From brain drain to brain circulation: attracting high skilled migrants back

The improvement of Human Capital from brain circulation

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Introduction

1.1 Background

Many developing countries nowadays face with the problem of Human Capital Flight (HCF), or 'brain drain' as it is often referred to. Brain drain is the migration of relatively highly educated individuals from developing countries to developed countries. Comparative data reveal that by 2000 there were 20 million highly skilled immigrants living in the OECD member countries, a 63.7% increase in ten years against only a 14.4% increase for unskilled immigrants (Docquier and Marfouk, 2006 in Beine, Docquier & Rapoport, 2008). Most of these highly skilled immigrants come from developing countries and now represent more than a third of the total immigration to the OECD.

The term 'brain drain' was introduced by the Royal Society to describe the migration of 'scientists and technologists' to North America from post-war Europe (Cervantes & Guellec, 2002). However, Spring (2009) argues that this term was first used in the UK to describe the migration of Indian scientists and engineers to the UK. The term originally referred to technology workers leaving a nation, but the meaning has broadened into the migration of highly educated or skilled experts from one country to another, usually for better pay or living conditions (Free Merriam-Webster Dictionary, 2010). Rapoport (2004) agrees with Cervantes & Guellec (2002) and states that the term 'brain drain' originates in the 1950s and refers to the immigration of scientists from countries such as the UK, Canada or the former Soviet Union to the US. In the 1970s, there was a clear opinion on the brain drain. The migration of highly skilled people was detrimental to the origin countries. Many scientists, including Jagdish Bhagwati, agreed on this statement and argued that the brain drain was basically a negative externality imposed on those left behind in the developing countries. Besides, it amounts to a zero-sum game in which the rich countries become richer and the poor countries become poorer. Hence, it will create a larger gap between poor and rich. They also stated that the international community should implement a policy whereby the countries of origin should get compensated for the losses they suffer from the brain drain, for example a 'tax on brain drain' (Rapoport, 2004). Data on the brain drain is hard to find, but the UN has estimated a total of 300.000 highly skilled emigrants from all developing countries to the West during the 1960s (UNCTAD, 1975 in Rapoport, 2004); the 1990 US Census showed that there were 2.5 million highly skilled immigrants. This did not include students (Saxenian, 2005).

During the last two decades, the negative view on the brain drain has changed. Many developing countries have experienced a social gain from the brain drain (Rapoport, 2004). Scientific researches describe new tendencies of migration of highly skilled persons who are working in a foreign country and later return to their country of origin, the so-called brain circulation. Biao (2007) states in Daugeliene & Marcinkeviciene (2009) that "since the topic of 'brain drain' was introduced to the United

Nations' debates in the late 1960s, policy thinking on skilled migration has shifted its focus from discouraging emigration in the 1970s to encouraging returns in the 1980s, and to facilitating 'brain circulation' since the 1990s" (Biao, 2007 in Daugeliene & Marcinkeviciene, 2009 p50). Since the return to education is higher abroad, migration prospects can raise the expected return to human capital and induce more people to invest in education at home (Beine, Docquier and Rapoport, 2008).

Many research has already been done on the topic of brain drain. Beine, Docquier & Rapoport (2008) for example investigated that among the developing countries there are winners and losers. They offer initial insights on general circumstances in which a beneficial or detrimental brain drain is obtained. They also suggest that more research is needed to create more confidence in policy conclusions. Data over longer time periods are needed to confirm the evidence. Besides, it is important to control the age of entry for migrants since people who acquired education at home can truly be defined as 'high skilled'. At last, they state that the sectorial composition of migration can be important and especially if the brain drain affects specific professions (Beine, Docquier & Rapoport, 2008). Daugeliene and Marcinkeviciene (2009) pointed out that brain circulation is the phenomenon that replaces the phenomenon of brain drain versus brain gain in a globalized, knowledge-based world. They conclude that many nations faced the movement of their highly skilled people, but just a few countries managed to solve this problem and attract them back or keep close contact. India has been a great example. Rapoport (2004) concludes that countries should not impose restrictions on the international mobility of their high skilled residents, because this could decrease the long-run level of their human capital stock. Docquier & Rapoport (2012) state that although it seems that globalization has made the human capital scarcer where it is already scarce and more abundant where it is already abundant, but that this is not totally correct. Recent literature shows that high skilled migration can generate positive network externalities and is therefore positive for developing countries. However, it creates winners and losers. The winners and losers are not created by fate, but they depend largely on public policies adopted in the developing and developed countries. For a better result they need to improve the state of international migration data. They also state that many of the macro studies surveyed do not identify the causal effects of high-skilled migration on development in a fully convincing way (Docquier & Rapoport, 2012). Saxenian (2005) states that India's successful turning from brain drain into brain circulation could be a model for others. However, for example large parts of Africa and Latin America lack the skill base or political openness to become attractive environments for technological entrepreneurship (Saxenian, 2005). Perhaps this could apply to the health sector in Africa. For the Middle East, most migrants are refugees and hence not inclined to return to their country that lacks the economic stability needed for technological investment (Saxenian, 2005). If these countries improve their government and their stability, maybe refugees will return, because of the families they left behind.

The brain drain is thus seen as an important and challenging topic for countries and many research has already been done. But what about the attention in the media? Media attention for a topic can create a massive response from the public opinion, which in turn affects the decisions from governments to put this topic on the agenda. An example can be the image of the drowned Syrian refugee boy named Alan Kurdi, which created a public response to deal with the refugee crisis in Syria. But what about the situation in Syria after the war is ended? When experts seek media attention, they want to create a public response to their challenge. The opinions from experts are shown in newspaper articles and are important as they create the public opinion and eventually influence the agenda of the government. This data is very different from other scientific data, as these only show the opinions from experts.

1.2 Research Question

Research on the brain drain is mainly done by looking at the national level or comparing countries which are near neighbors, for example India, Taiwan and China. Yet, countries like South Africa and Syria have larger problems with the brain drain and no countries to compare within their neighborhood. The purpose for this thesis is to analyze the countries Syria and South Africa and compare them with each other with respect to job sectors, policies and motives related to the brain drain, and a country which is typical for a successful turning of brain drain into brain circulation, namely India. India turned its massive brain drain into a brain circulation by focusing on the positive aspects of the country and creating new policies. This thesis will research the main differences with respect to the job sectors, policies and motives between India, South Africa and Syria in facing the issue of brain drain. Besides, the media attention related to the brain drain problem in these three countries will be analyzed to find the different opinions of experts and how they want to set the agenda for governments in these countries. It is already known that all three countries face with the brain drain issue or turned it into a brain circulation issue. The problem is only different between these countries. The aim of this thesis is to provide new insights in the debate of the brain drain by comparing the countries on the factors of job sectors, policies and motives of skilled migrants which can also apply to the European Union (EU) in terms of policy, strategy, organization and communication, but also to help in finding a solution for the losers from the brain drain and to show the current attention paid to brain drain in the mass media. These insights include the current problem of the EU with the Syrian refugees and how the EU should act once Syria's civil war is ended because for example, as Abboud (2016) states, the education systems need to be rebuild after the civil war. Many Syrian children do not go to school during the war. Also, insights are given in the South African situation, where healthcare workers also migrate to the EU. This research tries to find solutions for this problem and discuss the role that

South Africa and the EU should play in this part. It builds on the paper of Hagopian et al (2004) by giving suggestions what South Africa could do to reverse their brain drain and turn it into brain circulation. Also, it builds on the paper of Kalipeni, Semu & Mbilizi (2012) by suggesting possible joint solutions between South Africa and the EU to increase the long-term development of South Africa. It builds on the paper from Straubhaar (2000) by analyzing the media attention paid to this subject and whether experts in the media focus on the positive aspects of the brain circulation or the negative aspects of the brain drain. Last, to grow the EU's human capital, this research presents some suggestions relating to the brain circulation.

The research question for this thesis will be: What are according to scholarly experts in the media the differences in job sectors, policies and motives influencing the brain drain between India, Syria and South Africa? In this research question, it is important to look at the approach on brain drain between the different countries and how they deal with the migration of skilled people. As the research question is comparative, the thesis will provide a comparison between the countries in order to identify the complexity of the brain drain issue and to investigate whether one country is successful in turning the brain drain into brain circulation, while other countries keep struggling with the brain drain as a problem. The research question will give new insights in the differences between the job sectors from the high skilled migrants between the countries and how these differences relate to different motives for migrating, but also what measures countries are currently taking and which measures are successful. To provide a full answer to the research question, sub questions will be needed. The opinions of experts shown in newspaper articles will support the answer to the research question and sub questions, as it can be analyzed whether they agree or disagree on the solutions for the brain drain in the three countries. The sub questions will first take a look at the job sectors of the skilled migrants, then they look at the perspective of the governments of the countries and last, they view the perspective of the skilled migrants and the reasons for leaving the country and deciding either to stay away or to return home. Eventually, the final answer to the research question will contain a combination of the conclusions from all sub questions.

The job sectors in which the highly intellectuals who decided to migrate from the countries India, South Africa and Syria are located vary per country. The first sub question of my thesis will be: What are the main differences in the job sectors of migrating skilled experts discussed by scholarly experts in the media of the different countries? It is important to know the differences in job sectors, because this will again identify the complexity of the phenomenon. This sub question is important as the differences in job sectors could explain the outcomes related to the brain drain in a country. Discussing the differences in high skilled migration between job sectors will reveal that different approaches are needed and that each job sector has different reasons for migration. This thesis will provide an understanding why for example many skilled experts from one job sector leave a country,

while in another country many skilled experts from different job sectors are leaving. By understanding the migration of highly skilled individuals in the different job sectors, the answer on the research question will be more clarified. To analyze how much attention is currently paid to the job sectors of the skilled migrants, and what experts see as important related to job sectors, newspaper articles will be analyzed.

Every country develops its own policy for dealing with the brain drain. The second sub question will be dealing with the different policies of the countries. It is therefore formulated as: To what extent is there consensus or dissensus among scholarly experts in the media related to the main differences in the policies dealing with the brain drain between the different countries? Migration policies from each country will therefore be necessary to provide the information needed to answer this question. This sub question is important, as it reveals what government initiatives already have been taken and how experts bring light to this in media. Whether they agree or disagree could help in explaining the effectiveness of these policies and comparing them with each other could create policy suggestions for the compared countries. Through the experts' views in migration policies of the countries and in newspaper articles, the initiatives taken by the governments will be identified. To analyze whether the different policies have the desired effect in figures on the countries, a dataset by Brücker, Capuano and Marfouk (2013) will be analyzed. The role of this dataset will be expanded in Chapter 3 of this research.

Migrated experts often plan to return to their home country at one day, but the reasons for leaving their country in first instance often plays a role in deciding to stay away. The development of the country is thus important for the decision of a skilled expert to return or not. Therefore the main reasons for leaving the country have to be identified. For example, in South Africa one of the main reasons is the high crime level in the country. So, migrated experts who plan to return will probably await the developments on the crime level of the country. The third sub question will be: How do the experts in the media formulate the main differences in the reasons for migrated experts to leave their home country between the different countries? In addition to this question are the reasons for return, which is indicated in the following question: How do the experts in the media formulate the main differences in the reasons for migrated experts to return to their home country between the different countries? This third sub question and the additional question are important, as they help to understand the reasons behind the migration of the individual experts. It will reveal what countries can do to control the brain drain problem and on which factors they have no control. Expected answers will relate to the fact that in order to solve the problem, the countries have to tackle these reasons for leaving a country, but at the same time they should encourage experts to leave for education if they guarantee to return after a couple of years. These questions will help to answer the research question, as they look at the perspective of the skilled migrants. Newspaper articles and scientific articles with

expert interviews will be analyzed to control to what extent the reasons mentioned in the Theories chapter correspond with reasons suggested in the media.

1.3 Approach

This thesis will contain a comparative research. The countries India, South Africa and Syria will be compared to analyze the brain drain. As India is successful in turning the brain drain into brain circulation, there will be analyzed to what extent Indian solutions could count for South Africa and Syria. Questioned will be what solutions are possible for South Africa and Syria and why some solutions do not apply to these countries. It will become clear what the complexity of the brain drain issue is and why one country can be successful in turning the brain drain into brain circulation, while other countries keep struggling with the brain drain as a problem. To get a clear image of the situation, the concepts globalization and push/pull factors will be identified to explain the reasons for the human capital flight. Globalization opens up border between countries and makes it easier to accomplish a free movement of workers between countries, while the push/pull factors explain a push factor, which are negative aspects of a native country that could count as a reason for skilled migrants to leave, and a pull factor, which indicates the reasons for skilled migrants to be attracted by developed countries. The dataset that is important for my thesis is from Brücker, Capuano and Marfouk (2013). This is a dataset on international migration, which is also focusing on the education levels of the migrants. The countries India, South Africa and Syria are included in this dataset. The education levels could help to indicate the brain drain from the countries and this will support the answering of the sub questions and research question. Besides, the dataset gives an overview to what countries most Asian Indians, South Africans and Syrians migrate. This will also help to understand the problem of the brain drain and it will explain the complexity of it. The dataset will be more elaborated in Methods chapter of this research. In addition to the dataset, the newspaper articles related to the brain drain and the mentioned countries will be important. The expert views in these newspaper articles will be analyzed and explain the current situation in which India, South Africa and Syria are located. As the brain drain in Syria has recently became a problem, the expert views in newspaper articles will provide more insights in how Syria is trying to deal with this problem, what kind of Syrian high skilled people migrate and for what reasons they migrate. The newspaper articles also highlight the importance of the brain drain and discusses whether this is positive or negative. Important to mention here is that newspaper articles will be analyzed to gain the opinions from experts and not facts. The facts will be gained from the dataset from Brücker, Capuano and Marfouk (2013) and to support certain figures from this dataset, the expert views on this matter will be compared.

The remainder of this thesis is as follows. The first chapter will expand on the theories of globalization and the push/pull factors. This chapter will conceptualize the research problem. The second chapter will describe the methods that will be used in this thesis. The relevance of the research question and sub questions will be explained and what kind of insights this will bring to the debate. The dataset from Brücker, Capuano and Marfouk (2013) will be important, as well as the newspaper articles related to the topic of brain drain. The third chapter will be the analysis of the data and newspaper articles. In this chapter the sub questions will be answered and will be arranged on the basis of these sub questions. The last chapter will contain the conclusion. There will be a common answer for the research question and this answer will be discussed with the authors mentioned in the first chapter. At last, there will be practical implications towards the EU. Hence, there will be explained what value this thesis could have on EU level.

Theories

2.1 Introduction

This chapter discusses the theories that will be used for the thesis. It takes a look at the perspectives of different authors and what the main issues of debate are regarding to the brain drain. There are many issues relating to whether the brain drain is positive or negative for a country and how a country should act to turn its brain drain into brain circulation. Also, the globalization of the brain drain has made its entrance to this debate. To understand the reasons for the brain drain, many scientists use the push and pull theory. The concept of globalization is important for this research. The first section of this chapter will therefore discuss the relation between globalization and the brain drain. It will first describe the relation between international migration and globalization. Secondly, it will describe the effect of globalization and how experts can create more attention for global challenges through the media. Last, it will explain the complexities of globalization related to migration and what opportunities can be created.

The debate on the brain drain is an evolution from the brain drain into brain circulation, as the past decades show us that the brain drain does not have to be a negative issue and, if a country is responding well, it can be an important factor to increase human capital. This is important to know and will provide information about what is already researched. The analysis of the debate between the authors will be the second section. It starts with explaining why brain drain was seen as negative before and how media attention can create agenda-setting for policymakers on global challenges. Second, it describes the recent arguments from different scientists who discuss the recent tendencies related to brain circulation and last it discusses situations in which the brain drain is still worrisome.

The last concept is called the push and pull factors. The push factors force the individuals to move voluntarily, most often because they risk something if they stay. Pull factors in the destination country attract the individuals to leave their home. The concept of push and pull factors is important, because these factors explain all reasons for movement. This will be the third section of this chapter. First, a general explanation for the push/pull theory will be discussed. Second, it will compare the push and pull factors of the rich and the poor. Third, there will be discussed whether push factors or pull factors have more influence on high skilled migrants. Fourth, the influence of the media regarding the decisions of the high skilled migrants will be discussed. Fifth, the differences in the push/pull factors between different high skilled groups will be explained and last there will be a relation to push/pull factors and the gender of the high skilled migrants. The final word of this chapter will contain a conclusion with the theoretical insights and importance of these insights for the remainder of the thesis.

2.2 Globalization and Human Capital Flight

In this section the relation between the brain drain and globalization is the central point of debate. Globalization has as result the expansion of markets and elimination of geographical isolation and it changes not only economic cooperation, but also the mindset of societies and management principles. On the one hand, according to Meyer (2001), the migration of skilled experts has become a highly debated issue relating to the process of globalization, which is a result of the opening of national resources in a knowledge-based economy (Meyer, 2001). Varma and Kapur (2013) state that "the globalization of economy has resulted in what can be termed as brain circulation" (Varma & Kapur, 2013 p318). Bundred and Levitt (2000) agree with this statement and add that globalization have made international migration easier, resulting in larger transfers of human resources (Bundred & Levitt, 2000 in Marchal & Kegels, 2003).

On the other hand, according to Saxenian (2002), the development of technical communities that loosens national borders and boast shared assets like technical information, trust, and contacts have been largely overlooked in accounts of globalization (Saxenian, 2002). A major aspect of globalization is the international migration. A dominant pattern of the international migration is high skilled migration. The migration to the OECD countries increased with the same rate as trade, but brain drain from developing countries to developed countries has raised much faster. (Docquier & Rapoport, 2012).

However, Marchal & Kegels (2003) state that "the neoliberal argument for globalization maintains that deregulation, opening up of markets and stimulation cross-border movement of persons and goods will eventually benefit all countries. Ethically, individual freedom of movement and the personal right to pursue self-fulfillment and better living conditions are called upon to justify the brain drain." (Marchal & Kegels, 2003 p98). Tankwanchi, Özden and Vermund (2013) state for example that with continued globalization, the expectation is that the migration of African physicians will raise unless the numbers of physicians and job satisfaction in the home country improves (Tankwanchi, Özden & Vermund, 2013).

Globalization also led to a bigger focus from media on global challenges. Dirikx and Gelders (2008) discuss for example the important role from the mass media in influencing people's attitude towards global warming (Dirikx & Gelders, 2008). Or Wilson and Dalton (2008) highlight the recent media attention for human trafficking and that this attention requested policy responses from policy makers (Wilson & Dalton, 2008). If turned to the brain drain, a rather fast growing part of the public opinion has changed mind slowly. The public opinion now realizes that the consequences of migration are very complex and ambiguous (Straubhaar, 2000).

There are different effects of globalization. A first effect is that many cities develop specific cultures to attract high-tech professionals, investment and businesses. In the case of India, the cities Bangalore and Hyderabad converged local governments, private and public sectors, and skilled personnel to develop the economic bases, infrastructure and cultures necessary for their transformation and development (Chacko, 2007). Beine, Docquier and Rapoport (2008) state that the globalization is one of the causes for the growing of the brain drain. A second effect of globalization is that it has strengthened the tendency for human capital to agglomerate where there is already plentiful human capital and it contributes to increase positive self-selection between skilled migrants (Beine, Docquier & Rapoport, 2008). Rapoport (2004) states a solution and explains that in the current context of globalization, selective immigration policies are only able to reinforce the tendency stated by Beine, Docquier and Rapoport (2008).

A third effect of globalization is described by Zweig, Changgui and Rose (2004), who state that globalization entails the increased flows of goods, capital, services and people across international borders. This has increased during the past 10-15 years and these increased flows are often the result of lowering border controls. Therefore, globalization can change the value of goods and services, but also the society's evaluation of individual talent and scales. This is largely due to the transaction costs of global exchanges (Zweig, Changgui & Rosen, 2004). The increase in the value of global goods is especially true in developing countries who undergo the process of economic modernization or structural transformation. For example, a modernizing society needs more high skilled people because of the increased role of technology in economic development and international competition, and the emergence of new trade norms. If a country wants to be competitive in a globalizing world, it needs a steady inflow of new ideas and information from overseas. Individuals who incorporate new ideas, technologies or information may find enormous opportunities if they migrate to developed countries. Thus, globalization offers people opportunities to increase the value of their human capital (Zweig, Changgui & Rosen, 2004).

The international movement of people is an essential component that stimulates further integration of the world economy in the process of economic globalization (Marchiori, Shen & Docquier, 2013). Marchiori, Shen and Docquier (2013) state that "it is found that the reason why the impacts working through the technology mechanism generates a large impact is greatly because of international capital mobility, as production technology defines production efficiency, which is one of the most important determinants of returns to physical capital. In other words, the benefits and the harms of brain drain can be amplified when it takes place in globalization" (Marchiori, Shen & Docquier, 2013 p1585). This also describes the complexities of the brain drain, which people come to realize more and more through the experts that turned to the media for attention of this global issue (Straubhhaar, 2000).

Asiedu (2010) describes that the complexities of the migration process have created new pressures on the governments of countries, which must manage the inside migration and outside migration in a way that sustain their place in the globalized world. However, in most cases they are operating in a policy environment characterized by ineffective planning and insufficient collaboration across boundaries (IMI, 2006 in Asiedu, 2010). Because of globalization, countries have greater access to capital, better technology, and access to foreign markets, which creates opportunities for countries to grow their economies. However, globalization has been criticized because it leads to increased inequality across and within countries, because these benefits are not equally distributed. Some people might therefore suggest that globalization is a trick of rich countries to deepen the dependency of poor countries (Asiedu, 2010). Asiedu (2010) describes that the luring of Third World professionals to work in the rich nations' economies is one example of the negative effects of globalization. The hunt for global talent by rich countries and multinational companies has accelerated the migration of skilled labor between countries, and generated complex patterns of brain circulation and networks (Lowell et al 2004 in Asiedu, 2010), despite of the global economic crisis that may result in somewhat reduced migration. The demand for high skilled professionals has accompanied technological booms like those in Silicon Valley. Most developed countries consider the migration of high skilled professionals as a way of filling the gap of labor shortages, but there are also developed countries that use high skilled migrants to improve their human capital (Iredale, 2001 in Asiedu, 2010). This creates an imbalance in developing countries, in which important job sectors like healthcare face shortages of skilled personnel.

According to Docquier and Rapoport (2012), high skill migration does not mean that the human capital from a country will automatically decrease. It can generate positive network and diaspora externalities. The brain drain side of globalization creates therefore winners and losers (Docquier & Rapoport, 2012). Countries therefore need a clear policy regarding the high skilled migration. To create attention to global challenges, experts seek media attention to convince the public opinion of the importance for the challenge. As Dirikx and Gelders (2008) state: "The theory of agenda-setting states that the salience of an issue in the media has an influence on the importance attached to that issue by the public." So to put the importance of a policy regarding the brain drain on the agenda, experts can put their opinions through the media (Dirikx and Gelders, 2008).

