



Bridgewater State University

Virtual Commons - Bridgewater State University

Honors Program Theses and Projects

Undergraduate Honors Program

5-9-2023

Human Capital Flight Impact on the Greek Economy Post the 2008 Global Financial Crisis

Andrew Cook

Follow this and additional works at: https://vc.bridgew.edu/honors_proj



Part of the [Political Science Commons](#)

Recommended Citation

Cook, Andrew. (2023). Human Capital Flight Impact on the Greek Economy Post the 2008 Global Financial Crisis. In *BSU Honors Program Theses and Projects*. Item 599. Available at: https://vc.bridgew.edu/honors_proj/599

Copyright © 2023 Andrew Cook

This item is available as part of Virtual Commons, the open-access institutional repository of Bridgewater State University, Bridgewater, Massachusetts.

Human Capital Flight Impact on the Greek Economy
Post the 2008 Global Financial Crisis

Andrew Cook

Submitted in Partial Completion of the
Requirements for Commonwealth Honors in Political Science

Bridgewater State University
May 9, 2023

Dr. Rachel Navarre, Thesis Advisor

Date: 5/4/2023

Dr. Inkyoung Kim, Committee Member

Date: 5/4/2023

Dr. Sidita Kushi, Committee Member

Date: 5/4/2023

1 Introduction

Historically, Greece has been a nation that focused heavily on the trading of goods for its economic success, due to its ideal geographic location serving as a conduit to the near east. However, in recent years the Greek economy has undergone changes that have altered its exports and the structure of the labor market. Greece continues to suffer repercussions from the 2008 Global Economic Crisis, which has caused a large outward migration of skilled workers. During the years of 2010-2015, between 280,000 and 350,000 skilled migrants had fled Greece to work in other nations abroad (Labrianidis & Pratsinakis 2016). Greece's main export is human capital, valued at \$13.9 billion, which is larger than its oil, aluminum, and drug exports combined (Endeavor 2016). Human capital refers to the economic value of the experience and skills of a worker, which are created through education, training, and intelligence (Kenton 2023). Greece is one of the nations within the European Union which is experiencing the highest rates of human capital flight. The phenomenon of human capital flight in Greece was exacerbated by the 2008 Global Financial Crisis.

Human capital flight, also known as brain drain, is the emigration of skilled workers from a less developed country to a more developed country. Skilled workers can be defined as those who work in the tertiary sector of the economy, for example: doctors, lawyers, or engineers. These workers migrate to highly developed nations for reasons such as an increase in wages, improved quality of life, less government corruption, etc. Highly skilled workers are a vital aspect of a country's economy because they create higher amounts of economic output which fuels a nation's development. Greece is an example of a nation which is affected by human capital flight, especially after its inability to recover economically from the 2008 Global Financial Crisis. This research prompts the question: how does human capital flight impact

Greece's economy in the aftermath of the 2008 Global Financial Crisis? Works from previous scholars lay out the theoretical frameworks for human capital flight discussing how and why it occurs.

2 Literature Review

Scholars have long studied the phenomenon of migration for the sake of economic benefits and higher standards of living. As the world has become more interconnected through the process of globalization, there have been higher rates of migration for economic reasons. The mobility of highly skilled persons from developing countries to developed countries has grown substantially in the latter half of the 20th century (Chiamaka 2020). People are able to migrate further distances due to technological advancements in transportation, with greater access on a global scale. Communication is much more widely available and accessible, meaning that people are able to migrate and still be able to keep in touch with their friends and families in their home countries. Migrants are also able to remit money back to their home countries which makes it easier to stay and work abroad while benefiting their families back home. Improved literacy and education rates have caused a global lens of information, with media, television, news, etc. being accessible to people all over the world (Czaika 2014). Thus, migrants are able to see opportunities in countries abroad that they were previously unable to due to limited information.

When looking at human capital flight, there are two types of countries: the receiving country and the sending country. The receiving country is more developed and has greater socio-economic opportunities that appeal to migrants. The sending country is less developed and lacks these opportunities, prompting migration to elsewhere. The biggest destinations for skilled migrants have historically been the United States, United Kingdom, and Germany for workers in

science fields (Saravia 2004). The largest sending countries of people with these skills are typically from India and Mexico (Saravia 2004). These receiving countries offer dramatically higher standards of living, wages, and freedom which attracts skilled workers from sending countries.

Human capital flight entails the transfer of human capital from a developing country to a developed country. Workers from developing countries seek to enhance their lives by migrating to developed countries where they are able to receive higher pay, experience higher standards of living, and less political corruption. Although migration is beneficial for these individuals that are able to improve their lives, it can be harmful to the economies of the developing countries. Low income countries suffer greatly from this phenomenon and are losing human resources. It has become increasingly difficult for them to gather qualified people to work at their universities, hospitals and industries (Jalali 2017). The migration of skilled workers has negative impacts on developing countries as it hinders their development even more. These countries are already struggling to finance themselves, and with the absence of skilled individuals that provide numerous economic benefits, it creates a difficult situation. Developed countries are able to absorb an increasing number of skilled workers, which further contributes to their already powerful economies. Although there are ways that human capital flight is detrimental to a nation's development, there are also ways it can be beneficial. Remittances is one of the main ways that emigration can be beneficial to developing countries.

Remittances, also known as the sending of money from workers abroad back to their families in their home countries, can be beneficial to the growth of developing countries. Remittances have the ability to boost economic spending in the home country of skilled workers who are abroad. Remittances have the potential to provide financial assistance to the local

economy by reducing credit limitations and stimulating investment, ultimately resulting in the promotion of economic growth (Cazachevici 2020). Consumer spending directly contributes to the growth of businesses through which creates more jobs. Remittances are especially beneficial for low and middle income countries who are unable to generate vast amounts of economic growth independently. This means that the businesses that are located in these nations are unable to produce mass amounts of economic output, and remittances are able to help boost this growth through increased consumer spending. Remittances have a positive impact on low and middle income countries because their domestic institutions are typically unable to provide such large amounts of economic growth (Issahaku 2018).

