losses in workforce. Whether immigration is consisting of expatriates, refugees or emigrating workforce, recognizing immigration as a powerful economic tool, which has potential to unlock significant resources to support sustainable economic growth seems imperative according to research. However, re- search suggests that, if immigrants experience lack of economic integration and inclusive workforce, the repercussions are economically far reaching and severe, with adverse effects potentially straining economies and aging workforces with unprecedented long term burden. Alas, immigration alone fails to fulfill the losses sustained from population aging, nonetheless its economic importance should not be undermined by political narrative.

Swedish economy, and particularly the labor market, hosts a relatively high share of immigrants' workforce or ties to foreign born population, which has had significant impact on Swedish economy as a whole indicates prior research. Despite the lowest overall unemployment rates in developed countries, the workforce is quote segregated while gaps between low skilled and high skilled is growing while immigrants suffer from lowest participatory rates despite decisive labor market pol- icy implementation measures in place. On the other hand, data suggests that, immigrants adjust to Swedish culture in a fairly quick manner, in regard of Swedish fertility. Migrants fertility rates in Sweden are falling faster they integrate, offsetting the much needed demographic boost from migration. Despite generational spacing and limited effects of fertility rates, biggest underlying problem is the recently starting aging of baby boomer generation. Since Sweden can arguably be considered as an example state across many societal issued, even constantly increasing immigration simply will not cover the void left by the generation, leaving policy makers with very little option to alleviate aging demographics.



In Hungary population aging is happening at staggering rates in comparison any other EU member states, policy formulation ought to consider addressing primarily their growing youth unemployment and high rates of interruptions in tertiary education. Additionally, the lack of women inclusion in the work force is shockingly low. Hungarian policymakers are facing difficult times, which furthermore fuel suspicions and reasonable concern how effectively can Hungary integrate immigrants into their labor force and economy to compensate for falling demographics, as they are experiencing and struggling to address serious domestic labor market challenges in the first place. Consequently, research concludes that labor market policies ought to address the inclusion of domestic workers while creating the foundations to attract foreign high skilled labor force, to compensate for labor shortages, while actively cooperating with EU on implementing ALMPs and other guidelines to increase the labor market participation especially outside Budapest where regional differences are strongest. Lastly, the follow through rate in tertiary education is alarmingly low, resulting in a weaker work force which in turn struggles to alleviate the increasing labor demand as populations grows older implied by thorough analysis.



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