Certain characteristics for developing countries in terms of governance, technological distance, demographic size, and the interaction between these, are connected with the ability of a country to form human capital in a context of migration and to create global benefits from having a skilled and educated diaspora (Docquier & Rapoport, 2012). Rivzi (2005) states that the popular idea of brain drain appears to link each individual's identity to only one country to which individuals are expected to be loyal to. He questions whether this idea is sustainable in an era of globalization. The same applies to

the notion that it is only possible to make a contribution to the development of a country by being located in this country (Rivzi, 2005). In the context of globalization, the biggest issue has become not where people are located, but what contribution they are able to make to the social, cultural, and economic development of the countries with which they identify. The international mobility of skilled people is both a consequence of sustain the processes of economic and cultural globalization, but it is also a necessary stimulus (Rivzi, 2005). It is important for developed countries and developing countries that there is a circulation of knowledge in a globalized knowledge economy. A number of policy scholars such as Meyer and Brown (2003) suggest that for the developing countries to benefit from the brain circulation, the location of people is unimportant so long as the developing countries are able to draw upon their expertise (Rivzi, 2005). This option is called the diaspora option and underline the need to create links through which skilled migrants could still be connected to their home country (Rivzi, 2005).

Tung (2008) explains that there are four factors which stimulate the brain circulation. The first factor is Globalization. The growing economic interdependence has meant that countries around the world are more inter-connected than at any other previous time in history. Second, reducing the migration barriers to the movement of people have made it easier for people to relocate across countries. Third, more and more developed countries permit dual citizenship, thus facilitating this mobility across nations. Last, boundary less careers is the new concept in which highly skilled people are increasingly willing to change jobs across international boundaries to get more satisfying careers (Tung, 2008 in Daugeliene & Marcinkeviciene, 2009). Baruch, Budhwar and Khatri (2007) state that the boundary less career approach, where physical boundaries and national borders are no longer rigid, fits well with the concept of expatriation. Self-directed expatriation is increasingly recognized as a common career choice and it is about improving one's lifestyle and looking for new career choices (Baruch, Budhwar & Khatri, 2007). Daugeliene & Marcinkeviciene (2009) also discuss that in the knowledge-based society of today, the one-way ticket still reigns and that globalization has made temporary workflows almost common-place. This allows sending and receiving countries to benefit from the brain circulation not just from their remittances, but also from the specialized experiences of the expatriate professionals (Daugeliene & Marcinkeviciene, 2009). Marchal and Kegels (2003) agree with this statement and add that the shift from brain drain to brain circulation is accompanied by the opening up of international borders for goods and labor, which is a key strategy in the current liberal global economy (Marchal & Kegels, 2003). However, Meyer (2001) also states that globalization of the highly skilled labor market does not occur without massive network investments. There are exceptional cases where individuals move quickly from one place to another on their own and establish immediate contact with a potential employer. Internet is an example. This is a unique situation and corresponds to a situation where the networks in the home country are very similar with those set up

in the host country (Meyer, 2001). Internet also contributes in the globalization process and creates the opportunity for experts to seek media attention worldwide.

Rivzi (2005) analyses the ways in which the brain drain relates to the dilemmas of globalization and focuses on the opportunities provided by the new knowledge economy and global labor markets on the one hand, and on the perceptions of loyalties to the home country on the other hand (Rivzi, 2005). According to Rivzi (2005), there are negative and positive interpretations of the globalization and the brain drain. He states that the negative side feels that it is fundamentally wrong for developed countries to recruit high skilled workers from developing countries where they might have invested a lot of money in their education and where their skills can make a significant contribution to national development. However the positive side says the brain drain is an inevitable consequence of globalization and in a globally integrated knowledge economy both the developing and developed countries benefit from the global circulation of skilled workers (Rivzi, 2005). Guellec & Cervantes (2002) add that in a globally integrated knowledge economy, the brain circulation is not only related to the changing structure of economic activities, but also to "the opportunities for high technology entrepreneurship, access to leading clusters of research and innovation, bottlenecks of employment opportunities in public and private research and the globalization of the R&D activities of national firms" (Guellec & Cervantes, 2002, p71).

Key insights from this section start with the fact that international migration is a major aspect of globalization. This research is about the brain drain and to analyze the brain drain, it is therefore also important to analyze the concept of globalization. The globalization has impact on the movement of workers and it will help in explaining the growing brain drain or brain circulation from the developing countries to the developed countries in this research. Globalization has also created more attention from the media to global challenges and experts are more and more trying to convince the public opinion of these challenges to create the awareness needed to put these challenges on the agenda. Also important for this research is to keep in mind that the location of the high skilled migrants is less important as long as they are able to contribute to the social, cultural, and economic development of the countries with which they identify. So a high skilled migrant does not have to return to the home country to contribute to the home country's development.

2.3 From brain drain to brain circulation: the evolution of Human capital flight

This section discusses the evolution from the brain drain into the brain circulation. At first many scientists believed the brain drain was detrimental for the countries of origin. It was a negative externality for those left behind in the developing countries and it created a bigger gap between the poor and rich countries. The scientists agreed that the international community should implement a

policy whereby the countries of origin should get compensated for the losses they suffer from the brain drain, for example a 'tax on brain drain' (Rapoport, 2004). The experts through the media seem to have the power to turn the public attention to this issue and thereby put it on the agenda for policy makers (Dirikx & Gelders, 2008). Most experts do this by framing. Entman (1993) maintained in Dirikx and Gelders (2008) that: "To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described" (Entman, 1993 in Dirikx & Gelders, 2008 p100). Frames make is possible for the public to rapidly determine the importance of an issue, the responsible person, and the possible consequences. Therefore the media frame can have an important effect on the public understanding of the brain drain (Dirikx & Gelders, 2008).

According to Beine, Docquier and Rapoport (2008), there are different causes for the phenomenon called brain drain. They describe a supply-side and a demand-side. On the supply-side, the globalization of the world economy has strengthened the need for human capital to come together where it is already abundant and contributed to increase positive self-selection among international migrants. And on the demand-side, host countries have gradually introduced quality-selective immigration policies and are engaged in what appears as an international competition to attract global talent (ILO, 2006 in Beine, Docquier & Rapoport, 2008). Both are seen as negative arguments for the brain drain. Stark (2003) continues and argues that an economy open to migration challenges the structure of the incentives they confront. Higher prospective returns to human capital in a foreign country clashes with human capital formation decisions at home. Besides, a good migration policy can secure a welfare gain for all workers (Stark, 2003). Commander, Kangasniemi and Winters (2004) describe that for return migration a positive channel would occur when skilled migrants return with experience, links to networks and financial resources. For reasons to return they refer to a statement of Dustmann (1996), who says that in general, a skilled migrant can decide to return if he prefers consumption in the sending or home country, if prices are lower in the home country, or if human capital acquired in the receiving country is more valuable in the sending country (Dustmann 1996, in Commander, Kangasniemi & Winters, 2004). However, Commander, Kangasniemi and Winters (2004) also believe that returning skilled migrants may be those that have performed relatively poor in the sending country and that the best migrants tend to stay away. This is of course another negative argument for the brain drain, but they add that these observations are not necessary true for all different migration groups or countries (Commander, Kangasniemi & Winters, 2004).

The last two decades the first and negative view on the brain drain has changed into a more positive view. Docquier, Lohest and Marfouk (2007) stated at first that when you take away the human capital of a country, it means that you take away one of their scarcest resources. The brain drain is

usually seen as an obstacle on economic development. However, they state that recent theoretical studies have shown compensatory effect, that the brain drain can also be beneficial for sending countries (Commander, Kangasniemi & Winters, 2004; Docquier & Rapoport, 2007; Beine, Docquier & Rapoport, 2001 in Docquier, Lohest & Marfouk, 2007). According to Beine, Docquier and Rapoport (2008), early contributions identified a range of positive feedback effects in the form of remittances, return migration with additional skills acquired abroad, and creation of scientific and business networks, but they also conclude that the welfare of those left behind would still fall given the social return to education is higher than its private return (Grubel and Scott, 1966; Bhagwati and Hamada, 1974; McCulloch and Yellen, 1977 in Beine, Docquier & Rapoport, 2008). Many scientists (Blitz, 2005; Kuznetsov and Sabel, 2006; Le, 2008; Saxenian, 2002; Tung, 2008; Yun-Chung, 2007; Teffera, 2004) show that developing countries experience social gains from the brain drain and state that the brain circulation replaces the traditional concept of brain drain (Daugeliene & Marcinkeviciene, 2009). They describe the new tendencies of migration of highly skilled persons who are working in a foreign country and then return to their native country (Daugeliene & Marcinkeviciene, 2009). Tung (2008) maintains in Daugeliene and Marcinkeviciene (2009) that in the past there was a discussion between brain gain on the one hand, whereby a country receives a healthy injection of human talent through migration, and on the other hand, the opposite which is called brain drain. Tung (2008) further discusses that it is now more appropriate to see these migration patterns in the context of brain circulation (Tung, 2008 in Daugeliene & Marcinkeviciene, 2009).

According to Le (2008), the migration of knowledge workers may help international labor movement with transferring technology across borders in both directions: from origin countries to developed countries and vice versa. This kind of migration creates brain circulation (Le, 2008). As Marchal and Kegels (2003) also state in their article: "Strikingly, in the publications of the World Bank and other international agencies, the terms 'human capital flight' and 'brain drain' are increasingly replaced by 'professional migration', 'professional mobility' or 'brain circulation' (International Organization for Migration, 2001; World Bank, 2001; OECD, 2002 in Marchal & Kegels, 2003 p90). Therefore it is discussed that brain circulation is the phenomenon which fundamentally replaces the phenomenon of brain drain in a globalized and knowledge-based world.

Many scientists analyze the phenomenon of brain drain and state that brain circulation is necessary for a country's economic development, but they also stress the need to accumulate highly skilled people (Beine, Docquier & Rapoport, 2008; Chacko, 2007; Daugeliene & Marcinkeviciene, 2009; Rapoport, 2004; Saxenian, 2002; Saxenian, 2005). The brain circulation has therefore different positive effects. As first, Daugeliene and Marcinkeviciene (2009) state that "highly skilled human capital migration appears to be as one of the most important elements, contributing to countries economy progress" (Daugeliene & Marcinkeviciene, 2009 p49). A country's development depends on factors as

learning, researches, innovation creation, and collaboration with other countries. In an isolated economy there is no competition in the national level (Daugeliene & Marcinkeviciene, 2009). Besides, networks of scientists and engineers are more flexible and faster in transferring technology, skill and knowledge between distant regional economies compared to most corporations and these networks have the potential to play an increasingly important role in the evolution of global production networks (Saxenian, 2002).

As second, when keeping in mind that a country's development depends on factors as learning, researches, innovation creation, and collaboration with other countries, brain circulation has become one of the most important factors that influences the economy growth and competitiveness of a country. (Daugeliene & Marcinkeviciene, 2009). Daugeliene and Marcinkeviciene (2009) add some body to this by stating that: "Human capital is one of the most important pillars sustaining countries economy growth as well as its competitiveness in the knowledge-based world" (Daugeliene & Marcinkeviciene, 2009 p49). A rather fast growing part of the public opinion has changed mind slowly due to the attention from the experts in the media for the brain drain. More and more people realize that the consequences of migration are very complex and ambiguous. They realize that economic effects depend on the size, the speed, the intensity and the structure of migration flows with regard to age and qualification (Straubhaar, 2000). Daugeliene (2007) stresses that "brain circulation is a very welcome phenomenon in different countries, especially for those with low human capital potential" (Daugeliene, 2007 in Daugeliene & Marcinkeviciene, 2009 p51) and highlights that "brain circulation can arise positive long-term dynamic economic as well as social effect" (Daugeliene, 2007 in Daugeliene & Marcinkeviciene, 2009 p51). Meanwhile, Blitz (2005) points out that the combination of temporary migration, sustained investment in R&D, and remittances being sent back home has led to brain circulation to prove that the result of such skilled migration flows may increase economic growth for sending and receiving countries in the long term (Blitz, 2005 in Daugeliene & Marcinkeviciene, 2009). Saxenian (2002) and Kuznetsov (2006) maintain this statement and stress that because of the brain circulation phenomenon, high-skilled migration benefits both sides and the circulation of knowledge workers from poor economies to rich economies and back is opening new possibilities for economic development worldwide (Saxenian, 2002; Kuznetsov, 2006; in Daugeliene & Marcinkeviciene, 2009).

As third, Meyer (2001) also agrees that the phenomenon of brain circulation is not necessary negative for developing countries. Some good may come out of the expatriation in terms of increasing access to external resources. It is no longer necessary to keep nationals in the country through restrictive measures. The emphasis is now placed on science and technology as well as educational policies to provide incentives and conditions for effective returns (Meyer, 2001). Therefore Meyer (2001) also states that the 'tax on brain drain' according to their human capital value is no longer a

discussion on the agenda (Meyer, 2001). Beine, Docquier and Rapoport (2008) agree with Meyer (2001) that the emphasis is now on science, technology and educational policies. They add the fact that since the return to education is higher abroad, skilled migrants can raise the return to human capital and encourage more people to invest in education at home (Beine, Docquier & Rapoport, 2008).

While many countries seem to benefit from the brain circulation, there are still situations where the problem of brain drain occurs. Take for example the many small countries in Sub-Saharan Africa and Central America, in particular. The situation here is extremely worrisome. While the main globalizers (China, India, Brazil) all seem to experience non-negligible gains, these countries still face brain drain problems (Beine, Docquier & Rapoport, 2008). Marchal and Kegels (2003) underline this fact and state that the cause for the problem in these countries is the migration of health personnel. Health personnel, and in particular nurses and doctors, but recently also physiotherapists, pharmacists and biomedical researchers, probably even account for the majority of skilled migration (Martineau et al., 2002 in Marchal & Kegels, 2003). According to Docquier, Lohest & Marfouk (2007), the countries in Sub-Saharan African face various disadvantages such as a low level of development, high political instability, and religious and ethnic fractionalization. The brain drain has therefore different possible causes, many of which cannot be affected by public interventions. To focus on areas that can be influenced by public policy, for example promoting education and improving the political climate at origin, could help to reduce the brain drain or turn it into brain circulation (Docquier, Lohest & Marfouk, 2007). The brain drain can also lead to brain waste when skilled personnel who migrated to developed countries are employed in functions below their level of qualification (Bundred & Levitt, 2000 in Marchal & Kegels, 2003). This situation is a loss for both countries. However, the gains from brain circulation outweigh the losses from the losers, which results in an overall gain for developing countries as a whole (Beine, Docquier & Rapoport, 2008).

Key insights from this section start with the fact that the negative view on the brain drain has changed over the years in a positive view of brain circulation. The media framing has caused a better understanding from the public related to the brain drain topic. For this research it is important to notice that there are winners and losers. Human capital migration contributes to a country's economic progress, its competitiveness, and increases the access to external resources. A rather fast growing part of the public opinion has changed mind slowly due to the attention from the experts in the media for the brain drain by recognizing the complexity of the problem and realizing the economic effect of the brain drain. However, the situation in countries in Sub-Saharan Africa and Central America is extremely worrisome. As this research investigates South Africa, it is important to keep this in mind.

2.4 Push/pull factors

This section discusses the importance of the push and pull factors relating to the brain drain. It will start with introducing the push-pull theory and the core of this theory. It will secondly compare the push and pull factors with the rich and poor. As third the importance of the pull factors related to the high skilled migrants will be discussed and these could be seen as the motives for the high skilled migrants. The role of media will be discussed as the fourth point. Fifth, the job sectors of the different high skilled migrants will be discussed and what differences this creates in the push and pull factors. It will take a focus on the health sector, as this job sector will be added in this research to the five existing groups. As sixth, the influence of migration policies regarding the push and pull factors will be explained. Finally, the differences in push and pull factors between gender will be discussed and critics against this theory will be given.

The push-pull theory was first introduced by Ravenstein in 1889 and elaborated by Lee in 1966. It is the most frequently quoted explanation for migration. The core of this theory argues that migration results from push-pull factors which operate at areas of origin and destination, respectively (Kalipeni, Semu & Mbilizi, 2012) and that reasons for brain drain have been explained by a push-element, consisting of an undesirable combination of economic, political and social hardships in developing countries, which drives highly skilled individuals to be pulled towards the prospect of better education, careers, wages and living conditions in developed countries. It is proposed that due to low salaries, rigid regulations, bureaucracy leading to nepotism, as well as lack of career opportunities and institutions for advanced graduate studies and research, highly skilled individuals from developing countries look for better opportunities (economic as well as educational) in developed countries. Political instability and corruption in home countries also makes highly skilled individuals look for those countries where there are stable governments and functioning democratic political systems (Varma & Kapur, 2013).

The ongoing inequalities in working conditions between rich and poor offer a greater pull towards the developed countries. Young and well educated individuals are most likely to migrate, especially when in pursuit of higher education and economic improvement. The role of the governments and recruitment agencies in encouraging the brain drain increases the pull (Dodani & Laporte, 2005). High skilled migrants face a combination of economic, social and political factors, and family choices. De-motivating work conditions, together with low salaries are the push factors on the one hand, set against the likelihood of prosperity for themselves and their families, work in well-equipped working conditions, and the opportunity for professional development on the other hand, which are the pull factors (Dodani & Laporte, 2005). Marchal and Kegels (2003) agree that there are political, economic and social push factors in developing countries. First, some examples of political

push factors are political instability, insecurity, oppression and poor housing, civil strife, inadequate social services, and educational facilities for children. Second, the economic push factors are explained by the low salaries, shortages of supplies and work overload. Last, the social push factors are the lack of continued education and professional development (Bundred & Levitt, 2000; Kerse & Ron, 2002 in Marchal & Kegels, 2003).

Zweig (1997) states that studies have found a set of relatively consistent factors that push people out of their home country and pull them to developed countries. Most of these studies see the low development of economic and political culture in the Third World as the push factors that make high skilled professionals decide to migrate, while the resources and benefits of the developed countries are the pull factors that attract them. Besides these major factors, there are also other factors like professional issues, economic conditions, friends and family, and political stability and freedom (Zweig, 1997). It is often the case that the potential migrant compares his potential situation in his home country with the situation of his peers in the developed country and this comparison is critical to the decision of the potential migrant (Rao, 1978 in Zweig, 1997). He also gets help from experts in media who emphasize certain risks in the home countries and media articles about people who migrated can help him in deciding to take the same step. There are also important individual factors, like the social class, and the ability to adjust to foreign social and work conditions (Glaser, 1978 in Zweig, 1997). The political culture may also be important. El-Saati (1979) states that "less personalized performance review systems, which decrease the importance of personal ties in determining promotion, makes the West more attractive to people from traditional states" (El-Saati, 1979 in Zweig, 1997).

Labor migration has been explained in the neoclassical migration models as the response to the existing differences of economic and social development level. The unfavorable conditions in the home countries are defined as the push factors, and the benevolent conditions in the destination countries are determined as the pull factors (Kazlauskiene & Rinkevicius, 2006). Research shows that most important factors in the structure of migration reasons are the economic factors. When comparing the push and pull variables, almost all events have a stronger effect of their attraction to the foreign country. This means that the pull effect is higher than the push effect (Kazlauskiene & Rinkevicius, 2006). This is confirmed by a statement from Brandi et al (2003), who found out that push factors are more common to unskilled migration, and the pull factors are likely to affect the high skilled migration (Brandi et al, 2003 in Kazlauskiene & Rinkevicius, 2006). Mayda (2010) also agrees and analyzes in Docquier and Rapoport (2012) that the impact of push factors on migration rates is relatively small compared to that of distance and pull factors (Mayda, 2010 in Docquier & Rapoport, 2012). The pull factors play a much greater role in the migration of high skilled people, with the exception of relations in academic society. However the flows of international migration are generally

directed to the rich countries, but this does not mean that all people migrate from the poorest countries (Kazlauskiene & Rinkevicius, 2006).

Experts in media help to generalize personal experiences and therefore play an important role in the social construction of risks (Douglas and Wildavsky, 1982; Fischhoff, 1995; Slovic, 2000, in Dirikx & Gelders, 2008). In other words, the media plays an important role in the way the public perceives the risks of staying in a country or migrating to a developed country. In this way the experts in the media contribute to the push and pull factors from countries by emphasizing the risks.

Mahroum (2000) sheds light on the various push and pull factors that are involved in the process or migration of five different groups of highly skilled professionals in the OECD area. He argues that each group of highly skilled professionals is affected by different push and pull factors. In other words, each different job sector with high skilled migrants has different push and pull factors. The first group are the managers and executives and these are mostly affected by corporate policies, especially regarding internationalization and the expanding of activities overseas. The decision for their mobility comes often unplanned and as a surprise. This is often based upon a new merger or expansion of the employing firm. The second group are the engineers and technicians and these are largely affected by migration policies, industrial and labor policies of governments. The main push and pull factors for this group are based on economic factors. This group seems to be the most responsive to the state of the national economy compared to the other groups. The third group are the academics and scientists. People from this group are most affected by bottom-up developments in academia and science, because these are necessary in the diffusion of scientific ideas. The two main dynamics for scientific attraction are the attraction of a country in a particular discipline and the prestige of an institution. The fourth group are the entrepreneurs. These have the intention of starting certain business activities and therefore arrive with capital and ideas for setting up a business. They are affected by mostly governmental policies (for example visa, taxation, and protection) and credits facilities. Entrepreneurs are often attracted to places where tax incentives and venture capital for startups are available, or where public funds to support entrepreneurs exist. Silicon Valley is a great example destination for entrepreneurs. The last group are the students. They are affected by governmental, intergovernmental, and inter-institutional policies. It is often unknown what the motives or the ultimate destiny of the students is in their destinations and they are often perceived as passengers who are heading abroad to a certain destination (Mahroum, 2000).

A sixth group can be added to the list of five groups from Mahroum (2000), which is the healthcare group. This is a problem occurring especially in the African countries and media attention from experts to this problem in this continent is important. The International Organization for Migration (IOM) in Zimbabwe is hopes to work with experts to create public awareness via the media and work towards improved and balanced reporting regarding migration. According to IOM Migration

Health Officer Nomagugu Ncube, the media has an important role to play in shaping a public opinion on the matter (Kapambwe, 2014). Kingma (2001) explains that there are several reasons for healthcare migration that contains both push and pull factors. First, healthcare workers migrated in search of professional development that was not available in their current job or country, demonstrating educational pull factors. The desire to practice professional healthcare skills may have attracted them to migrate from rural to urban areas or to migrate to another country where opportunities were better to use their knowledge and skills. The second reason is that healthcare workers sought better wages, improved working conditions, and higher standards of living which were not present in their native countries, demonstrating economic and social push and pull factors. Third and last, healthcare workers were looking for working spaces where they would encounter less risk to their personal safety. This reason is an increasingly strong political and social factor in healthcare migration (Kingma, 2001 in Kline, 2003).

Dovlo (2003) says that examples for push factors relating to the healthcare professionals in Africa are low remuneration, poor working conditions and low job satisfaction, political and ethnic problems, and civil strife and poor security. Poor governance is also an issue for high skilled people to migrate. Job satisfaction can be reduced by the lack of technology and equipment to perform professional tasks for which staff are trained. Examples for the pull factors relating to the healthcare professionals in Africa may arise because of increased demand for healthcare professionals in developed countries and economic changes that make the professions in this sector unattractive to job market entrants (Dovlo, 2003). Marchal & Kegels (2003) agree with Dovlo (2003) and state that in the healthcare sector, low professional satisfaction and a decreasing social valuation of health professionals are important factors which underlies both the push from developing countries, as well as the pull from developed countries (Marchal & Kegels, 2003). For example, most African government lack commitment and resources to improve the employment conditions. This is a problem to the full use of existing professional capacity (Economi Commision for Africa, 2000 in Marchal & Kegels, 2003). These are important reasons for African health professionals to leave.