Although there are benefits to remittances, there are also ways that it can be harmful. One of the criticisms of remittances scholars have is that the financial inflows are spent on consumer goods that are not “productive” to the economy. This means that consumers will spend their money on items such as clothes and jewelry, rather than investing their money which is more sustainable (Meyer 2017). These purchases may provide a short-term boost to the local economy, but they do not create long-term economic development. Instead, if the money were invested in more productive endeavors, such as education, infrastructure, or small businesses, it could have a greater impact on the economy in the long run. Additionally, remittances can be viewed negatively because countries may begin to rely on the foreign inflows of money rather than domestically generated finances. Weaker economies are more sensitive to growth effects of migrant transfers, compared to developed economies, there are many other ways to generate wealth besides relying on remittances (Eggoh 2019).

In the case of Greece, it is a developed country, however it has a considerably weaker economy compared to others within the European Union which turn off skilled professionals

from working in the country. The 2008 Global Financial Crisis affected migration patterns in Europe, as it increased in some areas while it decreased in others. Migration flows out of Central and Eastern European countries had fallen, while migration flows out of Southern Europe had increased. Following the crisis, labor migration from Central and Eastern Europe to Western European countries has decreased, while migration from Southern European nations appears to have increased both towards Northern Europe and non-European destinations (Dijkstra 2015). The 2008 Global Financial Crisis affected both high and low income European nations, through decreased amounts of investment and discrepancies between labor markets. Nations that had joined the European Union more recently were able to keep themselves better afloat during the crisis as they were still experiencing higher amounts of economic growth. This newfound economic growth was attained through higher amounts of trade and investment from other EU countries.

Southern European nations that had been in the European Union longer struggled with a lack of investment that induced large outflows of migrants. Poland, Romania, and Bulgaria, among other lower-income economies, sustained rapid growth and witnessed a return of migrants, whereas some Baltic nations, along with Spain, Greece, Portugal, and Ireland, experienced significant negative investment shocks that led to emigration (Dijkstra 2015). The weaker European economies were benefited by return migration during this time, while Southern European countries were struggling to keep their economies stable which resulted in large outflows of migrants. Scholars highlight that South Eastern Europe in particular had enjoyed a small economic boom prior to the 2008 Global Financial Crisis. This was largely attributed to foreign investment and the borrowing of money by both firms and households (Bartlett 2011).

This inflow of investment of the borrowing of money allows more money to be spent in the economy, creating economic growth.

Not only did the economies of Southern European countries suffer, but many of them saw a decreased population during this time as well. For example, Spain had a total population change of 12.83% from 2001-2007, compared to a change of 1.69% from 2008-2014 (Eurostat 2023). In contrast, the Western European nation of the United Kingdom saw a population change of 4.36% from 2001-2007, compared to a change of 5.19% from 2008-2014 (Eurostat 2023). Factors such as net-migration and fertility rates were the key drivers of these population changes. In Spain, people migrated out of the country due to a loss of job opportunity during the financial crisis, while in the United Kingdom there was still a large number of influx migration to keep the population afloat.

3 Case Selection: Why Greece?

Greece makes an excellent candidate for this study because it is one of the European nations that experienced some of the most difficult economic turmoil post the 2008 Global Financial Crisis. This economic uncertainty combined with political unrest has caused a great deal of human capital flight to other Western European nations. Prior to Greece's acceptance into the Eurozone, the Greek economy already had several unresolved issues. In his piece *Historical Cycles of the Economy of Modern Greece from 1821 to the Present*, Alogoskoufis describes the history of Greece's economy and fiscal policies up until the aftermath of the Global Financial Crisis. The Greek government implemented a variety of fiscal and economic policies, none of which could save the fate of the economy. The high government spending was not reduced, creating a large budget deficit (Alogoskoufis 2021). Debt was on the rise due to the government's spending, further causing a deterioration in Greece's economic competitiveness.

The Greek government acquired the losses of large private companies, such as oil companies, through a process of socialization. This only further increased the government's debt and its inability to financially recover. The government also raised income and corporate taxes, which affected the official sector but did not affect the majority of individuals who were self-employed who evaded income taxes. Therefore, the government's attempt to reduce debt by raising taxes was a failure due to wealthy people managing to evade paying taxes. Joining the Eurozone appeared to be the next best option for Greece, as it seemed to be a chance to participate in new borrowing markets.

Greece's entry into the Eurozone in 2001 made investors believe that Greece was a safe place to invest. This is because investors thought that having a single currency amongst European nations would eradicate the differences between their economies. Greece's interest rates dropped to similar rates of those in Germany, as both investors and lenders thought Greece was less likely to default as it was backed by the Euro Central Bank. With lower interest rates, Greece was able to borrow money at even higher rates than before. This did allow for the Greek economy to prosper in the early 2000s, however, Greece's underlying fiscal problems did not go away. Greece was one of the fastest growing economies in the European Union, with a GDP growth rate of 4.1% for the years of 2001-2007 (World Bank 2022). The country was unable to create revenue stems from wealthy business owners evading taxes and over-reporting their debt payments (Alogoskoufis 2021). These underlying fiscal problems would be the precursor to Greece's economic crisis post 2008.

While economics drove human capital flight from Greece, corruption played a role. Corruption can discourage skilled individuals from staying in Greece or returning to their home country after studying or working abroad. One way corruption affects human capital flight is by

limiting economic opportunities for talented individuals. When corruption is rampant, it can create a culture of nepotism, where well-connected individuals get ahead at the expense of merit-based candidates (Rontos 2020). This can lead to a lack of career opportunities for skilled individuals, especially those who do not have connections or do not want to engage in corrupt practices. According to Transparency International's Corruption Perceptions Index in 2021, Greece ranks as 59th out of 180 countries in terms of perceived levels of corruption in the public sector, with a score of 50 out of 100. Corruption can also erode trust in government institutions, which can discourage skilled individuals from staying or returning to Greece. If individuals believe that their government is corrupt and not interested in promoting the welfare of its citizens, they may be less likely to invest their time and energy in building a future in Greece. Corruption can have a significant impact on human capital flight in Greece by limiting economic opportunities and eroding trust in government institutions.