Kalipeni, Semu & Mbilizi (2012) state that "immigration policy is another important pull factor. The US and its European allies have visa policies that encourage the brain drain." (Kalipeni, Semu & Mbilizi, 2012 164-165). In the opinion of Saxenian (2005), a lot of highly skilled individuals seem torn between the familial and cultural pull of home and what they regarded as superior professional and economic opportunities in developed countries (Saxenian, 2005). In the health care sector, the increasing demand for health care from developed countries is fuelled by mainly demographic trends, for example the ageing of the baby-boom generation. More important reasons are advances in medical practice and technology, emerging new diseases, and increasing expectations (Marchal & Kegels, 2003).

Docquier, Lowell and Marfouk (2009) have analyzed the high skilled migration on the basis of gender. They state that women and men do not respond with the same intensity to push and pull factors. Women have a tendency to rely more strongly on relatives and friends for help, information, protection and guidance at their destination. Therefore social networks are seen as more important for women. Also, educated women are better able to escape from sexual discrimination they must suffer in many developing countries compared to uneducated women. Most well educated men stay in their home country because they do not face the same barriers to career advancement compared to women (Docquier, Lowell & Marfouk, 2009).

While the push and pull theory seems to have many support from scientists, Portes (1976) criticizes the push and pull theory, saying that accounts of push and pull factors within particular countries fail to clarify why some high skilled people are affected by them and choose to migrate, while others do not and tend to stay in their country of origin (Portes, 1976). While the examination of primary determinants at the international level helped to clarify the pull from destination countries, the analysis of secondary determinants may help to explain the push from countries of origin. He concludes that countries which are uniformly underdeveloped may, in fact, tend to suffer less from a professional exodus than those which have pushed ahead in some sectors, while lagging behind in others (Portes, 1976).

Key insights from this section include that the push and pull theory will explain the reasons for high skilled migrants to leave India, Syria or South Africa. The many different push and pull factors of the different scientists need to be analyzed on these countries. Pull factors would have a greater influence on the high skilled migrants compared to the push factors because of the economic benefits in the developed countries. The media plays an important role in how the people in the country perceive the risks of staying or migrating. It is also important to keep the five groups analyzed by Mahroum (2002) and the added sixth group in mind when analyzing the cases. Each group has different motivations, so when comparing the groups these differences will have to be kept in mind.

2.5 Conclusion

Concluding remarks on this chapter start with the globalization and the brain drain. According to Varma & Kapur (2013), the globalization of economy has as result the brain circulation phenomenon. International migration is a major aspect of globalization. As a response, many cities have developed specific cultures to attract high-tech professionals and businesses. The Indian cities Bangalore and Hyderabad are great examples (Chacko, 2007). This research investigates India, Syria, and South Africa and it is important to analyze what impact the globalization has had on the brain the from these countries. It also should be kept in mind that the biggest issue is not where people are located, but

what contribution they make to the social, cultural, and economic development of their home country (Rivzi, 2005). There are other ways to contribute to their home country for high skilled migrants and this is called the diaspora option. Globalization has also created more attention from the media to global challenges and experts are more and more trying to convince the public opinion of these challenges to create the awareness needed to put these challenges on the agenda of policymakers.

Although the brain drain was viewed as a negative externality at first, scientists found evidence suggesting this is not necessary true. The brain drain is now better described as brain circulation, as many skilled migrants return to their home country at one point in life, with a lot of experience from abroad (Beine, Docquier & Rapoport, 2008). Brain circulation has become one of the most important factors that influences the economic development and competitiveness, because the development of a country depends on factors as learning, researches, innovation creation and collaboration with other countries. It also increases the access to external resources. A rather fast growing part of the public opinion has changed mind slowly due to the attention from the experts in the media for the brain drain by recognizing the complexity of the problem and realizing the economic effect of the brain drain. However, there are still situations where the brain drain is a problem. The many small countries in Sub-Saharan Africa are a great example. The situation is extremely worrisome and while the main globalizers experience non-negligible gains, these countries still face brain drain problems. As this research also investigates South Africa, this is an important fact to keep in mind.

The push and pull theory will be a major aspect of this research, as it explains the reasons for high skilled migrants to leave their home country. The many different push and pull factors of the different scientists need to be analyzed on these countries. The analysis of India's turn of pull factors will be interesting for Syria and South Africa, as these countries have not succeeded yet in turning these pull factors. The media plays an important role in how the people in the country perceive the risks of staying or migrating. It is also important to keep the five groups, or job sectors as they are called in this research, analyzed by Mahroum (2002) and the added sixth group in mind when analyzing the cases. Each group has different motivations, so when comparing the groups these differences will have to be kept in mind. There are also differences between the migrants on the basis of gender. Women and men do not respond with the same intensity to push and pull factors (Docquier, Lowell & Marfouk, 2009). Not all of this research will related to the push and pull theory, because there is no clarification why some high skilled people are affected to certain push and pull factors and choose to migrate, while others do not and tend to stay in their home country (Portes, 1976).

Methods

3.1 Introduction

This chapter will explain the methods that will be used for this research. This research will contain a quantitative and a qualitative content analysis. The strategy for this chapter is first to show the collected data and second, to analyze the data related to the sub questions, countries and theoretical concepts. The data will be organized on these subject to make it easy to gain the correct data for answering each of the sub questions and eventually the research question. Therefore, the aim of this chapter is to overview and analyze the data that will be used, so the data is easy retrievable in the next chapter of this research. For the qualitative data, this will be done through setting up a coding scheme using 'Atlas.ti'. The documents will be put in this program and quotations can be made and assigned to the sub questions, countries and theoretical concepts. The first section of this chapter will contain the data collection. This section will discuss the data that will be used to provide a clear answer to the sub questions and research question. For this research, a dataset from Brücker, Capuano and Marfouk (2013), newspaper articles, expert perceptions in policies and expert interviews in journals will be analyzed. This section will explain why this data is important and how it will help to answer the sub questions and research question. It also explains which considerations should be taken into account. The status, authors, time span and quantity of the data will also be discussed and put into a data collection scheme, to show the relevance of the data. The second section will contain the data analysis. India has turned the brain drain into brain circulation and will therefore be an important comparison for Syria and South Africa, countries which are still dealing with the brain drain problem. This section will operationalize the concepts mentioned in the previous chapter. The dataset from Brücker, Capuano and Marfouk (2013) and the expert perceptions will be analyzed. The structure of the coding scheme will be explained and there will be discussed why this coding scheme is important in answering the sub questions and research question and how it contributes to this research. The last section will be a conclusion which contains suggestions for the analysis and how the methods should be applied to this research. It will explain what has to be done in what order to provide clear answers to the sub questions and research questions and give a structure for the analysis chapter. The expected insights delivered by this research will show the complexity of the brain drain problem, give an overview of the different dimensions of the brain drain problem and find possible policy solutions for Syria and South Africa. Besides, this research will also give insights in what the EU could do more to control their own brain drain and to help Syria and South Africa in turning their brain drain into brain circulation. The EU has direct influence on the brain drain from Syria, as many Syrian refugees enter the EU and tend to stay at least until the war in Syria is over.

3.2 Data Collection

For this research, a dataset on international migration will be analyzed to give a general overview of the brain drain from India, Syria and South Africa. Besides the dataset, newspaper articles relating to the brain drain from the countries will be used to view the differences in motives from the migrants, job sectors and policies between the different countries. Migration policies from India, Syria and South Africa will be analyzed to explain the differences in dealing with the brain drain between the countries. Also, some interviews with experts in journals could be helpful in answering the job sectors and motives of the high skilled migrants from the countries. This data will be viewed in a coding scheme to give a clear overview and provide a full answer to the sub questions and research question.

3.2.1 Dataset Brücker, Capuano and Marfouk

As many scientists already wrote in previous articles, it is very hard to find useful data for the brain drain subject. The databases from the OECD, IGS Datalab and DANS Data Archive do not show much useful data directly related to the brain drain. However, for this research Kees Aarts is contacted, who provided a relevant dataset from Brücker, Capuano and Marfouk (2013), which is called 'Education, gender and international migration'. He found this dataset on the website of IAB. This is The Research Institute of the Federal Employment Agency in Germany. The authors carried out the data collection on international migration within the framework of the TEMPO project (TEmporary Migration, integration and the role of POlicies). This is a European project financed by NORFACE (New Opportunities for Research Funding Agency Co-operation in Europe), a partnership of 15 research countries which is established to increase the cooperation in research and research policy between the European countries. The TEMPO project has as its goal to extend the knowledge of the causes and consequences of international migration with particular focus on themes like temporary migration, migrants' integration, and migration policies. This project will be interesting for this research, as the TEMPO project also investigates the migration of the high skilled and educated students. The status of the database is online, as the database is available for access via the website of IAB. No recent updates are announced, so for the time being this will be the final database. Besides the focus on international migration, the dataset also shows the educational levels of the migrants. This will be very helpful in answering the research question and sub questions. The time span is from 1980 until 2010. It contains three major excel files relating to international migration. These three files will be discussed next, and to create a clear perception of these files, a figure from each file will be displayed.

The first excel file contains data on the total number of foreign-born individuals aged 25 years and older, living in one of the 20 considered OECD destination countries. The data is organized by year, gender, country of origin and educational level. The educational levels are distinguished in low,

medium and high. The high educational levels of foreign-born individuals are important for this research, because these could indicate the brain drain from a country. Using the time span from 1980 until 2010 could help to understand how the brain drain has developed in a country over the past years. Figure 1 shows the data from Australia in 2010 for men organized by educational level. The sending countries are organized alphabetical and this data is organized in the same way for the years 1980-2010 with an interval of 5 years for all 20 destination countries both by men and women.

	A	Z	AA	AB	AC
1	Australia	2010			
2	Total immigration stock	Total	Low	Medium	High
3	Men	2062532	469850	576414	1016268
4	Country of birth	100,0%	22,8%	27,9%	49,3%
5	Afghanistan	3950	1040	250	2660
6	Albania	657	236	86	335
7	Algeria	621	92	104	425
8	Andorra	10	2	4	4
9	Angola	203	22	56	125
10	Antigua and Barbuda	9	0	4	5
11	Argentina	4914	645	1183	3086
12	Armenia	366	47	77	242

Figure 1: Dataset Brücker, Capuano and Marfouk Basic file.

The second excel file contains the total number of foreign-born individuals, in all age groups as a whole, living in one of the 20 considered OECD destination countries. The data is organized by gender and country of origin. Unfortunately this data is not organized by educational level, so this will probably be less important for this research. Figure 2 shows the data for Australia as the destination country for 2010. The sending countries are organized alphabetical and this data is organized in the same way for the years 1980-2010 with an interval of 5 years for all 20 destination countries.

	A	T	U	V
1	Australia	2010		
2	Country of birth	Total	M-Total	F-Total
3	Total immigration stock	4786969	2321730	2465239
4			48,5%	51,5%
5	Afghanistan	18184	9788	8396
6	Albania	2188	1114	1074
7	Algeria	1089	661	428
8	Andorra	5	5	0
9	Angola	428	211	217
10	Antigua and Barbuda	33	13	20
11	Argentina	12356	5906	6450
12	Armenia	1059	477	582

Figure 2: Dataset Brücker, Capuano and Marfouk Gender file.

The third excel file contains the emigration rates. It shows the proportion of migrants over the pre-migration population. The data is organized by gender, skill level and year. The age group is 25 years and older. This last file will also be important for my thesis, as it shows the emigration rates from all countries, including India, Syria and South Africa. The data of these countries can be compared to each other and to the total emigration rates of the world. This is again organized by educational level,

so the high educational levels will be most valuable for this research and the time span will again help to understand the development of the migration in the countries over the past years. The authors used for country by skill level and year data from Barro and Lee (2013) and United Nations Population Division (2011). Figure 3 shows the emigration rates of men and women for all countries and the world in total in 2010, organized by educational level. This data is organized alphabetical and for the years 1980-2010 with an interval of 5 years. It contains two separate sheets, one with the emigration rates for men and one with the emigration rates for women. This is organized in the same way.

	A	Z	AA	AB	AC
1	**Emigration rates**	**2010**			
2	**Men and Women**	**Total**	**Low**	**Medium**	**High**
3	**Country of residence**				
4	**World**	**1,91%**	**1,40%**	**1,29%**	**5,31%**
5	Afghanistan	1,54%	0,72%	3,05%	6,83%
6	Albania	18,10%	34,54%	11,21%	38,99%
7	Algeria	4,09%	4,50%	1,82%	9,94%
8	Andorra	6,98%	5,94%	6,11%	11,54%
9	Angola	4,08%	2,63%	4,52%	31,15%
10	Antigua and Barbuda	32,71%	32,12%	15,10%	88,96%
11	Argentina	2,16%	0,83%	2,04%	7,65%
12	Armenia	6,68%	16,21%	2,85%	16,42%

Figure 3: Dataset Brücker, Capuano and Marfouk Emigration file.

The variable that that will be used for this research is called Education, gender & international migration. The dimension of this variable is the emigration rates. This dimension shows the emigration rates from all countries of origin to the 20 OECD destination countries for the years 1980-2010. The interval is 5 years. Indicators are gender and educational level. The educational level is most important for this research, as the high educational level shows the level of brain drain from a country.

From the dataset this research will investigate to what countries most Syrian, South African and Asian Indian high skilled individuals migrate and what the trends were in the past years. The first and third files will be very helpful for this research. This will provide information in explaining the differences in the brain drain between India, South Africa and Syria. This research will take a look at the migration trend of the countries over the past years and explain the differences in relation to events. For example, the war in Syria in relation to the many refugees leaving the country, which includes high skilled individuals. Or the building of high-tech cities and the development of the IIT studies in India in relation to the decreasing percentage of migrating experts. In this way, the data will support in answering the research question.

The face-validity from the dataset is good, as the dataset covers the concept that it supposed to measure. The brain drain from the countries of origin to one of the 20 OECD destination countries can easily be read through the high educational level of the participants. In relation to content validity, the dataset should represent the brain drain from every country to the OECD destination countries. Brain drain is often referred to as the migration of human capital from developing countries to developed countries. The OECD countries represents most often the developed countries. The only

problem that could occur is that the high skill migrants who move from their country of origin to a country that is not one of the 20 OECD countries are not included. In the cases of India, Syria and South Africa, most scientific articles found out that the countries where the high skilled migrants move to are within these 20 OECD destination countries.

The dataset should be reliable, as they show the presumed causes of migration from countries. They make a clear distinction in the educational levels, whereas low skilled includes lower secondary, primary and no schooling; medium skilled includes high-school leaving certificate or equivalent; and high skilled includes higher than high-school leaving certificate or equivalent. The emigration rates computed in the dataset weight the total number of migrants from a given country of origin by the total workforce in that country, and hence provides a measure of the loss of labor market potential experienced by a given source country when part of its population migrates.

3.2.2 Collecting experts perception

To support the dataset from Brücker, Capuano and Marfouk (2013), there are newspaper articles, policies with expert perceptions and expert interviews in journals used which will be relevant in indicating the brain drain from a country. These expert perceptions are found in 11 newspaper articles from newspapers like BBC News, Express News Service, Foreign Affairs Review, Nu.nl, Orient News, The Economic Times, The Express, The South African, UNHCR, 4 expert interviews in journals like Geojournal, the Journal of Comparative Policy Analysis and Global Health Action journal, and 3 migration policies with expert perceptions from Asia Policy, Migration Policy Centre and AFD. These documents will only show the perceptions of the experts to support the answers found by using the dataset from Brücker, Capuano and Marfouk (2013). Stratified sampling is used and the newspaper articles are divided over the countries India, Syria and South Africa. From each country, at least 3 newspaper articles are used. These newspaper articles are selected on the basis of relevance with the topic of the brain drain related to globalization and the push/pull theory. The newspaper articles are found in Google by using the search terms: "Brain drain India", "Brain circulation India", "Reverse brain drain India", "Brain drain South Africa", "Brain circulation South Africa", "Reverse brain drain South Africa", "Brain drain Syria", "Brain circulation Syria", and "Reverse brain drain Syria". As Google filters on relevance with the search terms, the first 10 pages of Google were analyzed. The newspaper articles were read and when the theoretical concepts of globalization and push/pull theory were applied, selected for this research. This is illustrated in the following example for the newspaper article from Petzer (2014) in The South African. The term "brain drain Syria" is used in Google and this newspaper article was on the first page on 16 March 2016 with 246.000 hits, when it was first retrieved. The newspaper article shows affection with the brain drain and the push/pull theory. It states for example

that "While the pull factors have scarcely changed – South Africa is not very noticeably safer or more stable than it was in the peak emigration years – the financial situation abroad most definitely has" Petzer (2014 p2). The use of the term brain drain and the push/pull theory makes this newspaper article relevant for this research. By using this selection, 11 newspaper articles were left who had relevant information for this research. Also, for every country, a migration policy with expert perceptions is selected on the basis of relevance with the brain drain topic related to globalization and the push/pull theory. These are found in Google by using the search terms: "migration policy India", "migration policy Syria", and "migration policy South Africa". As Google filters by relevance, the first 10 pages were analyzed. For every country, the migration policy with the most relevance to the topic and theories of this research is selected. For example the migration policy document of Kabwe-Segatti et al (2006) from AFD. The term "migration policy South Africa" is used and this migration policy document with expert perceptions was on the second page of Google on 20 December 2015 with 1.840.000 hits, when it was first retrieved. On the first page of Google some other documents showed affection with this research, but this document has much more depth than the documents on the first page. The documents shows for example job sectors which are affected by the brain drain, which can be seen in the following quotation: "The sectors most affected by the brain drain were found by the same survey to be education and health (59%), business services (47%), banking and finance (43%), information technology and industrial high tech (both 35%)" (Kabwe-Segatti et al, 2006 p 117). But this documents contains also statements related to globalization and the brain drain, for example "Some local government officials have seen this increasing diversity as a positive sign of their cities' emergence as trading and cultural centers and as a broad endorsement of South Africa's regional status. To further promote such regional and global integration, city planners in Johannesburg, Cape Town, and Durban have begun outlining strategies for recruiting and incorporating highly skilled migrants and refugees into urban socioeconomic networks" (Kabwe-Segatti et al, 2006 p167). These examples show the relation from the policy document with this research, as this research is based on the globalization theory and includes a sub question regarding the job sectors. 2 expert interviews in journals are selected for India and South Africa on the basis of their relevance with the brain drain topic related to globalization and the push/pull theory. As these expert interviews in journals are scientific, Google Scholar is used on the search terms: "Brain drain India", "Brain drain South Africa", "Brain drain Syria", "Brain circulation India", "Brain circulation South Africa", "Brain circulation Syria", "Reverse brain drain India", "Reverse brain drain South Africa", "Reverse brain drain Syria", "Skilled migration India", "Skilled migration South Africa", and "Skilled migration Syria". As Google Scholar filters on relevance, the first 10 pages were analyzed. By using this selection, many scientific articles showed up, including the 4 expert interviews in journal used for this research. The expert interviews in journals who shows affection with this research on the theories where selected. For example the

expert interviews of Chacko (2007) in the Geojournal, which showed up on the first page of Google Scholar by using the term "Reverse brain drain India" with 31.900 hits when it was first retrieved. In this document, the terms globalization and push/pull theory are used. Examples are the statement of Behrman and Rondinelli (2002), who state that "in response to globalization, many cities develop specific cultures to woo high-tech professionals, investment and businesses" (Behrman and Rondinelli, 2002 in Chacko, 2007 p135) for globalization, and "The dual pulls of home and professional advancement have been successful in drawing high-skill professionals" (Chacko, 2007 p136) for the push/pull theory. These examples show the relation to the theories of this research as well as the third sub question about the motives of the high skilled migrants. As for Syria no relevant expert interviews in journals were found in for example the search term "reverse brain drain Syria" on the first 10 pages of Google Scholar with 6.440 hits, this country is disregarded in the expert interviews in journals. A sample of 11 newspaper articles, 4 expert interviews in journals and 3 migration policies with expert perceptions is chosen, to keep relevance with the research question of this thesis, as there are few relevant newspaper articles, expert interviews in journals and migration policies with expert perceptions related to the countries and job sectors, policies or motives yet. So, newspaper articles, expert interviews in journals and migration policies with expert perceptions related to the topic of brain drain, but without a relation to the theories or research question in this research are not included in the sample size. These articles were at first considered to include, but this would create a wide variety in quotations and it would make the research to broad. The expert interviews in journals and migration policies with expert perceptions are added to create at least a larger sample size. To generalize this research, future studies should investigate larger samples of newspaper articles, expert perceptions in policy documents and expert interviews in journals. This would be difficult for Syria, as there is not much written about Syria's brain drain yet. This research will therefore also be a start for future research on Syria's brain drain, hopefully larger samples of newspaper articles, expert interviews in journals and expert perceptions in migration policies will be available in the foreseeable future and confirm findings from this research.

The authors, size, status, date and time span of the documents are shown in table 1. This data collection scheme is created to cover all issues related to the research question and sub questions. Which job sectors high skilled migrants come from in India, Syria and South Africa are mainly covered in the newspaper articles and expert interviews in journals. Which migration policies the countries have are mainly covered by the expert perceptions in policy documents and the motives from high skilled migrants are mainly covered by the newspaper articles and expert interviews in journals.

Author	Documenttype	Size (Pages)	Status	Date	Time span
ANP (2016)	Newspaper Article	2	Final	11 Februari 2016	2010 - 2016
Bhagwati (2012)	Newspaper Article	2	Final	30 January 2012	1950 - 2010
Cater (2015)	Newspaper Article	2	Final	6 November 2015	1950 - 2014
Dutt (2011)	Newspaper Article	4	Final	13 December 2011	1990 - 2011
Express News Service (2015)	Newspaper Article	6	Final	9 October 2015	2015 - 2015
Gutteridge (2015)	Newspaper Article	15	Revised	5 October 2015	2014 - 2015
Kigotho (2013)	Newspaper Article	4	Final	11 October 2013	2007 - 2013
NU.nl (2016)	Newspaper Article	2	Final	15 March 2016	2016 - 2016
Petzer (2014)	Newspaper Article	3	Final	15 January 2014	2002 - 2014
Redmond (2015)	Newspaper Article	2	Final	28 September 2015	2015 - 2015
Sikora (2015)	Newspaper Article	3	Final	22 December 2015	2011 - 2015
Chacko (2007)	Expert interviews in the Geojournal	10	Final	26 May 2007	1970 - 2007
Varma & Kapur (2013)	Expert interviews in the Journal of Comparative Policy Analysis	17	Final	23 September 2013	1950 - 2013
Bidwell et al (2014)	Expert interviews in the Global Health Action journal	10	Final	28 July 2014	2003 - 2014
Taylor et al (2015)	Expert interviews in the Global Health Action journal	8	Final	17 March 2015	1970 - 2015
Ganguly et al (2011)	Expert perceptions in policy documents of Asia Policy	26	Final	July 2012	1980 - 2012
MPC Team (2013)	Expert perceptions in policy documents of the Migration Policy Centre	14	Final	June 2013	1950 - 2013
Kabwe-Segatti et al (2006)	Expert perceptions in policy documents of AFD	238	Final	March 2008	1910 - 2008

Table 1: Data Collection Scheme.

The newspaper articles will support the dataset from Brücker, Capuano and Marfouk (2013) in indicating the problems within the countries relating to the brain drain. They also create a perspective with new facts and can be helpful in analyzing the job sectors and motives of the high skilled migrants.

They describe the recent tendencies towards the brain drain in the different countries and are therefore useful in answering the research question and sub questions.