The economic downfall in Greece following the 2008 recession was a complex issue that resulted from a combination of factors, including domestic economic policies and global economic trends. One of the primary factors that led to Greece's economic downfall was the country's large public debt. In the years leading up to the 2008 recession, Greece had borrowed heavily to fund various public projects. This borrowing was made possible by low-interest rates and a relaxed lending environment that prevailed across Europe at the time. However, as the global financial crisis hit in 2008, Greece was left highly vulnerable to the sudden increase in borrowing costs and the contraction of credit. The crisis was also compounded by a loss of confidence in Greece's ability to manage its debt, which led to a sharp increase in borrowing costs and a worsening of the country's economic crisis. The recession in Greece had significant implications for the wider European Union, with concerns over the country's ability to service its

debt obligations leading to fears of a larger debt crisis (Juselius 2019). The EU and the International Monetary Fund ultimately stepped in to provide Greece with financial assistance, but the crisis had lasting impacts on the country's economy, including high levels of unemployment, reduced public spending, and social unrest.

Greece's induction into the Schengen area in 2000 had a significant impact on outward migration from the country. Migration rates out of Greece increased due to the free movement of people that the Schengen Area allocates. According to a 2011 study by the Hellenic Observatory of the London School of Economics and Political Science, joining the Schengen area made it easier for Greek citizens to migrate to other countries in Europe. The study found that the number of Greeks emigrating to other EU countries increased significantly after Greece joined the Schengen area, with a peak in emigration occurring in 2011. The study also found that many of the emigrants were highly educated and skilled individuals, leaving Greece in search of better job opportunities and living conditions. The Schengen Area was a major contributor to the increased migration patterns out of Greece due to the new freedom of movement.

4.1 Causes of Greece's Human Capital Flight

Human capital flight is a great contributor to the decline of the Greek economy. When skilled workers emigrate, this leaves behind a population that is low skilled and elderly. Workers that fit the demographic of young and skilled help grow the economy, while low skilled and elderly create less amounts of economic growth. Greece has a high rate of human capital flight due to reasons such as a high unemployment rate, low wages, and corruption. Especially since the Global Economic Crisis of 2008, young Greek professionals have migrated to richer European Union nations in search of greater opportunities. Countries in Northern and Western Europe can offer a better standard of living, higher wages, and less corruption. Doctors are one

of the groups that have been greatly affected by the economic crisis. Greek doctors have emigrated from Greece due to poor working conditions that are a result of the government's inability to create solid healthcare policies, as well as lower wages compared to European nations in the north west (Panagiotakopoulos 2020). It is critical for a country's economy to have skilled workers because they create more GDP growth and pay higher amounts of taxes.

Skilled workers such as lawyers, engineers, doctors, etc. are necessary for a successful and sustainable economy. With Greece having a great loss of its skilled workers, their economy is not able to grow as much and the country is not able to develop as much either. Skilled workers contribute to the development of a nation by paying higher taxes, which the government can utilize to improve infrastructure, education, healthcare, etc. Once skilled workers have left their home country, they no longer pay taxes in this country, meaning that the country is not able to benefit from their tax payments (Panagiotakopoulos 2020). Countries need tax payments in order to fund public education, improve infrastructure, etc. Skilled workers are critical for the development of a nation's economy, as they provide higher amounts of productivity compared to low skilled workers. According to a 2010 report by the General Confederation of Greek Workers (GSEE), a significant portion of young people, amounting to 38 percent, leave Greece to live abroad. The report suggests that the largest group of migrants come from the fields of economics, marketing, and legal sciences. Young people are migrating away from Greece at alarming rates, further causing economic losses. These young people will not be able to contribute their skills to the Greek economy, and Greece will miss out on their high productivity levels.

There are a variety of economic and non-economic factors that have caused human capital flight in Greece. Some of the non-economic factors in the emigration of skilled workers is

caused by the nepotism and inflexibility in the Greek workforce. The Greek economy is appearing more hopeless to young people, and they are not fond of the workplace discrimination on various factors such as religion, race, and sex (Marinikou 2016). Large scale human capital transfers can be linked to the economic benefits of more advanced European nations, such as increased GDP per capita and healthcare (Marinikou 2016). Greece has a less competitive and less developed economy compared to its richer European counterparts in the north and west.

One of the largest economic problems that emerged out of the 2008 Global Financial Crisis for Southern European countries, such as Greece, Spain, Italy, and Portugal, was high unemployment rates. Unemployment affects the economy as a whole because when there are less people making money, there is less money being spent that is put back into the economy. If there are less people available to work and less money being spent in the economy, production of goods slows down. If less products are sold by businesses, this means that there is less revenue created which leaves the government with less money. The government is able to tax businesses and allocate money this way, but if businesses are not generating enough money this means the government is going to suffer as well. Along with negative impacts on the economy, there are negative impacts on the individual unemployed person as well. The stressors of being unemployed can cause health impacts on an individual such as high blood pressure, diabetes, heart disease, etc. Mental health is affected as well, as rates of anxiety and lower self-esteem. Unemployed individuals experience poorer mental health compared to their employed counterparts.

Prior to the 2008 Global Financial Crisis, Greece was already dealing with an economic crisis of its own regarding large fiscal deficits, huge debt, a continued erosion of competitiveness and high unemployment rates (Bakas 2012). The 2008 Global Financial Crisis exemplified these

effects and sped up Greece's downfall into economic turmoil. In 2014, 65% of the Greek population claimed that unemployment was the most pressing issue within the country, compared to 49% of other citizens in the European Union declaring it as their nation's biggest issue (Eurobarometer 2014). The Greek government's inability to stabilize the unemployment rate has prompted for a large number of skilled workers to flee the country. Not only is unemployment in Greece high, there is also a limited compensation system to assist those who are unemployed (OECD 2013). The social safety net system in Greece is highly inadequate, having a lack of proper administration. This means that those who are unemployed are not receiving all of the necessary benefits that they need, further creating issues within the structure of the Greek economy. There is no universal income for poor people in Greece which means that they cannot spend money and it makes it harder for them to rejoin the workforce. Through Greece's social safety net program the government is only able to minimally reduce rates of poverty in comparison to other countries within the European Union (Karantinos 2014).

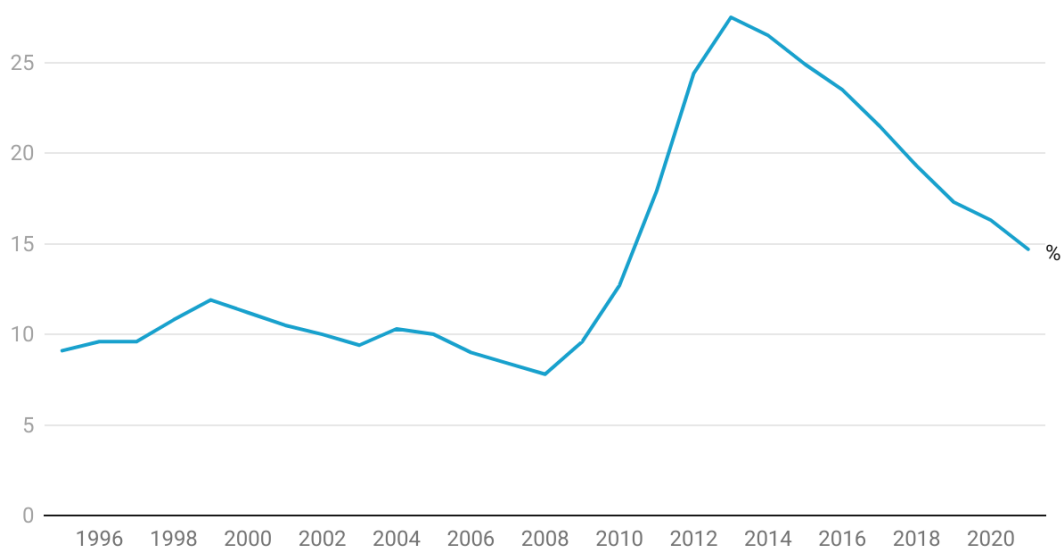
Greece has a large number of tertiary educated people, however the majority of them are unable to find the appropriate job to fit their skill set. This can be proven because when there was a large portion of vacant jobs in Greece the unemployment rate was still very high (Tubadji 2012). Unlike the majority of OECD countries, Greece employers tend to hire employees based on their educational attainment rather than what skills they can actually demonstrate in the workplace. This results in lower productivity in the Greece economy because people who are lacking skills necessary in the workplace are working in high-skilled jobs (OECD 2017). This makes it difficult for some Greek employers who need employees with strong skill sets. The high unemployment rate amongst recent graduates has resulted in them taking jobs that are much lower than their skill set is. Greece has the highest amount of over-skilled workers within OECD

countries (OECD 2015). It is difficult to find a job that appropriately matches a workers skill set, which results in them looking for opportunities abroad.

FIGURE 1

Greece Unemployment Rate

Greece Unemployment Rate from 1995-2021



Source: World Bank • Created with Datawrapper

Another reason for human capital flight in Greece is a low GDP per capita. When comparing the GDP per capita of Greece to other Western European nations with stronger economies, there is a significant difference present. In 2021, the GDP per capita in Greece is \$20,192, compared to France: \$43,659, Germany: \$51,203, United Kingdom: \$46,510, Netherlands: \$57,767, and Switzerland: \$91,991 (World Bank 2021). Skilled professionals are able to significantly increase their salary if they migrate to Western European nations. This is one of the largest factors for outward migration from Greece, as the government has several unresolved issues with the economy that prevent wages from growing. An increase in labor productivity is the biggest factor in growth of GDP per capita. Greece's labor force is less productive than other Western European nations, meaning that in Greece the typical labor hour

produces less economic growth. Due to the strong competitiveness in other Western European economies, workers are able to enjoy higher wages for the same amount of hours worked in Greece.

Another cause for human capital flight in Greece is lower standards of living compared to Western European nations. When looking at the Human Development Index, Greece is ranked at 0.887 in 2021, compared to France: 0.903, Germany: 0.943, United Kingdom: 0.921, Netherlands: 0.941, and Switzerland: 0.962 (United Nations 2022). Greece is considerably lower ranked compared to its Western European counterparts in terms of human development. Skilled workers are able to enjoy higher standards of living abroad, as the Human Development Index takes into account factors such as: life expectancy at birth, life expectancy index, expected years of schooling, mean years of schooling, education index, GNI per capita (PPP \$), and the GNI index (United Nations). Education creates a more valuable and skilled workforce, contributing to an increase in a nation's development. A longer life expectancy indicates efficient healthcare systems and access to advanced healthcare technologies. This makes living in Western European nations appeal to skilled workers as they will be able to enjoy a more comfortable lifestyle. In addition to a higher standard of living, young Greek professionals are leaving Greece due to the corrupt government practices.

In the aftermath of the 2008 Global Financial Crisis, a growing number of Greeks have a distrust in the national government due to its mishandling of the situation. This is backed up by other survey data as well. Due to such low trust in the most prominent political institution within Greece, the creation and passing of laws becomes much more complicated. Trust in the government leads to more efficient passing in economic policies, which is needed especially in times of economic crisis. These high levels of distrust within the government signifies political

unrest, which can prolong and exacerbate economic recessions. In 2014, 65% of the Greek population claimed that unemployment was the most pressing issue within the country, compared to 49% of other citizens in the European Union declaring it as their nation's biggest issue (Eurobarometer 2014). The Greek government's inability to stabilize the unemployment rate has prompted for a large number of skilled workers to flee the country. They are unable to utilize their skills in a high paying job, as they are few and far between. Skilled workers are resorting to other nations in Western Europe with higher employment rates in which they can enjoy a higher salary and numerous other benefits as well.

Young professionals have concerns with the actions of the Greek government. Young people are aware of the issues in the country and do not see them changing anytime in the future. Recent university graduates are angry with the corruption, nepotism, lack of career opportunities, and inefficient public administration (Lazaretou 2022). Lazaretou describes how the uncertainty and distrust in the government is a major push factor for migration. According to the Eurobarometer in 2014, only 9% of Greeks had trust in the national government (Eurobarometer 2014). The lack of faith in the government, combined with limited career opportunities, has created a sense of hopelessness and frustration among the youth in Greece.