Expert perceptions in migration policies from India, Syria and South Africa will be analyzed to support the dataset from Brücker, Capuano and Marfouk (2013) in viewing the differences between the countries in dealing with the brain drain. The successes and failures of India will be compared to the failures of Syria and South Africa. The expert perceptions in the migration policies will explain the perspectives of the countries on the brain drain. Hence, whether they stimulate brain circulation or they try to prevent high skilled professionals from migrating in the first place. For example the building of high-tech cities in India compared to the JIPSA initiative from South Africa.

The expert interviews in journals are taken with high skilled Asian Indians and South Africans. They consist of summaries with the most important reasons for leaving their home country or to return to their home country. Also, many interviewed migrants who are still in a foreign country plan to return home one day. They still feel strongly committed to their home country. These expert interviews in journals will support the dataset of Brücker, Capuano and Marfouk (2013) in understanding first, the reason why high skilled migrants still have not returned to their home country or second, why they have returned already. The first will define the problems of India and South Africa and the second will define the factors that attract the high skilled migrants back.

3.3 Data Analysis

There are two types of data being used in this research. The first is the dataset from Brücker, Capuano and Marfouk (2013). In order to create a full answer qualitative data in the form of expert perceptions will be used to support the findings from the dataset from Brücker, Capuano and Marfouk (2013). This section will first start with analyzing the dataset from Brücker, Capuano and Marfouk (2013), as second explain the analysis of the expert perceptions in the newspaper articles, expert interviews in journals, and expert perceptions in policies, and third it will analyze the coding structure created to order the expert perceptions and create answers to the sub questions and research question.

3.3.1 Dataset Brücker, Capuano and Marfouk

The dataset of Brücker, Capuano and Marfouk (2013) will contain a quantitative analysis as the dataset only contains numbers. The dataset will show the facts about the brain drain in India, Syria and South Africa. The analysis of this data is descriptive as it shows how the countries are performing on controlling their high skilled migration. The years shown in the database are ordered on an interval from 5 years between 1980 and 2010. The numbers in the database are measured by ratio. There is an absolute zero and the variable Education, gender & international migration is a 'count' variable. The

numbers measured from the dataset will create an answer to the research question and sub questions, as they show the brain drain figures from India, Syria and South Africa. They are continuous as the possible values fall under a continuum. Limitations of this dataset is that it cannot predict which high skilled individuals will migrate to another country and which will stay. This means that it cannot give a full answer to the research question and sub questions. Therefore the expert perceptions must support the dataset. The dataset will only identify the brain drain statistics from the country without suggestions for fixing the problem.

3.3.2 Content analysis of expert perceptions

The content analysis of expert perceptions consists of newspaper articles, expert interviews in journals and expert perceptions in policy documents. Newspaper articles are chosen to reveal recent events related to the brain drain, expert interviews in journals are chosen to reveal expert opinions and understand the reasons from high skilled individuals to migrate or to return, and expert perceptions in policy documents are chosen to show the differences in approaches from the countries. Appendix A shows more information about the experts in the documents used for the coding scheme. The content analysis of expert perceptions will contain a qualitative content analysis. This type of analysis is divided into inductive and deductive quality content analysis. As this research start with a theoretical based definition of the aspects of analysis, main categories and sub categories, this type of research will be a deductive quality content analysis. The main categories will be the sub questions from this research and the sub categories will contain the countries that will be analyzed. Under this sub categories the relevant theoretical concepts will be mentioned. By using this structure, the overview will be clear and the different sub questions will be the main pillars, as they finally contribute in answering the research question. The countries have been chosen as sub categories, so it will be easy to compare them with each other. The theoretical concepts will help in understanding the differences between the brain drain in the different countries. There is an exploratory twist as the experts perceptions can support the reasons for the numbers found in this database.

3.3.3 Making of a coding structure

This section will show a coding scheme in which all qualitative data will be overviewed. There are three different types of coding, namely open coding, axial coding and selective coding (Strauss & Corbin, 1998). This research uses open coding. This makes it possible to find answers to the sub questions and eventually the research question by dividing the data into different categories of meaning. Keywords will be assigned to the categories which identifies what they deal with. The primary categories will be the sub questions of the thesis and they will be categorized on the countries and the theoretical

concepts. The coding scheme will divide the quotations from the newspaper articles, expert perceptions in policies and expert interviews in journals over the concepts of globalization and push/pull theory, but also over the job sectors, policies and motives. The coding scheme will be drawn in a program called 'Atlas.ti'. The coding scheme will support the dataset from Brücker, Capuano and Marfouk (2013) in explaining the reasons for the numbers. Therefore the dataset from Brücker, Capuano and Marfouk (2013) will not be included in the coding scheme, as this is quantitative data.

The first step of the coding structure is, given the theoretical framework and the first sub question, regarding the job sectors in which the high skilled migrants are located. Therefore this is one of the primary categories in the coding scheme. The coding structure for this first sub question is illustrated in Figure 4 and discussed below. All data in the coding scheme that relates to the job sectors of the high skilled migrants is quoted in the category called 'Job Sectors'. The primary category job sectors is chosen as it describes the first sub question on which differences will be compared. This comparison is made by analyzing what the different experts in newspapers, interviews and policies state as the job sectors from the different countries mentioned in the theories chapter of this research. For example, Behrman & Rondinelli (2002) state in Chacko (2007) that the most important job sectors are from the IT sector and Management & Finance sector in India, while Kabwe-Segatti et al (2006) states that the most important job sector in South Africa is the Health sector, but they also refer to for example every sector related to the Service sectors. The newspaper articles and expert interviews in journals are most quoted because these mentioned job sectors the most, for example Behrman and Rondinelli (2002) are quoted in Chacko's (2007) expert interviews in the Geojournal that "in response to globalization, many cities develop specific cultures to woo high-tech professionals, investment and businesses" (Behrman & Rondinelli, 2002 in Chacko, 2007 p135), but the expert perceptions in policies also mention the job sectors, for example Kabwe-Segatti et al (2006) is quoted in the migration policy document with expert perceptions from AFD that "The sectors most affected by the brain drain were found by the same survey to be education and health (59%), business services (47%), banking and finance (43%), information technology and industrial high tech (both 35%)" (Kabwe-Segatti et al, 2006 p117). Within this category, every quotation has its own subcategory related to the countries India, Syria and/or South Africa. There is chosen to categorize on countries, because this will create the opportunity to compare the countries on this sub question as it is mentioned in the example of Behrman & Rondinelli (2002) and Kabwe-Segatti et al (2006) about the job sectors.

In most cases these quotations also relate to the concept of globalization or the push/pull theory, as for the example from Behrman and Rondinelli (2002). So within the subcategories of the countries, the quotations will be divided on the basis of the concepts globalization and push/pull theory. This makes it easy in the analysis part of this research to track for example everything that relates to the job sectors of South African skilled migrants and whether this is in the context of

globalization or push/pull theory. So, the quotations will be compared to the theories and divided into the theories where applicable as it is illustrated in the example of Behrman & Rondinelli (2002) and Kabwe-Segatti et al (2006) about the job sectors. This is done to discuss the theory in the analysis part of this research. In the example of Chacko (2007), she is supported in the theories by Beine, Docquier and Rapoport (2008). In figure 4 is illustrated what process in the coding scheme leads to answers in the analysis part of this research for the first sub question. The structure is marked with blue shapes and the example quotations are marked with white shapes. When selecting the category of job sectors, all quotations regarding the job sectors of India, Syria and South Africa with respect to globalization and the push/pull theory will be viewed. When selecting for example the job sectors from India with respect to globalization, only quotations with respect to globalization from the job sectors in India will be viewed. In the example quotation of figure 4 this is "Developing high-tech cities as response to globalization". Atlas.ti will show that this is a quotation from Chacko (2007). When carrying out the analysis part, the coding scheme proved to be helpful in organizing the structure of the job sector section of the analysis. Besides, it was a good reminder to apply the theories and refer back to the theories chapter where necessary in the analysis part. This is illustrated with the example of Chacko (2007) and Beine, Docquier and Rapoport (2008) earlier in this section.
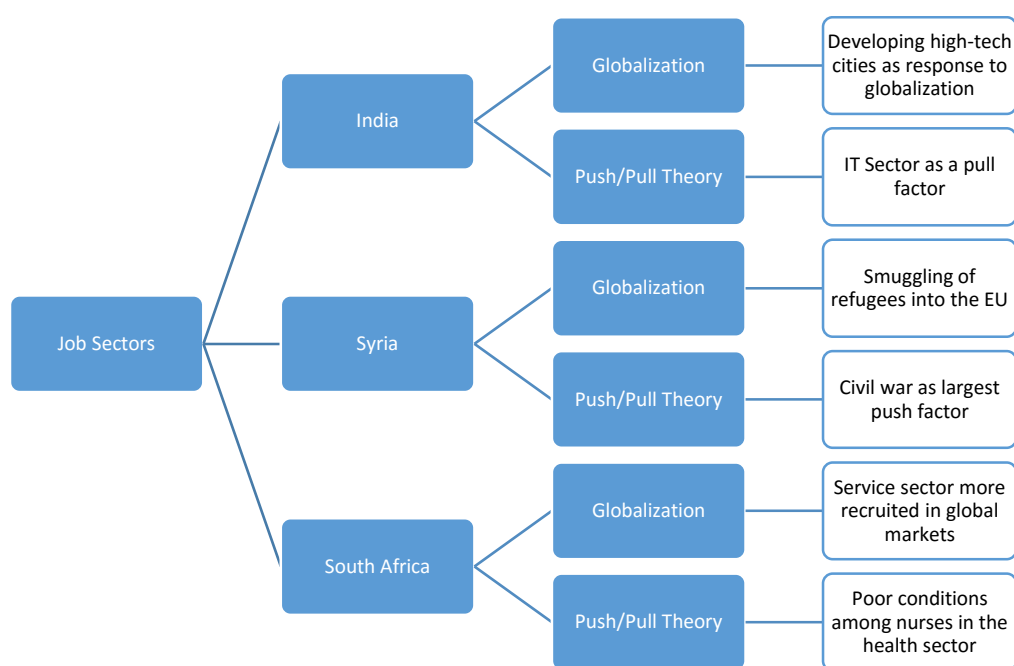

Figure 4: Job Sectors in which the high skilled migrants are located.

The second step of the coding structure is, given the theoretical framework and the second sub question, about the migration policies from the countries India, Syria and South Africa. This is also a primary category in the coding scheme and is called 'Policies', as it describes the second sub question

on which differences will be compared. This comparison is made by analyzing what the different experts in newspapers, interviews and policies state as important policy issues related to the countries. For example the quotation of India's schooling by Varma & Kapur (2013) and South Africa's lack of schooling, especially for black South Africans, quoted in Kabwe-Segatti et al (2006). The coding structure for the second sub question is illustrated in Figure 5 and discussed below. The expert perceptions in migration policies from the countries contain the most important quotations of the coding scheme for answering this sub question as this sub question is specifically about the policies that countries use regarding the brain drain. An example is the quotation of Ganguly et al (2011) in the migration policy document with expert perceptions of Asia Policy, where they note that "The government in New Delhi is facing a credibility test as the nation has been besieged by a plethora of corruption scandals in recent months" (Ganguly et al, 2011 p114). There are also some of the newspaper articles and expert interviews in journals with quotations that relate to the policy subject, for example the quotation from Varma and Kapur (2013) in their expert interview in the Journal of Comparative Policy Analysis, where they state that "India has emerged into one of the fastest growing economies with an average growth rate of more than 7% since 2000" (Varma & Kapur, 2013 p321). Most quotations related to the migration policies of the countries also relate to the theoretical concepts of globalization or the push/pull theory, for example the quotation of Kabwe-Segatti et al (2006), where most South Africans, especially black South Africans, are particularly poor in schooling and this is due to the apartheid, confirmed in the theories by Dovlo (2003) and Marchal & Kegels (2003), which can be seen as a push factor from the country. In figure 5 is illustrated what process in the coding scheme leads to answers in the analysis part of this research for the second sub question. The structure is marked with blue shapes and the example quotations are marked with white shapes. When selecting the category of policies, all quotations regarding the migration policies of India, Syria and South Africa with respect to globalization and the push/pull theory will be viewed. When selecting for example the policies from India with respect to globalization, only quotations with respect to globalization from the migration policies in India will be viewed. In the example quotation of figure 5 this is "India's economic reforms to a market-based system". Atlas.ti will show that this is a quotation from Varma & Kapur (2013). When carrying out the analysis part, the coding scheme proved to be helpful in organizing the structure of the migration policies section of the analysis and helps as a reminder to refer back to the right parts of the theories where necessary, as for the example from Kabwe-Segatti et al (2006) and Dovlo (2003) and Marchal & Kegels (2003) earlier in this section.
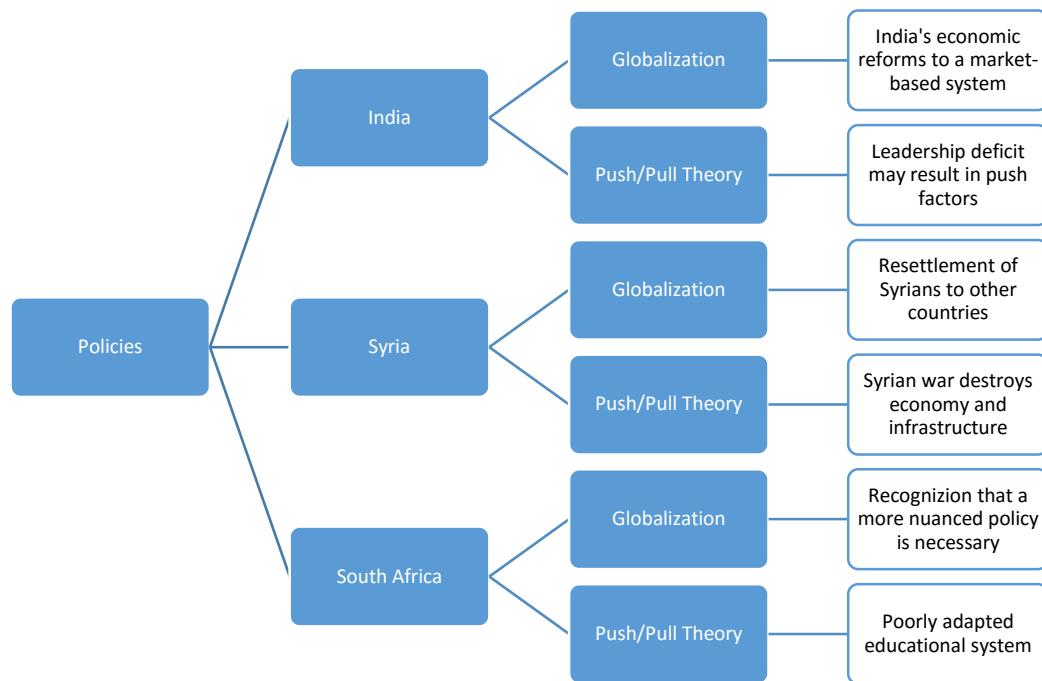
Figure 5: Migration policies in the countries of origin from the skilled migrants

The third step of the coding structure is, given the theoretical framework and the third sub question, related to the motives of the skilled migrants to move to a foreign country or to return after being migrated. This is called 'Motives' and is the last primary category in the coding scheme on which the countries will be compared. This comparison is made by analyzing what the different experts in newspapers, interviews and policies state as important push/pull factors from the high skilled migrants in the different countries. For example the pull of home from Asian Indians mentioned in a quotation in the expert interview in the Geojournal by Chacko (2007) and the pull of family from the migrated South Africans, quoted in the expert interview in the Global Health Action journal by Taylor et al (2015). The coding structure for the third sub question is illustrated in Figure 6 and discussed below. The sub categories are India, Syria and South Africa. This makes it easy to compare the motives of the skilled migrants between the countries, as is illustrated in the example comparison of Chacko (2015) and Taylor (2015), and investigate why differences have originated, for example the quotation from Sikora (2015) in his newspaper article from the Orient News that "Syria has also been seeing the best and brightest disappear from the streets for years due to blind obedience and an unquestioning subservient attitude from the general population during the Assad regime" (Sikora, 2015 p2) compared to the quotation from Chacko (2007) in her expert interview in the Geojournal about the pull of roots from Asian Indians as they grow older. This category of the coding scheme mostly relates to the theoretical concept of the push/pull theory as the sub question investigates the motives of the skilled migrants to move or to return. In the example with the quotation from Sikora (2015) in his newspaper article from the Orient News about political instability, there is referred to Dodani & Laporte (2005);

Kalipeni, Semu & Mbilizi (2012); Marchal & Kegels (2003); and Zweig (1997) from the theories chapter. Every decision a skilled migrant makes when deciding to migrate is thus related to push factors, pull factors or a combination between them. In figure 6 is illustrated what process in the coding scheme leads to answers in the analysis part of this research for the third sub question. The structure is marked with blue shapes and the example quotations are marked with white shapes. When selecting the category of motives, all quotations regarding the high skilled migrants' motives of India, Syria and South Africa with respect to the push/pull theory will be viewed. When selecting for example the motives from India with respect to the push/pull theory, only quotations with respect to the push/pull theory from the high skilled migrants' motives in India will be viewed. In the example quotation of figure 6 this is "Pulls of home successful in drawing high skilled migrants home". Atlas.ti will show that this quotation is from Chacko (2007). When carrying out the analysis part, the coding scheme proved to be helpful in organizing the structure of the migrants motives section of the analysis and helps as a reminder to refer back to the right parts of the theories where necessary, as for the example from Sikora (2015) and Dodani & Laporte (2005); Kalipeni, Semu & Mbilizi (2012); Marchal & Kegels (2003); and Zweig (1997) related to political instability earlier in this section.
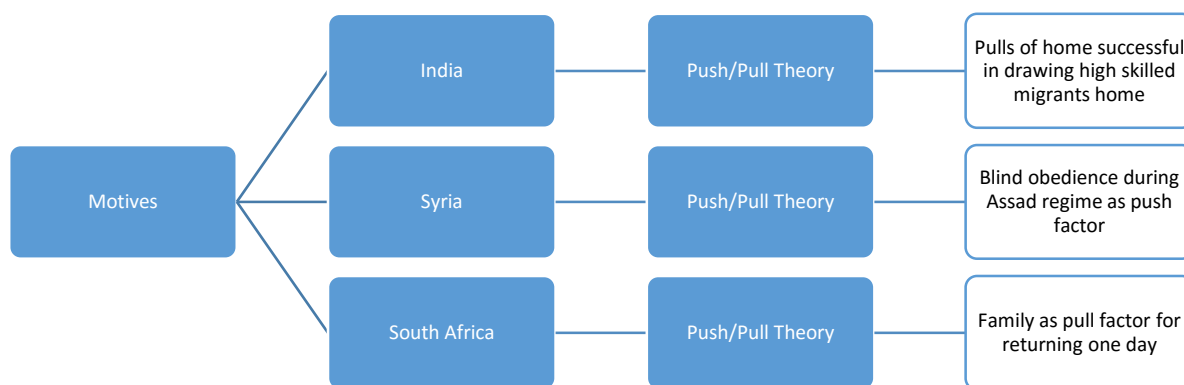
Figure 6: Motives from the high skilled individuals to migrate or to return.

3.4 Conclusion

The dataset from Brücker, Capuano and Marfouk (2013) will be important data for this research, supported by the coding scheme with the newspaper articles, expert interviews in journals and expert perceptions in policy documents. Newspaper articles from newspapers like BBC News, Express News Service, Foreign Affairs Review, Nu.nl, Orient News, The Economic Times, The Express, The South

African, and UNHCR are chosen to reveal recent events related to the brain drain, expert interviews in journals from Geojournal, the Journal of Comparative Policy Analysis and Global Health Action journal are chosen to reveal expert opinions and understand the reasons from high skilled individuals to migrate or to return, and expert perceptions in policy documents from Asia Policy, Migration Policy Centre and AFD are chosen to show the differences in approaches from the countries. Appendix A shows more information about the experts in the documents used for the coding scheme. The dataset from Brücker, Capuano and Marfouk (2013) will show the facts about the brain drain in India, Syria and South Africa. Possible causes for the numbers given in the dataset from Brücker, Capuano and Marfouk (2013) will be discussed by the expert perceptions from the coding scheme. In this way, the coding scheme supports the dataset from Brücker, Capuano and Marfouk (2013). However, it must be kept in mind that the coding scheme does not show facts, only opinions from experts, and can therefore not be seen as the primary data.

With the above mentioned comments on the dataset from Brücker, Capuano and Marfouk (2013) and the coding scheme in mind, the structure of the analysis of this research will be as follows. Each sub question will be assigned to a section and will be divided into the cases India, Syria and South Africa. The concept of globalization and the push/pull theory will be applied to the sections where these are significant. The purpose of the push and pull theory is understanding the reasons for high skilled individuals to migrate due to push factors from their country of origin or pull factors from the destination country. These factors will explain whether a country is able to control the situation or whether the country is depended on the developed countries. To illustrate where these concepts are significant the figures 4-6 can be consulted. Every section starts with the case of India, as this is the country which is most successful and will be the basis for analyzing the following countries, respectively Syria and South Africa. The first section will start with the job sectors of the high skilled migrants. The numbers from the dataset of Brücker, Capuano and Marfouk (2013) will be shown and the coding scheme will help to track the important items that will be related to this section. The job sectors of the high skilled migrants from each country will be analyzed and classified to one of the six groups mentioned in the theories chapter. The differences between the countries will be analyzed and the relation to globalization and the push/pull theory will be discussed. The second section will contain the differences in migration policies from India, Syria and South Africa. Experts' perceptions in the migration policies will be analyzed to show the differences in the approaches on the high skilled migration between the countries. There will again be a connection to the theory of globalization, as dealing with globalization is an important item in the migration policies from the countries. Also the push and pull factors will play a role in this section, because high skilled migrants can decide on the basis of the migration policy to migrate or to stay in their country of origin. For this section, the most important items from the coding scheme are expert perceptions in the policy documents. For each

country, the experts' perceptions in a migration policy document will be analyzed. The newspaper articles and expert interviews in journals will also contribute to this section, but the expert perceptions in policy documents are most related to this section, after the dataset of Brücker, Capuano and Marfouk (2013). The third section will contain the motives for the high skilled migrants to move abroad. For this section, the most important concept is, after the dataset from Brücker, Capuano and Marfouk (2013), the push and pull theory, as these indicate the reasons for people to migrate. India will show the turning of push factors into pull factors, which will be important in analyzing Syrian and South African motives for migration. For this section, the newspaper articles, expert perceptions in policy documents and expert interviews in journals from the coding scheme will be analyzed. After these sections, all sub questions will be answered and in the conclusion chapter, the answer to the research question will be given.

Analysis

4.1 Introduction

This chapter will discuss the results from the dataset and the coding scheme created in the previous chapter. Every section has as its structure respectively the countries India, Syria and South Africa. The second section will contribute in answering the first sub question regarding the job sectors from the high skilled migrants. It will show the differences in the job sectors of the high skilled migrants in the different countries. The third section will contribute in answering the second sub question regarding the migration policies dealing with the brain drain from the countries. It will show the differences in how the countries deal with the migration of their high skilled experts and what policies have been developed in the countries so far, related to the brain drain. The fourth section will contribute in answering the third sub question regarding the motives of skilled migrants to move or return. It will help to understand which motives from the high skill migrants are important to leave or return and how they influence each other. The final section of this chapter will compare the countries on all aspects and formulate an answer to the sub questions. Each section starts with defining the structure of each part of the section. All experts in the newspaper articles, expert interviews in journals and expert perceptions in policy documents are based on the views from experts, not on the facts. These will be viewed and supported by the dataset from Brücker, Capuano and Marfouk (2013).

4.2 Differences in job sectors between countries and the consequences

This section first starts with viewing the skilled migration in numbers from India over the years 1980-2010 from the dataset of Brücker, Capuano and Marfouk (2013). It will continue secondly with defining which job sectors, related to the groups from Mahroum (2000) mentioned in the theories chapter of this research, affect the high skilled migration from India the most and why they affect the high skilled migration. This is also related to the return of the high skilled experts to India. Furthermore, as third, the influence of high skilled migration within the country will be discussed. Fourth, recent developments towards the creation of many IT jobs will influence other job sectors and this will be explained. Findings related to India's job sectors will be summed up at the end of this part. The next part of the section will first start with viewing the numbers of skilled migration for Syria over the years 1980-2010. It will secondly explain the job sectors which affect the skilled migration in Syria before the civil war, and then, as third, turn to the effects of the civil war. Fourth, it will discuss the future for Syria and which job sectors are most affected. Findings related to Syria's job sectors will be summed up at the end of this part. The last part of this section will first start with viewing the numbers of skilled migration for South Africa over the years 1980-2010. It will secondly explain the most skills-intensive sectors and which sectors are most affected by the brain drain. As third, it then deepens on the sectors

which are most affected and why the current brain drain forms a problem for South Africa. Fourth, it takes a look at returned South Africans, what effect they had on the country and if they are able to solve the brain drain problem. It ends with a conclusion in which the findings of the South Africa part will be summed up.

Benefits from returned migrants and risks of the IT sector in India

When comparing the migration rates in the dataset from Brücker, Capuano and Marfouk (2013), India shows an increase in the total high skilled migration rates between 1980 (3,80%) and 2010 (4,97%). Within these total high skilled migration rates (TMR), there has been an increase between 1980 and 2010 of high skilled men (from 2,99% to 5,09%) and a decrease in the migration rates of high skilled women (from 7,09% to 5,64%). In this period, the total high skilled migration rates from the country raised towards the world average of 4,94% (from 3,80% to 4,97%) which is the ideal for brain circulation. The high skilled migration rates should not be much lower compared to the world rates, as this means that a country is isolating and keeping its high skilled migrants inside, which is in turn bad for its economy and human capital in the long term because human capital increases from brain circulation. It should not be too high either, as this means that a country is losing too much human capital on the short term. This data is shown in Table 2.

India	1980	1985	1990	1995	2000	2005	2010
TMR	3,80%	3,36%	2,59%	3,11%	3,60%	4,95%	4,97%
Men	2,99%	2,74%	2,07%	2,41%	2,99%	4,23%	4,52%
Women	7,09%	5,44%	4,19%	4,93%	4,97%	6,26%	5,64%

Table 2: Migration rates India

The dataset from Brücker, Capuano and Marfouk (2013) also shows that the largest destination countries are Australia, Canada, the United Kingdom and the Unites States. Within these destination countries, the high skilled Asian Indian migrants has grown significantly between 1980 and 2010. For example, in Canada, the migration stock of high skilled Asian Indians has grown from 27.230 men and 16.210 women in 1980 to 157.573 men and 145.843 women in 2010. The same applies more or less to the other largest destination countries (Brücker, Capuano & Marfouk, 2013). This is shown in table 3.

India	1980	1985	1990	1995	2000	2005	2010
AUS-Men	10.410	12.786	14.365	22.838	29.630	32.666	36.183
AUS-Women	8.383	10.612	12.384	20.403	25.884	33.235	41.275
CAN-Men	27.230	30.505	41.540	55.500	76.170	119.540	157.573
CAN-Women	16.210	20.295	27.820	39.685	58.585	100.640	145.843
UK-Men	53.741	43.792	34.809	51.474	70.421	83.934	132.822

UK-Women	29.902	24.450	19.453	53.144	55.315	85.239	116.680
US-Men	75.440	131.734	162.671	208.439	310.501	563.280	666.595
US-Women	43.888	76.082	108.048	156.045	227.369	433.028	529.225

Table 3: Destination countries high skilled migrants India

The job sectors from Asian Indians are mainly focused on the IT sector group and the finance and management sector group from the explained groups in the theories by Mahroum (2000). Behrman and Rondinelli (2002) state in the expert interview in the Geojournal from Chacko (2007) that there are a number of reasons why Bangalore and Hyderabad became magnets for returning IT, finance and management professionals. The specific cultures developed by cities to attract high-tech professionals, investment and businesses is a response to globalization as also suggested by Beine, Docquier & Rapoport (2008) in the theories chapter of this research (Behrman and Rondinelli, 2002 in Chacko, 2007). In addition, Chacko (2007) adds that in this case, Bangalore and Hyderabad converged local governments, private and public sectors and skilled professionals to develop the economic bases, infrastructure and cultures necessary for their transformation and development. In the Indian and global IT industry, the cities are now recognized as the central point of trade (Chacko, 2007).

According to Sheshabalaya (2005) in the expert interview in the Geojournal from Chacko (2007), the R&D units in India have increased rapidly into a premier global research organization, filling more patents than Bell labs (Sheshabalaya, 2005 in Chacko, 2007). Besides the jobs in call center operations and back office work, Bangalore and Hyderabad are developed into important R&D places. In accordance with Sheshabalaya (2005), Chacko (2007) argues that the technical and professional schools in Bangalore and Hyderabad provide training to work in the R&D centers. These schools have increased in number and stature. Bangalore has additional research institutes, besides the Indian Institutes of Science, such as the Defense Research and Development Organization, ISRO Satellite Centre, Centre for Artificial Intelligence & Robotics, and the Raman Research institute (Chacko, 2007). In Hyderabad the premier institutes are the International Institute of Information Technology, The Indian Institute of Chemical Technology and the Centre for Cellular and Molecular Biology (Chacko, 2007).

Kapur (2002) brings light to the discussion that an important part of the scheme to develop scientific and technical knowhow and output are returning non-resident Indians. He states in the expert interview in the Geojournal from Chacko (2007) that Bangalore, India's best high-tech city was a natural choice for returning Indian professionals and a pull factor for India as discussed by Zweig (1997) in the theories chapter of this research. From the top 20 IT software and service exporters in India in 2005-2006, twelve of them had their headquarters in Bangalore. These top IT software and service exporters were offering numerous of job opportunities. Almost all of the international companies in the Software Technology Parks in Bangalore were run by Indians with foreign experience,

most often from the Silicon Valley in the United States (Kapur, 2002 in Chacko, 2007). In accordance with Kapur (2002), Ryan (2005) is stating in the same expert interview in the Geojournal from Chacko (2007) an example that from all the employees working in R&D at General Electric's Jon F Welch Technology Center in Bangalore, a third were returned migrants from the United States (Ryan, 2005 in Chacko, 2007).

Dutt (2011) states in her BBC newspaper article that cities like Bangalore and Hyderabad not only influenced the returning of skilled migrants, but they also had an influence on migration within the country itself. An example is given by the city Kerala. In the 1990s, many young and educated workers left their city in search of opportunity. They travelled to other cities like Bangalore or they decided to move abroad. The pull factors of these young and educated workers were the abundance of jobs and the financial incentive was good (Dutt, 2011). According to Dutt (2011), many of these young and educated workers sent money back to Kerala, which greatly benefited the economy of Kerala. The state government claims that the standard of living for millions of families has improved with the help of just one remittance salary. The need for a non-resident workforce have over time led to the development of major infrastructure in Cochin. The newspaper article of Dutt (2011) states as an example the international airport. The airport's Managing Director V.J. Kurien says that the facility has grown 23% on average every year since it opened (Dutt, 2011). This is remarkable, because this is due to the non-resident workforce and this will eventually create new job opportunities within Cochin.

Recent developments show however that many graduates in India do not find work within their field of study. Dr. David Peter, principal from the Cochin University of Science and Technology, says in the newspaper article from Dutt (2011) that only one in five of his graduates will find work at home in their field. Many graduates will eventually get an IT job, because these are plentiful in India. The newspaper article of Dutt (2011) states the following from Sreehari, a young skilled professional in Kerala: "We have to forget some of the engineering we have studied in the last four years, and we have to learn new things, entirely different things to what we have studied in civil engineering because they just need brains who work on computers." (Sreehari in Dutt, 2011 p2). A striking observation, as this creates an imbalance between the job sectors.

Varma and Kapur (2013) describe approximately the same tendencies in their journal in the Journal of Comparative Policy Analysis with expert interviews. They conclude out of their interviews that there is an intention of IIT students to switch from engineering to business management or finance. This is primarily inspired by the belief that in the business management and finance sectors the opportunity for placement is higher or it results in a better salary. However, Varma and Kapur (2013) also state that the majority is still likely to be interested in engineering. The students who switched believed that being an engineer alone was not likely to be enough for their careers and well-being. By postgraduate education and training outside engineering, particularly in business

management and finance, the students felt that their careers would be better advanced (Varma & Kapur, 2013).

It can be concluded that the Asian Indian high skilled migrants mainly come from the engineers and technicians, managers and executives, and the students group described by Mahroum (2000). Many Asian Indian high skilled migrants have already returned because of the new possibilities India is offering. These returned migrants have become an important part in the development of India, as they brought a lot of experience and knowhow with them. Even within the country all cities seem to benefit from remittances send back by Asian Indians who decided to work in cities like Bangalore and Hyderabad. As many described, this is a benefit for the whole country. However, there are some disadvantages for the country. Many students who graduate will not find work at home in their field of study. Instead, they end up having an IT job because these are plenty in India. This leaves behind the other sectors and creates a gap between the IT sector and the rest of the country. India is still risking to lose professionals in other fields than the IT.

Syria's unbearable situation due to the civil war
When comparing the migration rates in the dataset from Brücker, Capuano and Marfouk (2013), Syria shows that the total high skilled migration rates (TMR) have slightly increased between 1980 (17,71%) and 2010 (19,48%). Compared to the world rate of 4,94% this is too high, which means that the country is losing too many high skilled individuals in the short-term. Within these total high skilled migration rates, there has been an increase between 1980 and 2010 of high skilled men (from 15,97% to 16,30%) and women (from 23,76% to 25,76%). This is also shown in table 4.

Syria	1980	1985	1990	1995	2000	2005	2010
TMR	17,71%	14,68%	13,40%	12,66%	12,19%	17,14%	19,48%
Men	15,97%	13,99%	13,29%	10,50%	10,99%	14,40%	16,30%
Women	23,76%	16,62%	13,68%	18,87%	15,48%	23,42%	25,76%

Table 4: Migration rates Syria

According to the dataset from Brücker, Capuano and Marfouk (2013), the largest destination countries are Australia, Canada, Germany, France, the United Kingdom and the United States. More European countries are involved here, as Syria's borders are close to Europe. Within these countries, the high skilled Syrian migrants have also been increasing significantly. For example, in France the migration stock of Syrians has grown from 1.464 men and 408 women in 1980 to 4.670 men and 2.269 women in 2010. As this dataset shows numbers between 1980 and 2010, the impact of the civil war started in 2011 in the country cannot be measured (Brücker, Capuano and Marfouk, 2013). This can also be found in table 5.

Syria	1980	1985	1990	1995	2000	2005	2010
AUS-Men	460	639	1.055	1.247	1.313	1.448	1.603
AUS-Women	238	387	745	966	1.043	1.339	1.663
CAN-Men	955	1.075	2.185	3.065	3.825	5.410	7.131
CAN-Women	345	490	1.255	1.860	2.465	4.015	5.818
GER-Men	2.190	1.683	1.382	2.418	2.334	2.698	2.439
GER-Women	1.192	316	222	957	630	1.696	1.390
FRA-Men	1.464	2.193	3.388	3.525	3.546	4.232	4.670
FRA-Women	408	645	1.116	1.282	1.403	1.697	2.269
UK-Men	0	279	549	239	1.264	1.507	2.384
UK-Women	0	86	185	164	595	917	1.255
US-Men	3.952	7.654	10.280	10.392	12.536	17.063	17.028
US-Women	1.744	3.048	4.359	5.374	6.899	9.196	11.046

Table 5: Destination countries high skilled migrants Syria

The experts of the MPC Team (2013) state in the policy document of the Migration Policy Centre that before the civil war broke out in 2011, Syria was considered an important receiver of migration, which is quite remarkable looking at the current situation. The migrants could be grouped into three main groups, namely refugees, labor migrants and transit migrants. Most migrants were refugees, but within the labor migrants group there were also a lot of high skilled employees. These started to arrive after the economic and legal reforms accompanying the recent transition of Syria to a social market economy in 2005. Finally, transit migrants enter Syria, mainly from Asia, to move to another country (MPC Team, 2013).

Syria's brain drain began alongside the beginning of the war in 2011. In his newspaper article in the Foreign Affairs Review, Cater (2015) states that lack of opportunities and political freedom made high skilled Syrians fleeing Syria for decades before the war, but the conflict has increased the high skilled shortages by unprecedented levels and especially the medical industry. These factors are confirmed as push factors by Dodani & Laporte (2005); Kalipeni, Semu & Mbilizi (2012); Marchal & Kegels (2003); and Zweig (1997) in the theories chapter of this research. Cater (2015) adds that in 2013, The Independent International Commission of Inquiry on Syria wrote that a major factor for doctors fleeing the country is the way medical care has been used as a tactic of war. It states that medical personnel and hospitals have been targeted on purpose and are treated as military objectives by the parties to the conflict (Cater, 2015). However, Cater (2015) also brings light to the discussion that the extent to which the brain drain paralyzes Syria in years to come cannot be measured, studies show that half the number of the certified doctors have fled the country over the last four years. This is

agreed on by Gutteridge (2015) in his newspaper article in The Express, where he states that Syria is also suffering a brain drain because the most skilled workers, including doctors and oil workers, have already fled (Gutteridge, 2015). Cater (2015) ends his newspaper article by saying that besides the health sector that seems to be bearing the brunt of the Syrian brain drain, there is education, arts and culture. These also suffer greatly as the youths of Syria are fleeing the country of being killed in the conflict. The globalization has made it easier to move to another country, as discussed by Meyer (2001) in the theories chapter of this research. The remaining Syrians that did not leave the country after four years of civil war will essentially be left the big task of rebuilding a country from the ashes with no young educated professionals. This gives a gloomy perspective on Syria's future (Cater, 2015).

UN High Commissioner for Refugees, Antiono Guterres, also mentions in the newspaper article in the Orient news from Sikora (2015) the disastrous consequences of such an exodus on the future post-conflict reconstruction of Syria. He states in this article that some 86 per cent of the interviewed refugees have secondary education and almost half have gone to university. Also, two-thirds of the Syrians interviewed in Greece by UNHCR had not left the country until 2015, and of those who did, 37 per cent have moved directly to Greece from Syria after just a few days in transit. This shows just how unbearable things have become, because many Syrians began moving after 2015 (Sikora, 2015).

The newspaper article from Redmond (2015) in the UNHCR news also interviews a Syrian doctor who fled the country among some 370.000 people. Redmond (2015) states in his article that more than 70 per cent of these people are Syrian refugees who have so far in 2015 made the dangerous sea crossing from Turkey to Greece on smuggler-supplied boats. Most of these people see the voyage as the last life-threatening obstacle they must face before finding safety in Europe (Redmond, 2015). So, among the Syrian refugees are many highly educated people. This is also noticed by the UNHCR staff. They are seeing increasing numbers of affluent, highly educated Syrians leaving the country. Some are able to bring their money with them, but this is not the case for everyone. The newspaper article of Redmond (2015) also interviews Hamad, an electrical engineer specializing in cellular phone technology and owner of three electronic shops in Syria. His life was very good, but after fleeing the country he is nearly destitute (Redmond, 2015).

It can be concluded that the job sectors from the Syrian high skilled migrants can in principle be classified in all groups described by Mahroum (2000) and even the sixth group added by this research. Syria has undergone a transformation from a massive receiver of migration into a country that loses all its people due to the civil war. Of course all groups are affected, but the biggest issues lie in the medical group and the students group. As most young educated Syrians left the country or got killed in the civil war, the remaining Syrians will be left behind the task to rebuild a country with less professionals left and no young educated Syrians to rely on. The things in Syria have become unbearable, which makes it harder every year to rebuild this country after war will be ended.

Migration problems in the health sector of South Africa and the start of few returnees

When comparing the migration rates in the dataset from Brücker, Capuano and Marfouk (2013), South Africa shows that the total high skilled migration rates (TMR) increased between 1980 (18,22%) and 2010 (12,10%). This is above the world average from 4,94% and too high, which means that the country is losing too many high skilled individuals in the short-term. The enormous fluctuations in the percentages over the years has to do with the Apartheid and post-Apartheid in South Africa. Within these total high skilled migration rates, there has been a large decrease between 1980 and 2010 in migration of high skilled men (from 48,55% to 12,14%) and an increase in migration of high skilled women (from 9,86% to 12,06%). The high percentage of 48,55% of men was due to the crisis of Apartheid in 1980 and is therefore an extreme. This can also be found in table 6.

South Africa	1980	1985	1990	1995	2000	2005	2010
TMR	18,22%	14,74%	8,73%	4,95%	8,23%	10,34%	12,10%
Men	48,55%	12,70%	8,48%	4,85%	8,18%	10,10%	12,14%
Women	9,86%	18,57%	9,04%	5,05%	8,28%	10,56%	12,06%

Table 6: Migration rates South Africa

According to the dataset from Brücker, Capuano and Marfouk (2013), the largest destination countries are Australia, Canada, the United Kingdom and the United States. Within these countries, the high skilled South Africans have also increased significantly. For example, in the United Kingdom the migration stock of South Africans has grown from 4.273 men and 2.529 women in 1980 to 43.009 men and 49.368 women in 2010. This applies to largest destination countries. In Australia and the United Kingdom, the number of high skilled migrated South African women is higher than the number of high skilled migrated South African men (Brücker, Capuano and Marfouk, 2013). This is also shown in table 7.

South Africa	1980	1985	1990	1995	2000	2005	2010
AUS-Men	5.121	7.856	11.002	14.223	21.930	24.177	26.780
AUS-Women	4.571	6.996	10.394	14.051	22.577	28.989	36.001
CAN-Men	3.685	4.695	7.070	8.760	11.205	13.375	17.630
CAN-Women	2.600	3.680	5.780	7.350	9.900	12.160	17.622
UK-Men	4.273	6.697	9.088	4.728	22.803	27.179	43.009
UK-Women	2.529	4.645	7.212	5.362	23.404	36.065	49.368
US-Men	3.888	7.995	11.200	12.496	16.651	27.789	27.602
US-Women	3.072	5.609	8.301	11.033	15.109	23.590	24.406

Table 7: Destination countries high skilled migrants South Africa

According to the expert perceptions in the policy document in AFD from Kabwe-Segatti et al (2006), the most skills-intensive sectors in South Africa are computers and information technology (were 57% of those employed were skilled), business services (47%), education and health (41%), and banking and finance (29%)(Kabwe-Segatti et al, 2006). These sectors are also defined by Mahroum (2000) as migration groups in the theories chapter of this research. Kabwe-Segatti et al (2006) state that the brain drain has over the past years became more and more important. According to the Southern African Migration Project (SAMP), in the policy document with expert perceptions from Kabwe-Segatti et al (2006), in 1994 only two per cent of companies rated the brain drain in South Africa as significant. By 1998, one-third already regarded the problem as significant. If this survey would be conducted today, it would most likely find that perceptions of the impact of the shortfall of skilled personnel, partly due to the loss of skilled migrants, are still more significant. The sectors that are most affected by the brain drain are education and health (59%), business services (47%), banking and finance (43%), and information technology and industrial high tech (both 35%) (Kabwe-Segatti et al, 2006).

Kabwe-Segatti et al (2006) continue in their policy document with expert perceptions in the AFD that the service sector is a major sector in South Africa of skilled labor and is in effect emerging as the most dynamic sector of the country's economy. It outstrips the older industries of mining and manufacturing. People employed in this sector are much recruited in global labor markets, and attracted by developed countries. This has become easier because of the opening up of border due to globalization as discussed by Meyer (2001) in the theories chapter of this research. While South Africa is able to produce skilled workers in key sectors, the country remains remarkably handicapped by an educational system that is ill-adapted to producing large numbers of workers highly skilled in key professions. Kabwe-Segatti et al (2006) state that this is due to policies implemented in an earlier period (Kabwe-Segatti et al, 2006). However, they also argue that this is due to the fact that South Africans themselves are often described as lacking in entrepreneurial skills. Only 1.3% of the South African adult population manages a business that has paid wages for more than three and a half years (Solomon, 2006 in Kabwe-Segatti et al, 2006).

Taylor et al (2015) discuss in their expert interview in the Global Health Action journal that a significant proportion of South African trained health workers have migrated post-training historically, but these numbers have increased during the last decades. They state that The South African Department of Health statistics for 2006 show that 7.000 South African nurses were working abroad compared to a nursing workforce in South Africa of 66.000 that year (Taylor et al, 2015). They continue by arguing that many migrate to developed countries and state that for example in the United Kingdom, the current List of Registered Practitioners contains 36% of doctors qualified outside the United Kingdom. South Africa is the third most frequent country of training of this list (Taylor et al,

2015). This is remarkable, because South Africa has a large shortage of health workers. The emphasis on ongoing links that migrant health workers keep with their country must increase, together with the emphasis on the potential benefits of these links and how they might influence the intention of migration and especially return migration. Crush and Williams (2001) exemplify in Taylor et al (2015) a network of South African high skilled migrants and how this network could encourage collaboration with South African counterparts (Crush and Williams, 2001 in Taylor et al, 2015). This is maintained by Rivzi (2005) in the theories chapter of this research.

So, the health sector in South Africa is regarded as one of the most critical areas of understaffing in the country. According to Kabwe-Segatti et al (2006), in response to fill the gaps caused by the migrations of high skilled migrants, the government is aggressively hiring healthcare professionals. The public hospitals in South Africa were reported to be short of no less than one-third of the doctors they need. There are poor conditions among nurses and the morale is low among health workers in general (Kabwe-Segatti et al, 2006).

Bhagwati (2012) states in his newspaper article in The Economic Times that restricting the migration of high skilled migrants is not a solution, because emigration restrictions today would violate a human right that is enshrined in current international treaties. Immigration restrictions in developed countries would also be difficult, as these are likely to run afoul of anti-discrimination principles and constitutional provisions in countries like the United States. It would be discriminatory to say to a Ghanaian doctor that he must return to his country while an immigrant Russian doctor is allowed to settle down (Bhagwati, 2012).

Statistics from South Africa in the policy document with experts perceptions from Kabwe-Segatti et al (2006) show that in South Africa, the official figures for documented high skilled immigrants are very low. For example 1.011 new immigrants were recorded by the government in 2003 and described as being in professional, semi-professional or technical occupations (Statistics South Africa, 2003:3 in Kabwe-Segatti et al, 2006). If this is calculated against the number of high skilled migrants that leave the country, there is a loss of 547 industrial and production engineer, 542 natural scientists, 693 medical personnel and 703 accountants. Most high skilled immigrants to South Africa have a Zimbabwean nationality (Kabwe-Segatti et al, 2006).

There are also South Africans who have returned. Petzer (2014) discusses in his newspaper article in The South African, that according to the Adcorp report, just under 400.000 South Africans have returned to the country between 2008 and 2013 (Petzer, 2014). However, the report says that this does not solve the problem. The number of vacancies for skilled positions in the country remains twice the number of the returned South Africans. The desperate skills shortage in South Africa is especially pronounced in engineering, management, medicine and finance. A suggestion by the Adcorp

report in the newspaper article from Petzer (2014) is if South Africa is to keep growing, the government must relax visa restrictions and import skilled labor as a matter of urgency (Petzer, 2014).