4.2 Migration by Numbers

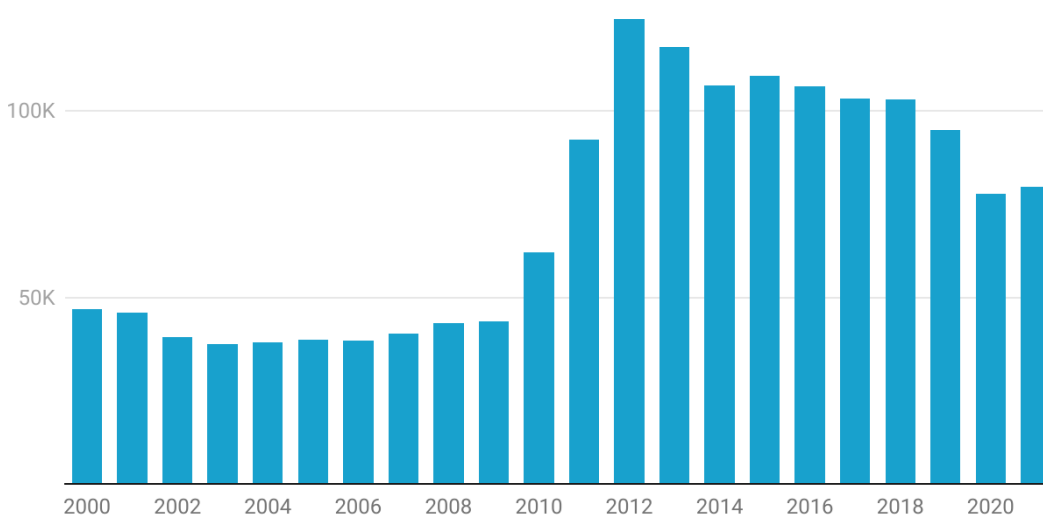
The migration of skilled labor severely hinders economic development in Greece. The economic implications of the 2008 Global Financial Crisis meant that impoverishment and loss of income and housing would be widespread. The Greek government failed to revive its economy in the aftermath of the recession, causing a huge emigration in skilled workers. More than 250,000 Greek professionals were abroad in 2017, with some 200,000 leaving the country after 2010 (Labrianidis 2019). Migration heavily increased in the aftermath of the recession, with

43,044 Greeks migrating in 2008, compared to 124,694 Greeks migrating in 2012 (Eurostat 2022). The time period post the 2008 Global Financial Crisis saw a stable increase in the number of migrants compared to before the crisis.. This supports the idea that migration is heavily caused by the economic impacts of the recession. The majority of Greeks migrated to Western European countries that were able to recover from the economic crisis and could supply them with stable jobs.

FIGURE 2

Greece Emigration

Emigration in Greece from 2000-2021



Source: Eurostat • Created with Datawrapper

4.3 Demographics of Skilled Migrants

The number of Greek professionals that are living and working abroad has increased since the 2008 Global Financial Crisis. It is estimated that the number of Greek professionals living and working abroad at the end of 2010 was between 119,000 and 139,000, and increased to between 280,000 and 350,000 during 2010-2015 (Labrianidis 2016). These numbers demonstrate the gap that is left in the structure of the Greek economy, as there is less money

coming in from the tertiary sector of the economy. The majority of these migrants are younger to middle aged people, who also happen to be the most vital age groups for the economy. Young professionals have the ability to work for a longer amount of time compared to those who are older, meaning they can generate more wealth. Medium and high income workers were the majority of the migration from Greece. This means that the Greek economy is left with a large portion of low income workers, who in turn contribute less to the tertiary sector of the economy. Skilled workers are a valuable asset to a nation's economy, as they create a more competitive environment.

FIGURE 3

Demographics and Social Characteristics of Skilled Migrants in Greece

Gender (%)	Age groups (%)	Family Income (%)	Profession (%)	Staff Position (%)
Male: 62.6%	Up to 29: 0.4	Very low: 2.4%	Professionals: 40.5	No staff position: 14.7%
Female: 37.4%	30–39: 40.1	Low: 9.3%	Academics: 35.7	Staff position: 23.4%
	40–49: 42.8	Medium: 48.5%	Researchers: 14.2	Staff position of high social prestige: 61.9%
	50–59: 13.7	High: 34.0%	Managers: 8.3	
	60–69: 2.6	Very high: 5.8%	Other: 1.3	
	Over 70: 0.4			

Source: Labrianidis 2021 • Created with Datawrapper

Western Europe is the region in which the majority of skilled migrants from Greece move to. In particular, Germany, the United Kingdom, and the Netherlands were the top destinations of skilled Greek migrants. Germany is the overwhelming destination of the three, as 33,000 Greeks migrated to Germany in 2012, compared to 6,000 to the United Kingdom and 3,000 to the Netherlands (Cavounidis 2015). Increased migration to Germany was common for several other Southern European nations that were hit hard by the recession as well (Cavounidis 2015). Germany is likely the largest destination of skilled Greek migrants due to it being the strongest economy in the European Union. In 2021, Germany's GDP was by far the largest in the European Union at \$4.26 trillion, compared to the second largest, France, at \$2.96 trillion (World Bank 2021). Germany was able to rebound quickly from the 2008 Global Financial Crisis, unlike Greece and other Southern European countries, due to its much more stable and stronger economy.

The United Kingdom is a destination for migrants that is increasing in popularity, especially with the younger population. According to a 2014 survey, 24% of Greek migrated to the UK, while 12% went to Germany, 8% went to the Netherlands, and 6% to Belgium (Triandafyllidou 2014). Some of the top reasons why Greeks migrated to these nations were due to: better career opportunities, better income, better quality of life, they can speak the language, and they have studied in the country (Triandafyllidou 2014). The United Kingdom has become increasingly popular amongst younger Greeks due to the favorable university programs which results in lower rates of return migration back to Greece (Mavrodi 2017). Some of the top areas of study for these migrants were: economics and business, engineering, and computer science. All of these areas of study are associated with high paying jobs which contribute greatly to GDP growth. These workers are migrating from Greece because there are limited employment

opportunities for them. Human capital flight causes a variety of systematic issues for a nation's economy, as there are gaps created within the structure of the labor force.

4.4 Economic Impacts of Human Capital Flight

There is a strong relationship between skilled workers and the economic competitiveness of a nation. Skilled workers earn more money, have higher degrees, and generate greater productivity than unskilled workers. If a nation has an economy that has an abundance of skilled workers, there is an incentive for more people to earn a higher degree so that they can compete with them. This creates a cycle of economic growth as the workforce gains more skills and in turn a greater number of people earn an increased salary. There is a substantial impact on economic growth in terms of highly skilled migrants, as the existence of these professionals creates a greater amount of intellectual capital for a nation. This means that it creates a competitive environment in which the indigenous citizens of a nation are motivated to gain more knowledge and improve their skill set (Oliinyk 2021). Skilled workers are a vital part of a nation's economy because they drive innovation and growth for the future. A nation that lacks skilled workers is left with a noncompetitive labor force that generates a lower amount of economic growth. A population with a higher percentage of educated people also results in increased economic growth.