It can be concluded that the job sectors from the skilled migrants in South Africa also vary and can be divided into the following groups selected by Mahroum (2000): managers and executives, engineers and technicians, and students. Also the added sixth group healthcare applies to South Africa and creates probably the biggest problem. In the past years, more and more companies in South Africa rated the brain drain as a problem, while they did not see it as a problem that needed much attention in first instance. Due to policies implemented in an earlier period, South Africa remains handicapped by an educational system that is ill-adapted to producing large numbers of workers who are high skilled in key professions. Besides, most South Africans also lack entrepreneurial skills. The migration of health workers has increased significantly in the past years and the numbers are large on this migration compared to the skilled health workers who still live in South Africa. The emphasis on ongoing links that migrated skilled health workers keep with their country must increase, together with the emphasis on the potential benefits of these links and how they might influence the intention of migration and especially return migration. While many South African skilled migrants already have returned, the vacancies for skilled positions still remain twice the number of returnees. This will be a big challenge for South Africa to solve.

4.3 Migration policies from countries to deal with the brain drain

This section starts with policies regarding to India. It explains first the importance of the IITs founded a couple of decades ago. Second, it goes back to the 1950s and 1960s to explain the brain drain from India in first instance, before viewing the solutions India made to solve this problem related to the change from a state-controlled model to a market-based system. Third, the rise of high-tech cities will be discussed and what effect it causes for other cities within India. Fourth, policies relating to illegal migration and the economic transformation will be discussed. Despite all the claims that India is a rising power, the country faces a serious crisis. This is also due to the leadership deficit within the country and will form issue of the fifth Indian part in this section. The findings related to the Indian policies will be summed up at the end of this part. The next part is related to the policies in Syria. It first starts with showing the policies that were created before the civil war, to view how the country was dealing with the brain drain and how the country was attracting migrants from abroad. Second, it shows which protocols and agreements Syria signed and which administrative measures were created to limit the brain drain. This part will discuss as third what effects the civil war has on Syria and which policies should be created to help the country rebuilding its high skilled force after the war is ended. The findings relating to Syria's policies will be summed up at the end of this part. The last part is related to

the policies in South Africa. It first starts with explaining the policy proposals necessary for adopting a diaspora model and what opportunities this can create for South Africa. It will secondly discuss the situation of the government and how government thinking has changed. This will be further discussed by illustrating initiatives the government of South Africa have been taken to positively change the brain drain. As third, the situation of South Africa related to its neighboring countries will be viewed and problems related to ageing and the educational system will be explained, which views the difficulty in turning the brain drain from South Africa. The findings related to the policies in South Africa will be summed up at the end of this section.

India's political changes towards migration and the current risks of failure
According to Varma and Kapur (2013), in India, the excellence in education for science and engineering was seen, since its independence in 1947, as essential for the transformation from an economically poor and technologically backward developing country into a developed country. Five IITs were founded to supply advanced education in science and engineering. Since 2008, the Indian government has opened nine additional IITs in some states without IITs. It is extremely competitive to be admitted to an undergraduate program at the IITs. Students must score high on the Joint Entrance Exam (Varma & Kapur, 2013).

Bhagwati (2012) states in his newspaper article in The Economic Times that the working conditions in India in the 1950s and 1960s were very bad, which made many professionals migrate. The bureaucrats decided for example if a professional could go abroad for a conference. The extreme power from the heads of departments encouraged the decision for many professionals to leave. They felt that their brain would drain away in less time than it took to get to New York. Bhagwati (2012) mentions that as in many poor countries the brightest citizens receive their education abroad, the challenge is to prevent them from staying there and settling down instead of preventing them to move in first instance (Bhagwati, 2012).

In the expert interviews in the journal of Varma & Kapur (2013), it is stated that India followed a state-controlled model of development relying on extensive regulation, protectionism and public ownership. The consequences for this model were that the economic growth was slow during this period. A series of economic reforms were implemented since 1991 to move toward a market-based system. India has strikingly emerged into one of the fastest growing economies with an average growth rate of more than 7% since 2000. If we look to the dataset of Brücker, Capuano and Marfouk (2013), India's total high skilled migration rate decreases from 3,80% to 2,59% between 1980 and 1990. After 1990, the total migration rate from India increase from 2,59% in 1990 to 4,97% in 2010. These figures are also shown in table 2. Some IIT graduates are now returning to take advantage of the emerging high-level opportunities, due to the changes in economic environment and India's attempt to recover

its scientists and engineers working abroad (Varma & Kapur, 2013). These changes in economic environment created pull factors for high skilled migrants, because these were attracted by economic development as suggested by Kazlauskiene & Rinkevicius (2006) and Brandi et al (2003) in the theories chapter of this research. But this does not necessarily mean that the IIT graduates will stay within the country, as the data from Brücker, Capuano and Marfouk (2013) reveals. It appears that many IIT graduates first leave India and return in a later stadium.

The Government of India (2006) agrees in Chacko's (2007) journal with expert interviews by stating that the rise of Bangalore and Hyderabad as globally connected cities has had positive consequences for returning high skilled migrants. The cities invested in improving their digital infrastructure, developing Software Technology Parks and new residential townships on greenfield sites on the city outskirts meet to their transnational industries and workforce. The Software Technology Parks function like export processing zones, providing infrastructure and tax exemptions for five years to software firms located in them. These parks evolved into partnerships between the government and national and international firms. By 2006 there were 47 Software Technology Parks in the country (Government of India, 2006 in Chacko, 2007).

Dutt (2011) states in her newspaper article in the BBC News that in Kerala, the government is trying to stem the flow of its young, skilled workers. They also do this through the establishment of business parks and knowledge cities. They try to create five million jobs in the long-term in the states across the sectors of tourism, healthcare, logistics, IT, electronic hardware, gas-based industries and light engineering. In the coming decades such business centers should help to brighten the business image in Kerala and reverse the brain drain that hampered the growth in the state (Dutt, 2011).

According to the newspaper article of Express News Service (2015) in the Indian Express, India has witnessed large-scale illegal migration and its impact on the socio-economic and cultural fabric of the society. The opening up of borders due to globalization has made it easier for illegal migrants to move to another country, as suggested by Meyer (2001) in the theories chapter of this research. In some instances, illegal immigrants act as a destabilizing factor to spread ethnic tensions and riots. Illegal migration, coupled with human trafficking, drugs, weapons smuggling and hawala trade, poses a serious threat to the stability of India (Express News Service, 2015). This is remarkable, as India has made large profits from the high skilled migration over the past years. Therefore India pursues a zero tolerance policy for illegal migration. Minister of State for Home, Kiren Rijiju, states in the newspaper article of Express News Service (2015) in The Indian Express that migration flow is unstoppable in the era of globalization and he pushed for liberalized visa regimes (Express News Service, 2015).

The expert perceptions in the policy document in Asia Policy from Ganguly et al (2011) reveal that one of the drivers behind the transformation of India's social dynamics and foreign policy is the economic transformation. The precursors of the liberalization policy were visible during the 1980s. The

high growth industries are mainly private and therefore the private sectors is very important. The political system in India has not yet processed the implications of this change (Ganguly et al, 2011). They state in their policy document that the country continues to perform well economically, despite the inefficiencies of the government. This remarkable, but the reason for this economic growth is primarily due to the dynamism of its private sector. India is not shy to defend itself on the global stage as a power that can form the emerging global balance of power. Ganguly et al (2011) state in their policy document with expert perceptions that there is also a negative development. Despite all the claims that India is a rising power, the country faces a serious crisis. The nation has been besieged by a plethora of corruption scandals and therefore the government in New Delhi is facing a credibility test. There have been plenty scandals, like the Commonwealth Games, and the Indian government is paralyzed to the point of looking like a lame duck. Ganguly et al (2011) argue that this is due to the fact that there is no political will to make tough decisions and follow them through. The ability of the Indian government to initiate the second generation of economic reforms is questioned and this could have a negative effect on the economy of the country. This second generation of economic reforms is much-needed in the country (Ganguly et al, 2011).

So, strikingly, there is a leadership deficit in India at the political level. At regional level, leaders are doing well, but their appeal remains geographically limited. There has been no alternative leadership presented by the opposition parties that is able to mobilize the public opinion at a national level. Ganguly et al (2011) conclude in their policy document with expert perceptions that there is political disarray in the current state of the Indian polity. Politics in India is not a contest of ideas anymore and has become a play. There is no vision to where India should be heading in the crucial years of the 21st century. Nobody in either one of the two main parties can act larger than the moment. Ganguly et al (2011) argue that the Indian political leaders have so far failed to project any real authority and thereby give the world a reason to believe that India is being governed in any sense of the term (Ganguly et al, 2011).

It can be concluded that Indian policies have resulted in a very high increase of the economic growth of the country. This is due to change from a state-centered model into a market-based model. However, it is very challenging to keep this economic growth, as the political situation is worrisome in India. There have been plenty scandals in the past years and the government did not intervene as they could not make tough decisions. Therefore it can be said that there is a leadership deficit in India at the political level. This is worrisome, as India needs a stable government to introduce a second generation of economic reforms, which is much-needed in the country.

Syria towards a post-war migration policy

According to the policy document with expert perceptions of the MPC Team (2013), before the civil war which started in 2011 in Syria, the socio-economic conditions of Palestinians in Syria were relatively better than in Lebanon and Jordan. Syria was an important receiver of immigration. They state that a large group of these immigrants living in Syria includes high skilled employees and domestic workers and that they have been attracted by the need for foreign experts in the Syrian economy especially in the sectors of telecommunications, banking, insurance, etc. The MPC Team (2013) argues that this is a result of the rise of foreign and local investments following transition to a social-market economy. The labor law 17/2010 specifically regulated their employment status, according to which they are first required to have specific expertise that is not available among the Syrian high skilled people, and second to train Syrian workers in order to make them rapidly obtain the necessary experience. Furthermore, the MPC Team (2013) discuss that the Syrian authorities started in 2010 to record foreign employees by following these legal provisions. The number of foreign employees was estimated at 995 by the Ministry of Social Affairs and Labor in June 2010. This is despite the fact that larger numbers of foreign experts, and in particular from Russia, have long been living in Syria with their families (MPC Team, 2013). According to Mehchy and Mahadi Doko (2011) in the policy document with expert perceptions of the MPC Team (2013), the press estimates that there are between 5.000 and 7.500 foreign workers (Mehchy and Mahadi Doko, 2011 in MPC Team, 2013).

Strikingly, there is no overall law that deals with the Syrian migration, but there are a number of measures adopted since the beginning of the 2000s aimed at enhancing links with expatriates. The MPC Team (2013) argues in their policy document with expert perceptions that the Syrian Interior ministry has regulated their recruitment regarding to domestic workers with a special agency. It imposed the contracting accident insurance, days off, holidays, and suitable living conditions for domestic workers. To limit trafficking in women, these regulations strictly forbid marriage between a Syrian and a foreign domestic. The Ministry of Social Affairs and Labor adopted a law (2040/2007) in which they organize the agencies who are specialized in the recruitment and employment of foreign laborers and domestics. According to the MPC Team (2013), with this law, the domestic's rights are strengthened and it insists that the salary should be written into the contract and that there will be suitable housing. Moreover, the law restricts the creation of new agencies, it imposes the payment of significant taxes, it limits the fees for agencies, and it notes that the agencies have the responsibility of resettling domestics in cases of problem (MPC Team, 2013).

The policy document from the MPC Team (2013) furthermore discusses that Syria signed in 2000 UN Protocols to prevent, suppress and punish trafficking in persons, especially women and children and the Protocol against the smuggling of migrants by land, sea and air. These Protocols are both ratified in 2009 (MPC Team, 2013). Syria also set up some bilateral agreements regarding labor

migration. In 1995 the Syria-Lebanon agreement on mutual employment of their nationals was formed. In 2003 and 2008 Syria made an agreement with Qatar on Syrian workers in Qatar. In 2004, the Syria-Tunisia agreement was established on labor exchange. In 2007 with Jordan and in 2008 with Kuwait, Syria set up an agreement on manpower. In 2008 Syria established an agreement with the United Arab Emirates (UAE) on Syrian workers in the UAE (MPC Team, 2013).

The dataset from Brücker, Capuano and Marfouk (2013) reveals that from 1980 until 2000 the total high skilled migration rates dropped from 17,71% to 12,19%. After 2000 these total high skilled migration rates raised from 12,19% in 2000 to 19,48% in 2010. These figures are also shown in table 4. So, despite of the measures taken in 2000, the total high skilled migration rates raised anyway. This could be due to the Assad regime, where Bashar Hafez al-Assad became president in 2000.

According to the policy document with expert perceptions from the MPC Team (2013), the Syrian regime has remarkably not intervened in the management of labor migration, with the exception of Lebanon and a series of administrative measures created to limit the brain drain. The MPC Team (2013) discusses that the Ba'ath party tried to organize and control Syrians abroad for political and economic reasons. Syrians abroad have played a significant role in the opposition against the Syrian regime, and in particular the Syrians settled in Europe. However, in 2013 the Syrian Government welcomed the opposition, as well as Syrian citizens, who have left the country to return in order to participate in a national dialogue to resolve the crisis. Before the civil war started in 2011, Syria's international cooperation on migration included membership in several international organizations and regional processes. According to the MPC Team (2013), the state's participation in the Arab League as well as bilateral EU-Syrian cooperation programs have been suspended as a result of the violence and the Syrian regime's unwillingness to resign (MPC Team, 2013).

Cater (2015) concludes in his newspaper article in the Foreign Affairs Review that the brain drain in Syria in the long run will have the same negative effects or possibly be worse compared to the Berlin Wall. This is obviously due to the fact that the Syrian war will undoubtedly destroy the Syrian economy, infrastructure, and chances of rebuilding after the war ends (Cater, 2015). The political instability in the country is a push factors as is confirmed by Dodani & Laporte (2005); Kalipeni, Semu & Mbilizi (2012); Marchal & Kegels (2003); and Zweig (1997) in the theories chapter of this research.

Bart Vrolijk, head of Education in Syria from UNICEF, states in the newspaper article from Nu.nl (2016) that with the fragile truce in Syria the hope for many children and their parents grows that normal education is possible again. Most Syrian children are eager to follow education and education is now more important for Syria than it has ever been. It has to be prevented that a generation without serious education grows up and has no perspective for the future. Now, there are some cases where Syrian parents bring their children through the frontline to ensure that they can take an examination. Education gives children their routine and schedule back, which helps them dealing with the stress

they suffer now (Nu.nl, 2016). Bart Vrolijk, expects that when the peace will return in Syria, the education can relatively fast be resumed. He states that this seems remarkable, but the country has always had a relatively high educational level and there is a structure for education. The institutes are present and the Syrians are eager to follow education (Nu.nl, 2016).

Cater (2015) states in his newspaper article that to reduce the overall impact of the crisis, including the brain drain, the measures that can be taken now to support those remaining in the country and assist those who may return should be carried out together with humanitarian aid efforts. Suggestions of turning refugee camps into havens of education, training and enterprise are perhaps idealistic, but to secure a future for Syria efforts in this directions should be made (Cater, 2015).

Guterres warned in the newspaper article of Sikora (2015) in the Orient News that if things continue as they are right now, he feared not only for the lives of refugees, but also for the future of European asylum, as restrictive measures are already spreading all around. He strongly supports the idea of a massive program for resettlement and other forms of admission to European and other international countries that will be large enough to reduce the flow of migrants currently risking their lives to seek asylum (Sikora, 2015).

To sum up, before the civil war, Syria was an important receiver of migration. There is no overall law that deals with the Syrian migration, but they adopted a number of measures aimed at enhancing links with expatriates. Syria signed in 2000 UN Protocols to prevent, suppress and punish trafficking in persons, and the Protocol against the smuggling of migrants by land, sea and air. Besides, they also set up some bilateral agreements regarding labor migration. Despite of these measure taken, the Assad regime could not prevent the rise in the total high skilled migration rates. The Syrian regime has not intervened in the management of labor migration, with the exception of Lebanon and a series of administrative measures created to limit the brain drain. Since the civil war started, the situation obviously turned. However it is expected that when the peace will return in Syria, the education can relatively fast be resumed. The country has always had a relatively high educational level and there is a structure for education. The institutes are present and the Syrians are eager to follow education. Also, suggestions of turning refugee camps into havens of education, training and enterprise are perhaps idealistic, but to secure a future for Syria efforts in this directions should be made.

Government initiatives in South Africa related to the brain drain and its complexities
Bhagwati (2012) outlines in his newspaper article in The Economic Times that the outflow of skilled workers cannot be restricted, so institutional mechanisms should be developed to work with it. He argues that adopting a diaspora model implies four policy proposals. First, nurture the loyalty of professionals abroad instead of blaming them from not coming home. For example, they may be offered voting rights. Second, while the diaspora should be integrated through more rights, its

members also ought to accept obligations that put them on an equal footing with those who remain behind. The "Bhagwati Tax" is an example. Third, ways to supply skills to South Africa need to be organized. An example can be senior foreigners that migrate to South Africa to share their skills. Last, foreign aid should be used to expand training for South Africans in all the essential fields in rich countries. Bhagwati (2012) furthermore discusses that they would add to the diaspora, while the senior foreigners would help to fill current needs and together, these policies would benefit South Africa both in the short-term and the long-term (Bhagwati, 2012).

According to the expert perceptions in the policy document of Kabwe-Segatti et al (2006), governed fairly, the high skilled migration can enhance socio-economic progress both in countries of origin and destination. Migration is a crucial mean of broadening access to resources and reducing poverty, and it broadens the opportunities available to individuals.

When comparing the figures in the dataset from Brücker, Capuano and Marfouk (2013), the total high skilled migration rates dropped from 18,22% in 1980 to 4,95% in 1995. After 1995, the total high skilled migration rates raised from 4,95% in 1995 to 12,10% in 2010. These figures are also shown in table 6. The born-free generation started with the presidency of Mandela in 1994 created a migration from the high skilled South Africans, probably due to the many push factors in the country.

Kabwe-Segatti et al (2006) state that between 1994 and 2002, the government in South Africa was generally against the immigration and emigration of skilled labor. They argue that the government focused its attention on stimulating employment among South African citizens. This is remarkable, because the liberal views concerning international labor markets were ignored. According to Kabwe-Segatti et al (2006), regarding the market for high skilled workers, the government was particularly concerned to reverse the historical discrimination against black South Africans and the combination of a poor education system under apartheid and the migration of significant numbers of high skilled workers has created massive challenges for the development in South Africa. Kabwe-Segatti et al (2006) continue by stating that there is a multiplier effect associated with skilled migration which estimates that each skilled South African who migrates creates a strikingly ten redundancies. A consequence of migration is the massive loss of tax revenue (Kabwe-Segatti et al, 2006).

In their policy document with expert perceptions, Kabwe-Segatti et al (2006) highlight that government thinking on migration has changed substantially in South African the last years. Milestones in this process are the Immigrations Act of 2002, a subsequent amendment to the act in 2004, and various statements by officials from the president Mbeki. They argue that there is a clear recognition, at least at senior levels of policymaking, that a more nuanced policy on migration is necessary and this should be based on appreciating the role of migration to South Africa's society and economy (Kabwe-Segatti et al, 2006).

The Adcorp report in the newspaper article from Petzer (2014) in The South African agrees with Kabwe-Segatti et al (2006), by discussing that the shortage of high skilled workers has been induced by the Immigrations Act, which makes it difficult for foreigners to find work in South Africa. Recent amendments prohibit the use of immigration agents and quota work permits. These have both been widely used in the past by South African companies seeking foreign skills (Petzer, 2014).

Kabwe-Segatti et al (2006) furthermore discuss that the most recent long-term strategic phase of the government is the Accelerated and Shared Growth Initiative-South Africa (ASGISA). This is not a new policy, but rather an attempt to better coordinate existing policies. ASGISA is described as "a limited set of interventions that are intended to serve as catalysts to accelerated and shared growth" (Kabwe-Segatti et al, 2006 p49). ASGISA has as its ultimate goal to halve unemployment and poverty by 2014. ASGISA is a new initiative that aspires to combine growth with more assistance to those living in poverty.

The expert perceptions in the policy document from Kabwe-Segatti et al (2006) agree that since 2002, the government is more and more convinced that the country needs to encourage immigration by skilled workers in the most important sectors for the economy, for example engineering and information technology. The government has launched a further initiative that particularly aims to develop skilled workers, within the framework of its economic strategy. This initiative is known as the Joint Initiative for Priority Skills Acquisitions (JIPSA). It aims to coordinate the activity of different government departments. JIPSA has the strong support of the national treasury in particular and is headed by Deputy President Mlambo-Ngcuka. It is led by a committee of relevant ministers, business leaders, trade unionists and experts in education and training. The purpose of JIPSA is to identify what skills are needed and to seek solutions. Examples stated by Kabwe-Segatti et al (2006) are special training programs, and bringing in retired persons or South Africans who are currently living outside the country. Furthermore, JIPSA is designed to coordinate the work of relevant governments department in accordance with the policy on immigration administered by the Department of Home Affairs. However, the Department of Home Affairs is much disorganized, which makes it arguable whether it will be able to develop and administer a policy appropriate to these considerations of labor recruitments. (Kabwe-Segatti et al, 2006).

The expert perceptions in Kabwe-Segatti et al (2006) discuss that there are others pressures that make it difficult for the government to implement such a policy single-mindedly. They state that there is for example a striking pressure from many quarters to give absolute priority to the employment of South Africans and most especially black South Africans. Foreign companies are asked by the government to advertise for positions in the local press that would otherwise be filled by foreign workers. South Africa is also faced with the puzzle of advancing its own national interests, while helping in the development of its continent. This is also known as South Africa's 'African renaissance' foreign

policy. This is remarkable, because a South African policy of recruiting skilled labor from abroad could clash with a foreign policy that places high importance on stabilizing countries through Africa. Kabwe-Segatti et al (2006) state that if South Africa attracts skilled labor from its neighboring countries, it will be less likely that those countries will achieve the level of development which they want to achieve (Kabwe-Segatti et al, 2006).

Kabwe-Segatti (2006) conclude that the skills shortage is not a problem that can be solved quickly, because the educational system in South Africa is poorly adapted to producing the kind of graduates most required by business. They state that it is hard to reform the educational system and change people's attitudes towards education, skills acquisition and entrepreneurship in a short period (Kabwe-Segatti et al, 2006).

Another problem that arises in South Africa according to the expert perceptions in the policy document from Kabwe-Segatti et al (2006) is ageing. They argue that its scientific personnel are mainly white and male and they are ageing rapidly. South Africa has a policy that aims to promote a new generation of researchers who will more accurately reflect the general profile of the population. But this will put enormous pressure on the educational system. Kabwe-Segatti et al (2006) state that this can lead to a large number of university graduates who lack skills required by employers because they are unable to find work. Schooling for black South Africans especially is often of poor quality according to the expert perceptions in the policy document from Kabwe-Segatti et al (2006) and is particularly bad at training in mathematics and other skills necessary for the high-tech training to which the government aspires. This can be seen as a legacy of the apartheid and as a push factor from the country, as suggested by Dovlo (2003) and Marchal & Kegels (2003) in the theories chapter of this research. To sum up, South Africa's education system does not produce the required numbers of people in science and technology. The educational system remains poorly adapted to provide the type of tertiary students the government is seeking to encourage, particularly related to science, engineering, computer skills and business skills (Kabwe-Segatti et al, 2006).