Economic growth can be strongly correlated with high levels of education. Not only does education benefit individuals, it benefits the economy as a whole. Highly educated individuals produce greater amounts of economic output, compared to low or non-educated individuals, which is the innate problem with human capital flight. There are significant economic losses associated with unemployed skilled workers. Countries are able to utilize human capital for their economic gain rather than focusing on the exportation of natural resources and other goods.

There are small city-states like Singapore and Hong Kong that are economic powerhouses and have high levels of development due to their high levels of human capital. Although Greece has high tertiary education rates amongst young people, they have the highest unemployment rate for tertiary educated people within OECD countries (OECD 2019). Greece has the highest enrollment rate for Bachelor's degrees out of OECD countries amongst 19-24 year olds (OECD 2019). This means that Greece has been hurting its economy by having a large number of tertiary educated people but nowhere for them to work. They could be growing the economy because they earn higher wages, however, due to the issue of structural unemployment in the Greek economy they remain out of work. One of the benefits of having a skilled workforce is that they generate higher amounts of economic productivity.

Skilled workers are more productive compared to unskilled workers, meaning that a loss of skilled workers is a loss of economic growth. Economic productivity refers to the efficiency with which resources, such as labor and capital, are used to produce goods and services. In other words, economic productivity measures how much output, such as products or service, is produced per unit of input, such as hours of work or capital investment. Higher productivity means that more output is produced using the same amount of input or that the same output is produced using fewer inputs. For example, software engineers are highly skilled professionals who design, develop, and maintain software systems used in a wide range of industries, from finance to healthcare. Their work can result in significant economic gains for their employers, as software systems can increase efficiency, reduce costs, and improve customer satisfaction.

Skilled workers have higher productivity than low skilled workers due to their intense training and educational attainment (International Labour Office 2010). If there are a higher amount of low skilled workers in the labor force, there is a decreased amount of productivity and thus less

economic growth. Greece's economic productivity has suffered in the aftermath of the 2008 Global Financial Crisis.

After the 2008 global financial crisis, Greece's economic productivity suffered due to several reasons. One of the main factors was its heavy reliance on borrowing to finance government spending to keep programs afloat (European Court of Auditors 2017). As the crisis unfolded, Greece's debt burden became unsustainable, leading to a loss of investor confidence and a subsequent economic downturn. Additionally, the crisis had a ripple effect on Greece's banking system, which was heavily exposed to risky investments and suffered significant losses. This, in turn, led to a credit crunch and a sharp decline in business investment and consumer spending. As a result, Greece experienced a prolonged period of economic contraction, with high levels of unemployment and reduced economic output. According to the OECD, the labor productivity growth rate in Greece during 2007 was 3.5% compared to -2.7% in 2011 (OECD 2023). Since skilled workers generate higher amounts of economic productivity and they have been migrating out of Greece, it is safe to conclude that economic productivity rates have declined due to human capital flight.

Remittances are another negative impact of human capital flight on Greece's economy. Remittances can create a dependence on foreign sources of income, rather than on domestic economic growth. This can lead to a lack of investment in domestic industries, resulting in a weaker and less diversified economy. According to the World Bank, in 2013 there were only \$1.23 billion in remittances sent to Greece, compared to \$2.94 billion in 2021 (World Bank 2021). Remittances have increased significantly in the past decade, and only appear to be amplifying for the near future. This means that this money was not generated in the domestic economy, resulting in a reduction of business growth.. With domestic industries generating less

money, there is less money being put into them. This results in slowed economic growth for the home country and accelerated growth in the country in which the remittances are generated. This creates a cycle of dependence on remittances because it is the greatest form of income for families and their other methods are significantly less effective. Dependence on remittances can lead to political instability in Greece.

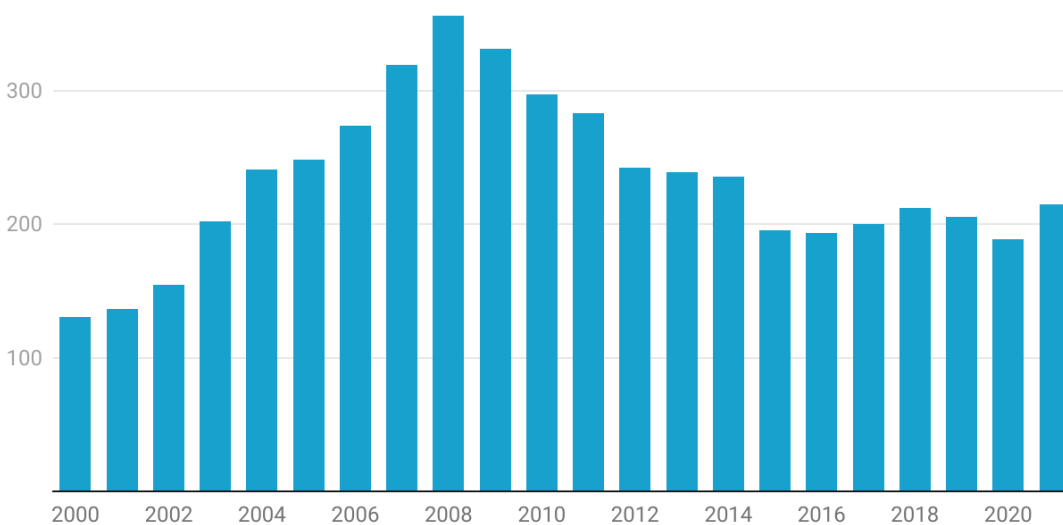
In addition to remittances, highly skilled workers negatively impact Greece's economy through a loss of innovation. Skilled workers fuel innovation through their expertise and educational attainment, further progressing economic growth. When skilled workers leave Greece, there is a shortage of talented individuals who can work in key industries such as technology, science, and engineering. This can lead to a lack of innovation because there are fewer people available to develop and implement new ideas. Greece has consistently had one of the lowest levels of research and development expenditure among the European Union member states. In 2019, Greece spent just 0.57% of its GDP on research and development, which is well below the EU average of 2.19% (Eurostat 2023). Greece has also seen a decline in patent applications, as according to data from the World Intellectual Property Organization, Greece filed just 283 patent applications in 2019, which is a significant decrease from 546 in 2014 (WIPO 2020). With a low amount of funding for research and development and a slowing down of patents being filed, it is clear to see innovation in Greece is on a decline. Innovation has the ability to create new markets, which fuels growth due to the expansion of new businesses and jobs. It also has the ability to escalate competitiveness within businesses, as they have to compete in order to have the best products or services. This kind of business growth drives the economy by generating more money and jobs. Innovation is a principal driver of GDP, and skilled workers are especially responsible for the creation of new technologies and mechanisms.