Taylor et al (2015) discuss in their journal with expert interviews that there are some opportunities to improve the educational system in South Africa. These are related to the South Africans who migrated and intended to stay in the UK, but still want to have an ongoing professional or charitable input in South Africa. They state that this input might include short-term projects, teaching, or mentoring programs. Policies aimed at encouraging medical diaspora to return professionally to South Africa will have a limited impact on the migrated South Africans, because family is the decisive factor (Taylor et al, 2015). This refers to the diaspora option of South Africa which Rivzi (2005) suggests in the theories chapter of this research.

It can be concluded that institutional mechanisms should be developed to deal with the outflow of migration. Four policy proposals are needed to adopt a diaspora model, which benefits

South Africa both in the short-term and the long-term. The born-free generation started with the Mandela presidency created a migration of high skilled South Africans, probably due to the push factors within the country. Between 1994 and 2002, the government in South Africa was generally against the immigration and emigration of skilled labor. Government thinking on migration has changed substantially in South African the last years. Milestones in this process are the Immigrations Act of 2002, a subsequent amendment to the act in 2004, and various statements by officials from the president Mbeki. The most recent long-term strategic phase of the ASGISA. This is not a new policy, but an attempt to better coordinate existing policies. Since 2002, the government is more and more convinced that the country needs to encourage immigration by skilled workers in the most important sectors for the economy, for example engineering and information technology. The government has launched the JIPSA initiative. It aims to coordinate the activity of different government departments. The purpose of JIPSA is to identify what skills are needed and to seek solutions. South Africa is also faced with the puzzle of advancing its own national interests, while helping in the development of its continent. Also, the educational system needs to be reformed. Another problem that arises in South Africa is ageing. Its scientific personnel are mainly white and male and they are ageing rapidly. South Africa has a policy that aims to promote a new generation of researchers who will more accurately reflect the general profile of the population. There are some opportunities to improve the educational system in South Africa. These are related to the South Africans who migrated and intended to stay in the UK, but still want to have an ongoing professional or charitable input in South Africa.

4.4 Motives of high skilled migrants and options for countries

This section starts with explaining the push and pull factors, or in other words motives, from India. It first looks at the push and pull factors from India before its transformation and what recent developments has changed these push and pull factors. This will also be shown by the change in behavior from IIT students. Second, the reasons for the return of high skilled migrated Asian Indians will be explained. There will be a connection to the family factors and also the influence of the high-tech cities that the government has created. The findings related to the motives of the Asian Indian high skilled migrants will be summed up at the end of this part. The next part will start with the explaining how Syria's push and pull factors influenced the high skilled Syrians before the civil war. Second, the impact of the civil war, related to the death of many children and the economic disaster the country is facing, will be explained and what push factors this create for all Syrians to flee the country. This will be shaped by giving an example of a Syrian high skilled refugee and what made him decide to eventually flee the country. Third, some figures about the Syrians outside the country will be given, to show an overview of how dramatic the situation inside the country has become. The findings

related to the motives of the high skilled Syrians will be summed up at the end of this part. The last part will first start with explaining the push and pull factors related to South Africa. It will show what reasons high skilled South Africans have to migrate to developed countries, and the UK will be highlighted. This part will secondly show the tendency of high skilled migrated South Africans to return home one day. This is related to family factors, social factors and professional factors. The high skilled migrated South Africans are eager to contribute to the country in some way. Third, it will be explained why the communication from the high skilled migrated South Africans with family at home is important and how this influences the decisions they make to return or to stay abroad. The importance of family ties will again be emphasized as fourth and before summing up the conclusions at the end of this section, the danger of the collapse of the Zimbabwean economy for South Africa will be mentioned as fifth.

Indian push/pull factors and the importance of family and high-tech cities

As the theory of this research confirms, the motives for high skilled migrants to leave or return are dependent on a push element, consisting of reasons to leave a developing country, and a pull element, consisting of reasons to migrate towards the prospect of a better life in developed countries. Varma and Kapur (2013) explain in their expert interview in journal that push factors in India before its transformation were mostly related to low salaries, rigid regulations, bureaucracy leading to nepotism, and lack of career opportunities and institutions for advanced graduate studies and research. Students and professionals from India were looking for better opportunities in the developed countries. Extra push factors can be added in the form of political instability and corruption. They also explain that pull factors for the high skilled Asian Indians were consisting of the prospect of better education, careers, wages and living conditions, democratic regimes and personal freedom. Better economic and political environment in developed countries can be added as the underlying pull factors. However, Varma and Kapur (2013) state that push and pull factors do not completely explain the motives for skilled migration. These factors do not apply to every single high skilled migrant and every country. Changes in migration laws, companies' policies for recruiting skilled workers from abroad and national security considerations are also important factors in migration, together with the social networks from migrants (Varma & Kapur, 2013).

Varma and Kapur (2013) found in their journal with expert interviews out that now, after graduation from IIT, about half of the students intended to stay in India, while the other half wished to go abroad. For those who wanted to go abroad, they expressed strong preference to pursue advanced degrees, and for those who wanted to stay in India, they preferred to get a job. The majority of IIT students had developed an interest in staying in India or going abroad for advanced education,

to return after their education to get a job in India. This is remarkable, because this was the opposite of the past trend of going abroad for career opportunities (Varma & Kapur, 2013).

Chacko (2007) states in het journal with expert interviews that a combination of push and pull factors made high skilled migrants from India decide to return to their country. What most migrated high skilled migrants referred to was to positives in India such as exciting work, prospects for advancement and making a difference, a desire to return to their roots, hope for a lifestyle that allowed more time with family, and salaries that were equal with those in the US in terms of purchasing power. In the expert interviews in the journal from Chacko (2007), a few interviewed high skilled migrants mentioned the security concerns in the period after 9/11 taken by the US, has led to more incidents were Asian Indians were mistaken for Arabs and urged to go back to their country or discriminated against. These incidents made the Asian Indian migrants feel unwelcome and they believed that they were viewed with suspicion and that their loyalty to the US was questioned (Chacko, 2007). Despite of these incidents, still more high skilled Asian Indians migrated to the US, as the dataset from Brücker, Capuano and Marfouk (2013) shows that the number of Asian Indian high skilled migrants raised from 310.501 men and 227.369 women in 2000 to 666.595 men and 529.225 women in 2010. These figures are also shown in table 3. This supports the statements from Brandi et al (2003) in Kazlauskiene & Rinkevicius (2006) and Mayda (2010) in Docquier & Rapoport (2012) in the theories chapter about the fact that pull factors eventually outweigh the push factors from a country. The economic pull factors in the US outweighs the push factor created by 9/11.

According to Chacko (2007), the pulls of home and professional advancement have been successful in drawing the high skilled migrants home. The high skilled migrants feel that now they can have everything, a good salary, a nice house, household help, a car and driver, good schools for the children and family close by. They felt the pull of their roots as they grew older. As is suggested earlier in the theories of this research by Zweig (1997) and Dodani & Laporte (2005), the family ties were decisive factors in deciding to return or not. Chacko (2007) states that the building of high-tech cities has made it easier for high skilled migrants to return and get a job in India. These high skilled migrants decided to migrate to learn new things and to take exciting jobs, but most of them returned to receive the stability of being home, in India (Chacko, 2007).

According to Chacko (2007), the cities created in India have knowledge-based activities like research, education and creative arts. They attract the high skilled migrants back who form transnational and highly mobile human capital. This can be in the form of knowledge workers or in the form of a creative class that through its ability to innovate can spur the economic growth. Chacko (2007) emphasizes that the high skilled workers are attracted to cities that provide a cosmopolitan environment characterized by diversity and openness. Bangalore and Hyderabad are perfect examples for this kind of cities (Chacko, 2007).

It can be concluded that push factors in India before its transformation were mostly related to low salaries, rigid regulations, bureaucracy leading to nepotism, and lack of career opportunities and institutions for advanced graduate studies and research. Pull factors for the high skilled Asian Indians were consisting of the prospect of better education, careers, wages and living conditions, democratic regimes and personal freedom. The majority of IIT students has now developed an interest in staying in India or going abroad for advanced education, to return after their education to get a job in India. Most migrated high skilled migrants returned because of exciting work, prospects for advancement and making a difference, a desire to return to their roots, hope for a lifestyle that allowed more time with family, and salaries that were equal with those in the US in terms of purchasing power. The pulls of home and professional advancement have been successful in drawing the high skilled migrants home. Family ties were the decisive factor is deciding to return or not. The building of high-tech cities attracted high skilled migrants back who form transnational and highly mobile human capital.

Syria's troubles with high skilled migration and education due to the civil war
According to the expert perceptions in the migration policy document of the MPC Team (2013), Syria was originally a receiver of refugees, especially Palestinians and Iraqis, but recently Syria has become a refugee sending country. With the violent repressions against the protests and the civil war as push factors, they have caused a significant movement of refugees towards neighboring countries and North Africa, as well as internal displacement. Host government, the UNHCR and other organization work to provide basic assistance to Syrian refugees, and the Syrian government works with the Syrian Red Crescent and the UNHCR to provide assistance to internally displaced Syrians and other populations (MPC Team, 2013).

Sikora (2015) states in his newspaper article from the Orient News that Syria has also been seeing the best and brightest disappear from the streets for years. Blind obedience and an unquestioning subservient attitude from the general population were the main demands were the Assad regime depended upon for its survival and anyone who dared to express any thoughts contrary to their interests ran the risk of arrest, imprisonment torture and even death at the hands of the followers from Assad. This was the reason many Syrian high skilled experts ended up leaving Syria even before the civil war began in 2011 (Sikora, 2015). This political instability is seen as a push factor and this is maintained in the theories chapter of this research by Dodani & Laporte (2005); Kalipeni, Semu & Mbilizi (2012); Marchal & Kegels (2003); and Zweig (1997). This is also illustrated in the dataset from Brücker, Capuano and Marfouk (2013), where is revealed that after 2000 the total high skilled migration rates raised from 12,19% in 2000 to 19,48% in 2010 while from 1980 until 2000 the total high skilled migration rates dropped from 17,71% to 12,19%. These figures are also shown in table 4.

Nu.nl (2016) explains that the civil war has had a massive impact on the push factors for Syria.

Supported by figures in their own newspaper article, Nu.nl (2016) states that in 2015 alone, a remarkable more than 500 children have been killed travelling to or during school, according to the latest figures from UNICEF. The organization estimates that more than 2.1 million children in Syria and 700.000 children in neighboring countries do not go to school anymore. Besides, children and young adults are recruited on a large scale by rivaling parties. Almost 6.000 schools are damaged in a way that they cannot be used anymore. In 2015, 40 attacks on education facilities were noted. Tens of thousands teachers are not able to practice their job at this moment (Nu.nl, 2016).

The ANP (2016) reveal in their newspaper article on the website of Nu.nl that since the civil war, more than 1.9 million people are wounded in Syria. Life expectancy has decreased enormous, from 70 years in 2010 to 55.4 years in 2015. The economic damage is estimated by the SCPR at 225.7 billion euros. For many years, the UN counted the number of victims in Syria, but halfway 2014 they stopped counting. The High Commissioner for Human Rights stated that the access to the country was limited and other sources became less reliable (ANP, 2016).

According to Cater's (2015) newspaper article in the Foreign Affair Review, the term brain drain does not only apply to legal migration and people deciding to move residencies, but is often associated with refugees. He explains that in Syria, there is a situation in which many educated or professional people move to a different country in search of better living conditions. A lot of attention is paid to the overwhelming rising numbers of migrants and asylum seekers in Europe, and even more attention is paid to the numbers that do not make it. However, there are few who prioritize concerns about who exactly are the people who are on the run (Cater, 2015).

In the newspaper article of Redmond (2015) from the UNHCR, Hamid is an example of a high skilled Syrian refugee. He is a doctor and it took him and his family remarkably more than four years before they finally decided to leave Syria in search of safety elsewhere. Millions of refugees recognize this pattern. The question they ask themselves is if the dangers of remaining at home now outweigh the risks of fleeing through an active conflict area and resorting to ruthless smugglers to cross international borders to find safety (Redmond, 2015). Besides, most high skilled Syrians had a good life before the civil war started. They often have to leave their wealth behind and start all over in a new country.

The MPC Team (2013) state in their migration policy document with expert perceptions that over 1.6 million Syrians are outside the country nowadays, most of them having fled from the current civil war. Almost 1.4 million Syrians fled the war to neighboring countries, most to Jordan, Lebanon, Turkey and Iraq. Other Syrian migrants reside in the EU countries and in other parts of the world. Due to the escalation of violence in Syria, these numbers have grown in all neighboring countries (MPC Team, 2013).

It can be concluded that Syria was originally a receiver of refugees, especially Palestinians and Iraqis, but recently Syria has become a refugee sending country. Blind obedience and an unquestioning subservient attitude from the general population during the Assad regime made many high skilled Syrians leave the country. This is supported by the dataset from Brücker, Capuano and Marfouk (2013), who shows a raise in the total high skilled migration rates after 2000. Now, the civil war has created a large number of children who got killed and the economic damage is enormous in the country. This contributed to the high skilled Syrians fleeing the country. In Syria, there is a situation in which many educated or professional people move to a different country in search of better living conditions. They do not refer to legal migration in the term of brain drain, but they associate it with the refugees. Many refugees have waited long before they decided to flee, because they have to leave everything in Syria behind. The numbers of Syrians fleeing the country are still growing nowadays.

South Africa's push/pull factors and the diaspora opportunities

Bidwell et al (2015) state in their journal in the Global Health Action Journal with expert interviews that the high skilled migration of South Africa is partly due to the push factors, which include high HIV prevalence, lack of resources, high crime rates, fears over personal safety, concern over political climate, insecurity, racial tension, and corruption. Their pull factors are mostly financial, but also the desire to experience a first world job, and gaining skills that can be used to help the South African system. Many South African health workers migrate to countries like the UK (Bidwell et al, 2015).

Taylor et al (2015) agree in their journal with expert interviews with Bidwell et al (2015) and add that there are several factors which make the UK a good destination for the many South African high skilled migrants. These factors include the historical colonial ties, ease of travel between the two countries, large expatriate communities, frequency of dual citizenship, and common language. Besides these non-professional links, there are also professional factors. These include previous active recruitment and similar medical school academic standards (Taylor et al, 2015).

Taylor et al (2015) continue by stating that most migrated South Africans feel the strong tendency to return one day to South Africa. The major issues for returning one day are related to family, friends and personal identity; active communication and comparison; and charitable and professional links. Taylor et al (2015) divide these in respectively family factors, social factors, and professional factors. Family factors are often the principal factor influencing the decision whether to return or not, as is also suggested by the theories chapter of this research. For many high skilled migrants, their children have established themselves in the UK education system and found friends within the UK. Taylor et al (2015) discuss that the decision to remain or to return is often taken as a family unit. Within social factors the high skilled South African migrants include the better quality of

life in South Africa. However, Taylor et al (2015) state that many high skilled South African migrants also discuss the negative aspects of the wider social environment, including financial security, crime, and the political environment. This influences their decision to return or not. Within the professional factors related to the high skilled health workers, many mentioned work-related factors affecting their future intentions. There is a wide range of planned career pathways including clinical, teaching, health policy, research, and private enterprise. Taylor et al (2015) explain that the differences between the working environment in South Africa and the UK is recognized and some find the aspects of the work environment in South Africa preferable. However, they also state that some see the differences as a barrier to their own professional development if they decide to return to South Africa. What can be seen as remarkable is clinical deskilling. Clinical deskilling within the UK is a problem for many South African high skilled health workers. They often end up with jobs beneath their potential, which can make them decide to return to South Africa (Taylor et al, 2015).

Taylor et al (2015) furthermore explain that within the high skilled South African migrants who decided or are planning to return, many feel a remarkably strong sense of duty and responsibility to South Africa. However, this is not exclusive to those intending to return. There are also high skilled South Africans who intend to remain within the developed country to which they migrated, but are willing to contribute to the development of South Africa in a different way (Taylor et al, 2015). This is the diaspora option Rivzi (2005) explained in the theories chapter of this research.

Taylor et al (2015) continue in their journal with expert interviews by explaining that the ongoing communication between high skilled migrants and their family, friends, and colleagues in South Africa goes often through social media, telephone, diaspora networks, and reunions. Many high skilled migrated South Africans also often visit their home country, which enables them to give the South African diaspora an up-to-date view on crime and safety, but also, within the healthcare sector, health care facilities, job opportunities, and standard of living at home and in other destination countries. Taylor et al (2015) state that the South African diaspora can have a wide variety of professional and charitable links with their country of training, regardless of whether they intend to move back. As long as the issue of crime and safety exists within the country, the return of high skilled migrated South Africans will remain a problem, because they want their family to be safe. The family influence implies that interventions and initiatives to encourage migrants to work in South Africa have a limited impact once the South African migrants have become settled in their developed country (Taylor et al, 2015).

The Adcorp report in the newspaper article from Petzer (2014) in The South African states that skilled South Africans are now returning home in significant numbers. They state that important factors of driving these skilled South Africans home include lack of job security and falling spending powers, but the financial implications are not the full story. Despite their higher buying power in South Africa,

most returnees still face a drop in personal income once they are resettled in South Africa. According to the Adcorp report in the newspaper article from Petzer (2014), the main reason lies behind the financial implications and is related to family, as is also suggested by Zweig (1997) and Dodani & Laporte (2005) in the theories chapter of this research. The Adcorp report continues by explaining that most migrated South African experts have the simple desire to reconnect with family and personal networks, a desire for the South African quality of life, and the desire to raise families with familiar values. The financial lure of the developed countries was a major factor for migrating when they were young, but once the skilled migrants were in mid-career, most of them began thinking of migrating back, due to family factors (Petzer, 2014).

However, Kabwe-Segatti et al (2006) describe in their migration policy document with expert perceptions that a new push factor occurs within South Africa. They state that the catastrophic collapse of the Zimbabwean economy has created great difficulties for South Africa, not least in the form of greatly increased numbers of refugees seeking to enter the country from the north (Kabwe-Segatti et al, 2006). This push factor could also be an explanation for the raise of the total high skilled migration rates in the dataset from Brücker, Capuano and Marfouk (2013), where the total high skilled migration rates raised from 4,95% in 1995 to 12,10% in 2010, while the total high skilled migration rates dropped from 18,22% in 1980 to 4,95% in 1995. These figures are also shown in table 6.

It can be concluded that push factors from South Africa include high HIV prevalence, lack of resources, high crime rates, fears over personal safety, concern over political climate, insecurity, racial tension, and corruption. Their pull factors are mostly financial, but also the desire to experience a first world job, and gaining skills that can be used to help the South African system. The UK is a big destination country because of the historical colonial ties, ease of travel between the two countries, large expatriate communities, frequency of dual citizenship, and common language. Most migrated South Africans feel the strong tendency to return one day to South Africa. This is related to family factors, social factors and professional factors. Most migrated South Africans feel a strong sense of duty and responsibility to South Africa. The ongoing communication of high skilled migrated South Africans with their home is very important. Many high skilled migrated South Africans often visit their home country, which enables them to give the South African diaspora an up-to-date view on crime and safety, but also, within the healthcare sector, health care facilities, job opportunities, and standard of living at home and in other destination countries. Skilled South Africans are now returning home in significant numbers. Important factors include lack of job security and falling spending powers, but the financial implications are not the full story. The main reason lies behind the financial implications and is related to family. South Africa must be aware that with the collapse of the Zimbabwean economy a new push factor can occur.

4.5 Conclusion

This final section will give an answer to each of the sub questions by comparing the countries on the different sub questions. The specific characteristics from the different countries on the subjects will be highlighted and compared, to create suggestions to solve the problems each country is facing.

The first sub question of this research is: What are the main differences in the job sectors of migrating skilled experts discussed by scholarly experts in the media of the different countries? The coding scheme with expert perceptions set out in the methods chapter revealed quotations on this sub question, regarding the globalization and push/pull theory, that leads to the following conclusions. In India, most high skilled professionals that left the country are mainly from the sectors engineers and technicians, managers and executives, and students as divided in the groups of Mahroum (2000) from the theories chapter. In Syria the high skilled professionals that left the country are from all classified groups from Mahroum (2000), while South African high skilled professionals are mainly from the same sectors as India except from one added large sector, which is the health sector when looking at the groups of Mahroum (2000) defined in the theories chapter. A massive flow of Asian Indian high skilled migrants has already returned to the country because of the new possibilities in India. This is due to the created pull factors of economic development mentioned in the papers of Kazlauskiene & Rinkevicius (2006) and Docquier & Rapoport (2012) in the theories chapter. They have become an important part in the development of India, as they brought a lot of experience and knowhow with them. Syria, originally a receiver of migration, has transformed into a country that loses all its high skilled individuals due to the civil war. No Syrian high skilled migrants have the intention to return during the civil war, so peace will be one of the first priorities for Syria. War is a push factor, and describes political, economic and social push factors mentioned by Marchal & Kegels (2003) in the theories chapter. In South Africa, the brain drain was first not seen as a problem, while it is now seen as one of the biggest problems for the South African sectors which require skills. This is the cause of the education system in South Africa that is ill-adapted to producing large numbers of workers who are high skilled in key professions. This is also a problem that could occur for Syria in the future, as they risk the chance of an entire generation without educated Syrians due to the civil war. India put a lot of effort in their educational system. In South Africa, the emphasis on ongoing links that migrated skilled health workers keep with their country must increase, together with the emphasis on the potential benefits of these links and how they might influence the intention of migration and especially return migration. This diaspora option is maintained by Rivzi (2005) in the theories chapter. While many South African skilled migrants already have returned, the vacancies for skilled positions still remain twice the number of returnees.

The second sub question of this research is: To what extent is there consensus or dissensus among scholarly experts in the media related to the main differences in the policies dealing with the brain drain between the different countries? The coding scheme with expert perceptions set out in the methods chapter revealed quotations on this sub question, regarding the globalization and push/pull theory, that leads to the following conclusions. Indian policies have resulted in a very high increase of the economic growth of the country, due to the change from a state-centered model into a market-based model. This economic growth created pull factors for high skilled migration, as they see this as important factors. This is also emphasized in the papers of Docquier & Rapoport (2012) and Kazlauskiene & Rinkevicius (2006) in the theories chapter. However, to keep this economic growth is a challenge for India. They suffered the last years from plenty scandals and the government did not intervene as they could not make tough decisions. This leadership deficit is worrisome, because India needs a stable government to introduce a second generation of economic reforms. This leadership deficit could create political instability, which is a push factor according to Dodani & Laporte (2005); Kalipeni, Semu & Mbilizi (2012); Marchal & Kegels (2003); and Zweig (1997) in the theories chapter of this research. Syria has no overall law that deals with migration, but they adopted a number of measures aimed at enhancing links with expatriates, signed some UN protocols related to human trafficking, and set up some bilateral agreements regarding labor migration. Despite these measures taken, the Assad regime could not prevent the rise of the total high skilled migration rates according to the dataset from Brücker, Capuano and Marfouk (2013). It is assumed that after the civil war, the education in Syria can be relatively fast resumed due to its structure for education. Good education is important, as this led in India to economic growth and therefore attracted high skilled migrants back. In the meantime, turning refugee camps into havens of education, training and enterprise should be a situation to strive for, as this could secure a future for Syria. South African policies should be developed that aim at adopting a diaspora model, which benefits South Africa both in the short-term and the long-term. This is also emphasized by Rivzi (2005) in the theories chapter of this research. South Africa has already put some effort in attracting their high skilled migrants back. This is shown in the ASGISA and the JIPSA initiative. Another problem for South Africa is its location in the world. They are trying to help in the development of their continent, while they are also trying to advance their own national interests. In response to ageing, South Africa has a policy that aims to promote a new generation of researchers who will more accurately reflect the general profile of the population. To improve their educational system, opportunities are related to the high skilled migrated South Africans who have the intention to stay abroad, but still want to have an ongoing professional or charitable input in South Africa. A closer look to the Indian educational system could help a great deal for South Africa and it would help to develop a policy regarding the diaspora network emphasized by Rivzi (2005) in the theories chapter.