Greece's GDP growth has retracted greatly in the aftermath of the 2008 Global Financial Crisis, partially due to the migration of skilled workers. Factors such as productivity, innovation, and investment all contribute to GDP growth. Since a higher number of skilled workers have migrated away from Greece, each of these factors has been in decline. Since 2008, Greece's GDP has declined significantly. According to data from the World Bank, Greece's GDP was \$355.9 billion in 2008, and it fell to \$214 billion in 2021, which represents a decline of approximately 40% (World Bank 2023). Skilled workers contribute greatly to GDP growth through their increased rates of productivity and ability to generate new ideas within their field leading to innovation. Since skilled workers support several ways that GDP can grow, it is safe to conclude that human capital flight has a negative impact on Greece's economy.

FIGURE 4

Greece GDP (nominal)

Greece's total GDP from 2000-2021 in billions of US\$



Source: World Bank • Created with Datawrapper

5 Country Comparison: Spain

Alongside Greece, Spain was another Southern European nation that was heavily affected by the 2008 Global Financial Crisis. The crisis in Spain was largely driven by the collapse of a housing bubble that had been fueled by excessive lending and borrowing between people and banks. During the boom years, Spanish banks lent heavily to developers and homebuyers, often with little regard for their ability to repay the loans. In 2006 the construction and housing sectors accounted for 18.5% of Spain's total GDP, which was double the Eurozone average (Royo 2020). As a result, when the bubble burst in 2008, many developers went bankrupt, and property prices plummeted (Royo 2014). This crisis caused numerous businesses to accumulate significant debt, and the unemployment rate surged, especially for the younger demographic.

Spain's unemployment rate skyrocketed during the economic crisis, as businesses were suffering due to massive amounts of debt. The unemployment rate rose from around 11% in 2008 to 26% in 2013, as reported by the World Bank in 2023. Similarly to Greece, this means that nearly a fourth of the total labor force was out of a job. Skilled workers were forced to look for jobs elsewhere as Spain had a limited selection and lower wages to offer. The top destinations for skilled workers from Spain are: Germany, France, the United Kingdom, and Switzerland (Arango 2016). These countries have strong economies, offer a wide range of job opportunities, and have higher wages than in Spain. They have strong industries in the following sectors: manufacturing, education, healthcare, finance, banking, and IT.

European nations such as Germany, France, the UK, and Switzerland offer higher salaries compared to Spain that appeal to skilled workers. Increased wages are one of the biggest reasons for migration out of Spain, as they cannot compete with salaries in other European nations. With the freedom of movement sponsored by the Schengen Area, people can live and work in other nations in the European Union with ease. In 2021, the GDP per capita in Spain was \$30,103,

compared to France: \$43,659, Germany: \$51,203, United Kingdom: \$46,510, and Switzerland: \$91,991 (World Bank 2021). Spain's GDP per capita is significantly lower than nearby nations, this appeals to skilled workers as they would be doing roughly the same job for a much higher amount of money. Skilled workers have been leaving Spain at high rates following the 2008 Global Financial Crisis, with low GDP per capita being one of the main reasons for migration.

Spain has had a significant outflow of skilled migrants due to the economic crisis. According to a 2014 report by the OECD, Spain lost around 400,000 young and highly skilled workers between 2008 and 2013. This number is significant, as it represented nearly 1% of the country's population at the time. The report also highlighted that Spain's loss of skilled migrants was higher than any other OECD country, except for Greece. Some of the most popular destinations for Spanish skilled migrants include the United Kingdom, Germany, and France. According to a report by the Spanish National Statistics Institute in 2017, around 80% of the Spanish emigrants with higher education who left the country between 2012 and 2016 chose these countries as their destinations. The United Kingdom has been a popular destination for Spanish skilled migrants due to its strong economy and high demand for skilled workers. According to a 2020 report by the Migration Observatory at the University of Oxford, Spanish citizens were the third largest group of foreign-born workers in the UK in 2019, after Polish and Romanian citizens.

Spain has been able to attract more foreign investment in recent years, which has helped to create job opportunities and improve the country's economic outlook. In addition, Spain has a larger economy than Greece, which means that there are more opportunities for businesses and individuals to succeed. Greece, on the other hand, has been hit harder by the economic crisis and has struggled to attract foreign investment. This has led to a greater sense of frustration and

disillusionment among the country's young people, who feel that they have few prospects for a better future in their own country. This has led to a higher rate of human capital flight from Greece, particularly among highly educated individuals. The high rates of migration contribute to the slow economic growth that Greece is experiencing.

Migration rates out of Spain have begun to decline in recent years while the economy has started to pick up again. This insinuates that human capital flight is a factor in economic decline as lower rates of emigration account for higher rates of economic growth. According to statistics from Eurostat, Spain had an outward migration of 446,000 people in 2012, compared to 296,000 in 2019 (Eurostat 2022). This is a significant decrease of 33%, meaning that people are more willing to stay and work in the Spanish economy rather than migrating elsewhere to work. Spain's GDP has also made a recovery in recent years as well. After the global recession, Spain's GDP was at a low of \$1.2 trillion in 2015, and it has grown since then to \$1.43 trillion in 2021 (World Bank 2023). Compared to Greece, the economy hit a low of \$195 billion in 2015 and grew to only \$214 billion in 2021. This data suggests that the decreasing number of migrants out of Spain in recent years has resulted in increased GDP growth. With a greater amount of skilled workers to contribute to the economy, there are higher rates of productivity, innovation, and overall economic growth.

6 Conclusion

There are several implications for the negative effects of human capital flight on Greece, one of them being political instability. Political instability in Greece can be created by dependence on remittances because the government is relying on external means of income to fund itself. The government may have to adhere more to the sources of the income because that is what is keeping them afloat, rather than its actual citizens. When the needs and demands of a

nations' own people are being pushed aside for the needs of an outside entity, conflict can arise. For example, if a foreign government or organization providing remittances demands that Greece implement certain economic policies or political reforms in exchange for continued support, the Greek government may feel compelled to comply, even if these policies are not popular or beneficial to the country. Currently, remittances in Greece do not account for a significant portion of its GDP, but it does have the potential to do so with amounts rising in the past decade.

In order to mitigate the economic and political effects that human capital flight has on Greece, the government must make an effort to slow down rates of migration. One important measure is to improve the education system to produce more skilled workers who can contribute to the country's economy. According to a study by Lazaretou (2022), improving the quality of education and increasing funding for research and development are crucial for reducing human capital flight. The study found that many young professionals leave Greece due to a lack of career opportunities and the perception that their skills and knowledge are not valued by employers. By investing in education, the government can create more job opportunities and increase the attractiveness of the country for skilled workers.

Another important measure is to combat corruption in the public sector. One of the major reasons why young and skilled workers leave the country is because of corruption within the government. They believe that the government restricts them from having more personal freedoms and there is a power imbalance amongst people. Nepotism is rampant in the nation, and it causes people that are underqualified for a position to be hired because of their family rather than on their skills. This creates an unfair situation for skilled workers who are actually qualified because their jobs are being taken by those who are born into powerful families. By improving transparency and accountability in public institutions, the government can increase trust in the

public sector and encourage skilled workers to stay in the country. The government can make an effort to be more honest about what they are doing and what their intentions are in hopes to better connect with its citizens.

Overall, human capital flight impacts the Greek economy through decreased rates of productivity, innovation, and economic growth. Skilled workers have higher amounts of productivity due to their acquired skills and can contribute to the growth of businesses. Skilled workers also drive innovation through their educational attainment and vast amounts of knowledge. Innovation can lead to the creation of new businesses and industries, generating more economic growth. Skilled workers make more money on average, meaning that they have more to spend and filter back into the economy. Through these factors, skilled workers are able to increase levels of economic growth in Greece.

Words Cited

- Alogoskoufis, G. (2021). Historical Cycles of the Economy of Modern Greece from 1821 to the Present. Department of Economics Athens University of Economics and Business, Working Paper, (01-2021).
- Arango, J. (2016). Spain: new emigration policies needed for an emerging diaspora. Washington, DC: Migration Policy Institute.
- Bakas, D. (2012). Unemployment in Greece: evidence from Greek regions.
- Bartlett, W., & Prica, I. (2011). The variable impact of the global economic crisis in South East Europe. *Economic Annals*, 56(191), 7-34.
- Cavounidis, J. (2015). The Changing face of Emigration. Harnessing the potential of the new Greek Diaspora, Washington: Migration Policy Institute.
- Cazachevici, A., Havranek, T., & Horvath, R. (2020). Remittances and economic growth: A meta-analysis. *World Development*, 134, 105021.
- Chiamaka, A. (2021). What happens after helping babies breathe training is complete? A prospective cohort study of Nigerian health care workers. *Nigerian Journal of Paediatrics*, 48(1), 34-38.
- Czaika, M., & De Haas, H. (2014). The globalization of migration: Has the world become more migratory?. *International Migration Review*, 48(2), 283-323.
- Dijkstra, L., Garcilazo, E., & McCann, P. (2015). The effects of the global financial crisis on European regions and cities. *Journal of Economic Geography*, 15(5), 935-949.
- Egogh, J., Bangake, C., & Semedo, G. (2019). Do remittances spur economic growth? Evidence

- from developing countries. *The Journal of International Trade & Economic Development*, 28(4), 391-418.
- Gropas, R., & Triandafyllidou, A. (Eds.). (2014). *European immigration: A sourcebook*. Ashgate Publishing, Ltd..
- Investopedia. (n.d.). Human capital definition. Retrieved May 8, 2023, from <https://www.investopedia.com/terms/h/humancapital.asp>
- Issahaku, H., Abor, J. Y., & Amidu, M. (2018). The effects of remittances on economic growth. *The Journal of Developing Areas*, 52(4), 29-46.
- Jalali, Q. M. (2017). Investigating causes of human capital flight of doctors and engineers from Pakistan. *Journal of Managerial Sciences* Volume XI Number, 1, 86.
- Juselius, K., & Dimelis, S. (2019). The Greek crisis: a story of self-reinforcing feedback mechanisms. *Economics*, 13(1).
- Karantinos, D. (2014). *An evaluation of the social and employment aspects and challenges in Greece*. Brussels: European Parliament.
- Labrianidis, L., & Pratsinakis, M. (2016). *Brain drain and the Greek crisis*. LSE Greece@ LSE.
- Labrianidis, L., Sykas, T., Sachini, E., & Karampekios, N. (2022). Innovation as a cause of highly skilled migration: Evidence from Greece. *International Migration*.
- Lazaretou, S. (2022). The Greek brain drain: the new pattern of Greek emigration during the recent crisis. *Bank of Greece Economic Bulletin*, (43).
- Meyer, D., & Shera, A. (2017). The impact of remittances on economic growth: An econometric model. *EconomiA*, 18(2), 147-155.
- Oliinyk, O., Bilan, Y., Mishchuk, H., Akimov, O., & Vasa, L. (2021). The impact of migration of

highly skilled workers on the country's competitiveness and economic growth.

Montenegrin Journal of Economics.

Panagiotakopoulos, A. (2020). Investigating the factors affecting brain drain in Greece: looking beyond the obvious. *World Journal of Entrepreneurship, Management and Sustainable Development*, 16(3), 207-218.

Rontos, K., Syrmali, M. E., Vavouras, I., & Salvati, L. (2020). Corruption and economic competitiveness: What Greece can tell us. *portuguese journal of social science*, 19(1), 97-123.

Royo, S., & Royo, S. (2020). From boom to bust: The economic crisis in Spain 2008–2013. *Why Banks Fail: The Political Roots of Banking Crises in Spain*, 119-140.

Saravia, N. G., & Miranda, J. F. (2004). Plumbing the brain drain. *Bulletin of the World Health Organization*, 82, 608-615.

Tubadji, A. (2012). Culture-based development: empirical evidence for Germany. *International Journal of Social Economics*, 39(9), 690-703.