The third sub question and additional sub question of this research is: How do the experts in the media formulate the main differences in the reasons for migrated experts to leave their home country between the different countries, and how do the experts in the media formulate the main differences in the reasons for migrated experts to return to their home country between the different countries? The coding scheme with expert perceptions set out in the methods chapter revealed quotations on this sub question, regarding the push/pull theory, that leads to the following conclusions. Before its transformation, Indian push factors were mostly related to low salaries, rigid regulations, bureaucracy leading to nepotism, and lack of career opportunities and institutions for advanced graduate studies and research. In Syria before the civil war, almost the same push factors occurred because of the blind obedience and unquestioning subservient attitude during the Assad regime. The dataset from Brücker, Capuano and Marfouk (2013) supports that since the Assad regime in 2000, the total high skilled migration rates raised. In South Africa however, also other push factors occur, like high crime rates, unsafety, and racial tension. Pull factors from destination countries are for the high skilled migrants in all three countries about the same, related to the prospect of better education, careers, wages and living conditions. These pull factors are confirmed by Docquier & Rapoport (2012); Dodani & Laporte (2005); and Kazlauskiene & Rinkevicius (2006) in the theories chapter. In Syria especially, but also in South Africa, safety is another push factor. Many high skilled migrants from India now returned due to the pull factors of exciting work, prospects for advancement and making a difference, a desire to return to their roots, hope for a lifestyle that allowed more time with family, and salaries equal to those in the US in terms of purchasing power. Eventually, family ties were the decisive factor in deciding to return or not. This is also suggested by Zweig (1997) and Dodani & Laporte (2005) in the theories chapter of this research. The pull factors that India created are a good example for South Africa, but also for Syria once civil war has ended. Both countries need to improve the safety of their citizens before they can start on promoting their pull factors. Many migrated high skilled South Africans feel a strong tendency to return to South Africa one day. This is again due to family ties, which now keep them up-to-date on what is going on within the country. If the South African government succeeds in reducing the push factors, and improving their pull factors, there is no doubt many South African high skilled migrants will return to help the country in their development and economic growth. Some of them already returned, but this is due to lack of job security and spending power, push factors created in the destination countries.

Conclusion

The first part of this chapter will answer the research question formulated in the introduction of this thesis. This is done, by first starting with formulating a common answer to the differences in job sectors of the high skilled migrants. Second, the differences in how policies in the different countries deal with the brain drain are explained. Third, a common answer to the differences in motives from the high skilled migrants between the different countries will be given. The second part of this chapter will contain the reflections and discussion with the theories chapter of this research. All statements on which this research agrees, but also the statements on which this research does not agree will be revealed. The last part of this chapter will contain the practical implications for the EU. These will include respectively the diaspora option, the civil war in Syria, the problem of luring healthcare workers from African countries, and the recommendation to calculate the EU's high skilled migration and compare it to the world's average rate.

5.1 Different situations influencing the brain drain

The research question of this research is: What are according to scholarly experts in the media the differences in job sectors, policies and motives influencing the brain drain between India, Syria and South Africa? In the analysis chapter of this research, the sub questions have been answered. Through these sub questions an answer for the research question will be formulated in this section.

There are differences in the job sectors of the high skilled migrants in India, Syria and South Africa. In India, most high skilled professionals that left the country are mainly from the sectors engineers and technicians, managers and executives, and students. In Syria the high skilled professionals that left the country are from all classified groups, while South African high skilled professionals are mainly from the same sectors as India except from one added large sector, which is the health sector. This reveals the complexity of the problem, as the high skilled individuals from different job sectors have different motives and need different approaches by the government. Indian returned high skilled migrants have become an important part in the development of India, as they brought a lot of experience and knowhow with them. India's only problem is that many students who graduate will not find work in their field of study in India. Therefore they have to take IT jobs instead, which creates a gap between the IT sector and other sectors within the country. Syria, originally a receiver of migration, has transformed into a country that loses all its high skilled individuals due to the civil war. No Syrian high skilled migrants have the intention to return during the civil war, so peace will be one of the first priorities for Syria. After war has ended, continuing education is important for the young Syrians to prevent Syria from having an entire generation without knowledge. In South Africa, the brain drain was first not seen as a problem, while it is now seen as one of the biggest

problems for the South African sectors which require skills. This is mostly due to their education system. South Africa must create a diaspora network which creates opportunities for high skilled migrated South Africans to help from abroad.

The countries in this research have very different migration policies and initiatives to control the brain drain. This is also due to the differences in the situation between the countries. Indian policies have resulted in a very high increase of the economic growth of the country, due to the change from a state-centered model in to a market-based model. However, to keep this economic growth is a challenge for India. They suffered the last years from plenty scandals and the government did not intervene as they could not make tough decisions. This leadership deficit is worrisome, because India needs a stable government to introduce a second generation of economic reforms. Syria has no overall law that deals with migration, but they adopted a number of measures aimed at enhancing links with expatriates, signed some UN protocols related to human trafficking, and set up some bilateral agreements regarding labor migration. Despite of these measure taken, the Assad regime could not prevent the rise in the total high skilled migration rates. It is assumed that after the civil war, the education in Syria can be relatively fast resumed due to its structure for education. This is positive for Syria, as it is important for Syria to continue their education fast after the civil war. South African policies should be developed that aim at adopting a diaspora model, which benefits South Africa both in the short-term and the long-term. South Africa has already put some effort in attracting their high skilled migrants back. This is shown in the ASGISA and the JIPSA initiative. In response to ageing, South Africa has a policy that aims to promote a new generation of researchers who will more accurately reflect the general profile of the population. To improve their educational system, opportunities are related to the high skilled migrated South Africans who have the intention to stay abroad, but still want to have an ongoing professional or charitable input in South Africa. This diaspora option is important for South Africa and therefore is a returning issue in answering the sub questions and research question.

The motives from high skilled individuals to migrate or to return are mainly related to family ties in all countries. The pull factors are mainly related to the economic situation or the prospect of better life in developed countries. However, each country has different push factors, most created by the government. Many high skilled migrants from India now returned due to the pull factors of exciting work, prospects for advancement and making a difference, a desire to return to their roots, hope for a lifestyle that allowed more time with family, and salaries equal to those in the US in terms of purchasing power. Eventually, family ties were the decisive factor in deciding to return or not. The pull factors that India created are a good example for South Africa, but also for Syria once civil war has ended. In Syria, the civil war created the most push factors, followed by the push factors created by the Assad regime. In South Africa, push factors like high crime rates, unsafety, and racial tension are

most common. Both countries need to improve the safety of their citizens before they can start on promoting their pull factors. Many migrated high skilled South Africans feel a strong tendency to return to South Africa one day. This is again due to family ties, which now keep them up-to-date on what is going on within the country.

These three sub categories have influenced the brain drain from the countries mentioned in this research in different ways. The different job sectors from the high skilled migrants requires different responses in actions from the government related to initiatives and policies. Also, the way the government has organized its country influences the push factors from the country, which make high skilled individuals decide to migrate. Although the pull factors play an important role, the push factors cannot be ignored.

5.2 Reflections and discussion with theories

Bundred and Levitt's (2000) statement that globalization have made international migration easier, resulting in larger transfers of human resources (Bundred & Levitt, 2000 in Marchal & Kegels, 2003) is agreed upon in this research. This research builds upon this statement by showing that in the healthcare sector from South Africa many high skilled healthcare workers migrated to the UK and in the IT sector of India many Asian Indians migrated to Silicon Valley in the past, in order for better perspectives. Zweig, Changgui and Rosen (2004) stated that globalization offers people opportunities to increase the value of their human capital. Expert perceptions from Bhagwati (2012) and Taylor et al (2015) in this research confirm this statement by saying that people can learn from experiences abroad. This research continues on this statement with two suggestions in which this benefits the sending countries in the long-term. First, they bring back more knowledge when they intend to return one day and second, if they do not intend to return, the discussed diaspora option would benefit the sending country, in this research mostly referred to South Africa.

Iredale (2001) stated in the paper from Asiedu (2010) that the demand for high skilled professionals has accompanied technological booms like those in Silicon Valley and that most developed countries consider the migration of high skilled professionals as a way of filling the gap of labor shortages, which creates an imbalance in developing countries where important job sectors like healthcare face shortages of skilled personnel. This research maintains and builds upon this statement by revealing that South Africa is facing a healthcare shortage, as suggested by Kabwe-Segatti et al (2006) and Taylor et al (2015). Therefore this research shows that the statement from Iredale (2001) does not only apply to Silicon Valley, but also to healthcare workers who migrate to the UK.

According to Docquier and Rapoport (2012) in the theories, high skilled migration does not mean that the human capital from a country will automatically decrease. It can generate positive

network and diaspora externalities. The brain drain side of globalization creates therefore winners and losers. Rivzi (2005) maintained this statement in the theories and add that it is important for developed countries and developing countries that there is a circulation of knowledge in a globalized knowledge economy. Rivzi (2005) stated the location of people is unimportant so long as the developing countries are able to draw upon their expertise (Rivzi, 2005). In this research, Bhagwati (2012) and Taylor et al (2015) agree that this diaspora option called upon by Rivzi (2005) can be an important factor for South Africa in keeping its high skilled individuals in the country, or to attract some of them back. This research adds that due to family factors most migrated high skilled individuals have a strong sense of duty towards their home country.

Commander, Kangasniemi and Winters (2004) believe that returning skilled migrants may be those that have performed relatively poor in the sending country and that the best migrants tend to stay away. The Adcorp report in Petzer (2014); Chacko (2007); Redmond (2015); and Taylor et al (2015) in this research do not agree with Commander, Kangasniemi and Winters (2004) and discuss that the high skilled migrants mostly return due to family living in their native country. The poor performance plays no role in this matter. However, some high skilled migrants return due to the work beneath their skills in the destination country and one might suggest that this could be the relatively poor high skilled migrants.

Saxenian (2002) states in the theories that networks of scientists and engineers are more flexible and faster in transferring technology, skill and knowledge between distant regional economies compared to most corporations and these networks have the potential to play an increasingly important role in the evolution of global production networks (Saxenian, 2002). The diaspora option called upon in this research by Bhagwati (2012) and Taylor et al (2015) fits perfectly in this statement. This research adds that the diaspora option therefore could reverse the brain drain in the long term for South Africa.

Docquier, Lowell and Marfouk (2009) stated in the theories of this research that women and men do not respond with the same intensity to push and pull factors. Women have a tendency to rely more strongly on relatives and friends for help, information, protection and guidance at their destination. Therefore social networks are seen as more important for women. Also, educated women are better able to escape from sexual discrimination they must suffer in many developing countries compared to uneducated women. Most well educated men stay in their home country because they do not face the same barriers to career advancement compared to women (Docquier, Lowell & Marfouk, 2009). When looking at the data of Brücker, Capuano and Marfouk (2013), In India and Syria the amount of high skilled migrants does not create a large difference if it is compared to gender. In South Africa however, this statement from Docquier, Lowell & Marfouk (2009) in the theories of this research is maintained. It is more common for high skilled women to migrate than for high skilled men.

This research supports therefore the statement from Docquier, Lowell and Marfouk (2009) and it may be assumed that sexual discrimination is an issue in South Africa.

Asiedu (2010) describes in the theories of this research that the complexities of the migration process have created new pressures on the governments of countries, which must manage the inside migration and outside migration in a way that sustain their place in the globalized world. However, in most cases they are operating in a policy environment characterized by ineffective planning and insufficient collaboration across boundaries (IMI, 2006 in Asiedu, 2010). This research agrees with Asiedu (2010) and states that India has a leadership deficit (Ganguly et al, 2015), Syria faces civil war which makes ineffective planning and insufficient collaboration naturally (MPC Team, 2013), and South Africa is seen as politically instable (Kabwe-Segatti et al, 2006). This research states that improvements in these countries are needed to prevent that the economic growth stagnates.

Meyer (2001) states in the theories of this research that the phenomenon of brain circulation is not necessary negative for developing countries. Some good may come out of the expatriation in terms of increasing access to external resources. It is no longer necessary to keep nationals in the country through restrictive measures. The diaspora option that Bhagwati (2012) and Taylor et al (2015) research suggest for South Africa elaborates on this statement from Meyer (2001).

Zweig (1997) discusses in the theories that family is not a major factor, but he describes it within other factors influencing the brain drain. The Adcorp report in Petzer (2014); Chacko (2007); Redmond (2015); and Taylor et al (2015) do not agree with Zweig (1997) that the family factor is not a major factor, as they define family as the decisive factor in whether high skilled migrants choose to return or not.

5.3 Practical implications for the EU

Practical implications for the EU from this research starts with the diaspora option. This is something that could be helpful for the EU, as in this research it is suggested that networks of scientists and engineers are more flexible and faster in transferring technology, skill and knowledge. A diaspora of experts would then communicate from outside the EU towards the experts inside the EU. The EU should move to a more human rights based approach to migration, instead of the currently more restrictive migration policies. This would make the EU more flexible and faster in transferring technology, skill and knowledge.

The EU should also help in rebuilding Syria after civil war has ended. For now, many Syrians seek refugee within the EU and this is recognized as a problem for the EU. Once the war has ended, the education systems need to be resumed and the country needs to rebuild its government and policies. To help the education system, the EU could create an organization with expert teachers to

help the young Syrians in getting a decent education. This could give Syria an opportunity for the future, as the young Syrians would receive proper education. If Syria has no future, the EU would spend a lot of money annually in aid for Syria. It would also be an option to give refugees with high skilled education the opportunity to rebuild the country.

In relation to the recruitment of high skilled healthcare workers, the EU could sign agreements with African countries in which they minimize the recruitment of these healthcare workers. This is currently an issue for the Member States on their own. Signing agreements would reduce the pull factors and prevent for example the UK from recruiting too many healthcare workers and countries like South Africa would have the opportunity to keep most of their healthcare workers within the country. These joint solutions would in the long-term have a positive effect on the healthcare system from South Africa. Again, this would save money for the EU as they can decrease the amount of aid they annually spend at African countries in the long-term.

The EU should calculate their average of high skilled migration to check whether they satisfy the world-norm of 4,94%. At the moment, this is mainly done on country-level. The high skilled migration rates should not be much lower compared to the world rates, as this means that the EU is isolating and keeping its high skilled migrants inside, which is in turn bad for its economy and human capital in the long term. It should not be too high either, as this means that the EU is losing too much human capital on the short term. By calculating the average high skilled migration, the EU would have an indication in whether current migration policies have the desired effect on the high skilled migration and they can change migration policies where needed.

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Appendix A: Experts in this research

ANP (2016)

In this newspaper article, the most important expert is the Syrian Centre for Policy Research (SCPR). The website from SCPR mentions the following about their organization:

> The Syrian Center for Policy Research (SCPR) is an independent, non-governmental, and non-profit think tank; which undertakes public policy oriented research to bridge the gap between research and policy making process. SCPR aims to develop a participatory evidence-based policy dialogue to achieve policy alternatives that promote sustainable, inclusive, and human-centered development.

Vision: An accountable transparent evidence-based, policy making process in Syria, supported by an active socio-economic dialogue, and dynamic public, private, and civil society partnership in which a credible professional research community produces knowledge for policy and public opinion.

Mission: To contribute to the enhancement of policy-oriented research, social dialogue, accountable and transparent policy making, and the capacity building of policy institutions in order to promote sustainable inclusive development.

SCPR Strategic Objectives: The main purpose of SCPR is to help people in Syria to better be able to initiate and engage in an open, respectful, and informed dialogue on key issues of public policy.

SCPR is expected to:

- enhance accountability and participation among public, private, and civil institutions;
- increase public participation in policy discussions and the decision making process;
- promote freedom of expression and respect for different points of view;
- strengthen the effectiveness of government systems and institutions;
- improve the quality of media coverage;
- and to serve development by empowering the population.

The main operational goals of the SCPR include the following:

- To produce evidence-based research and utilize knowledge to support good governance.
- To create a forum for policy dialogue among key representatives of political, social and economic sectors.
- To provide access to information and participation in policy making in order to empower the people.
- To expand institutional policy capacities in order to assess and communicate innovative ideas and research outputs.

SCPR Values:

- Empowerment for all

- Information for all

- Inclusiveness

- Equality in society by supporting the excluded, deprived, and marginalized

- Participation, transparency, and accountability

- High Research Ethics

- Independence

- Serving public interest

Source: http://scpr-syria.org/who-we-are/

Bhagwati (2012)

In this newspaper article, Jagdish Bhagwati is the most important expert.

The Columbian Law School gives following biography about Jagdish Bhagwati:

Jagdish Bhagwati is University Professor at Columbia University and Senior Fellow for International Economics at the Council on Foreign Relations (CFR). He has been economic policy adviser to Arthur Dunkel, director-general of GATT (1991–93), special adviser to the UN on globalization, and external adviser to the WTO. He has served on the expert group appointed by the director-general of the WTO on the future of the WTO and the advisory committee to Secretary-General Kofi Annan on the NEPAD process in Africa, and was also a member of the Eminent Persons Group under the chairmanship of President Fernando Henrique Cardoso of Brazil on the future of UNCTAD. Currently, he is co-chair with President Halonen of Finland of the Eminent Persons Group on Developing Countries in the World Economy.

Professor Bhagwati is described as the most creative international trade theorist of his generation and is a leader in the fight for freer trade. His most recent book Termites in the Trading System (Oxford University Press, 2008) discusses the deleterious effects of preferential trading agreements. His previous book In Defense of Globalization (Oxford University Press, 2004) attracted worldwide acclaim. Five volumes of his scientific writings and two of his public policy essays have been published by MIT press. The recipient of six festschrifts in his honor, he has also received several prizes and seventeen honorary degrees, and awards from the governments of India (Padma Vibhushan) and Japan (Order of the Rising Sun, Gold and Silver Star).

Professor Bhagwati writes frequently in major newspapers and magazines worldwide and has reviewed for the New York Times Book Review, Wall Street Journal, Foreign Affairs, The New Republic, and Times Literary Supplement. He has also appeared on TV shows including MacNeil/Lehrer NewsHour, Charlie Rose Show, BBC News, CNN, and Bloomberg Television.

A native of India, Professor Bhagwati attended Cambridge University where he graduated in 1956 with a first in Economics Tripos. He then continued to study at MIT and Oxford returning to India in 1961 as professor of economics at the Indian Statistical Institute and then as professor of international trade at the Delhi School of Economics. He returned to MIT in 1968, leaving it twelve years later as the Ford International Professor of Economics to join Columbia. He is married to Padma Desai, the Gladys and Ronald Harriman Professor of Comparative Economic Systems at Columbia University and a scholar of Russian and other former socialist countries' transition problems. They have one daughter, Anuradha Kristina.

Cater (2015)

In this newspaper article, the St Andrews Foreign Affairs Conference is the most important expert. Their website mentions the following about their organization:

A diverse and dynamic society that encourages the St Andrews community to explore global politics and current affairs.

St Andrews is home to one of the most highly-ranking International Relations (Politics) departments in the UK. Along with the university's highly international student and staff body, it is only natural that Foreign Affairs Society thrives here.

Foreign Affairs is University Affiliated and is the IR school's official student organization. However our society is not just populated by IR students but attracts a range of majors, including geographers, historians, and scientists.

What do we do?

One of our main occupations is our annual lecture series. Notable speakers we have hosted include the Prince of Jordan, the Japanese Consul General, and the political attaché of the Israeli Embassy in London. Without fail, our events are eagerly attended by students and faculty of the university. Our lectures are complemented by formal and informal debates, socials, and we also have a weekly radio show (tune in to STAR radio at 5pm every Sunday for 'This Week in Foreign Affairs").

In addition to this, we hold an annual conference, the St Andrews Foreign Affairs Conference ('SAFAC'), which each year considers a different theme. Past themes have included Global Health and Pandemics, the Arab Spring, and Nationalism. The conference attracts international speakers and crosses academic disciplines – for example, our Global Health themed conference in 2014 was organized in collaboration with the Economics Society, Medsin St Andrews and Medicines Sans Frontiers. More information on the upcoming conference can be found at www.safac.co.uk.

A third and crucial component of Foreign Affairs is the Foreign Affairs Review, our journal. A team of over 40 analysts publish articles weekly on their website foreignaffairsreview.co.uk, allowing deeper exploration into global politics and current affairs beyond the scope of the International

Relations course. Founded in 2012, the Foreign Affairs Review prides itself on being the largest publication at St Andrews, both in terms of staff size and output. All analysts are competitively selected, and write authoritatively and regularly on a wide range topics.

Mission: Since 2012, the St Andrews Foreign Affairs Conference (SAFAC) has brought leading academics, public and business leaders together to begin a meaningful dialogue about the most pressing issues in contemporary foreign affairs. SAFAC seeks to: inform, inspire and abet further action.

Source: http://standrewsfas.co.uk/about/

Dutt (2011)

In the newspaper article of Dutt, David Peter is the most important expert. The article mentions the following:

Dr. David Peter is Principal of the School of Engineering at the Cochin University of Science and Technology (CUSAT).

As there is no more information about David Peter, below you will find the vision of the CUSAT, in which he contributed.
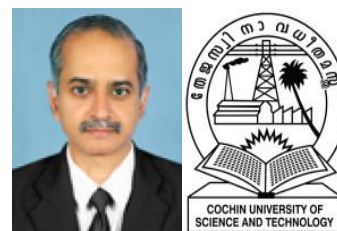
Cochin University of Science and Technology (CUSAT) occupy a unique place in the academic map of Asia as a premier institution for higher learning. The University's motto 'Tejaswinavadhitamastu' meaning 'may the wisdom accrued deify us both - the teacher and the taught - and percolate to the universe in its totality' which is taken from the Vedas, the ancient scriptures of the land, well epitomizes the ideals and philosophy of the University.

CUSAT offers programs across a spectrum of disciplines in frontier areas ranging from engineering, science and technology to humanities, law and management. The pursuit of excellence through these programs has given CUSAT a national and international acclaim. The academic diversity evidenced in the curricula ranging from traditional courses in science to the most advanced programs in technology and research is the unique strength of CUSAT. It is this strength which makes the University a highly sought-after institution worldwide for academic collaborations and exchange programs.

Besides, Kochi's pleasant, sunny weather accentuated by the cool breeze from the Arabian Sea offers visitors from any continent a benign atmosphere for academic pursuits.

Express News Service (2015)

In this newspaper article, Kiren Rijiju is the most important expert. His biography mentions the following:

He served as a Member of Khadi and Village Industries Commission from 2000 to 2005 he is often being referred to as the "voice of North East India". He is well

articulate and very fluent in Hindi, English and local dialects. He occasionally writes articles on security & socio-economic issues. Kiren is well travelled and has visited several countries.

Source: http://www.elections.in/political-leaders/kiren-rijiju.html

Gutteridge (2015)

In this newspaper article, Daveed Gartenstein-Ross is the most important expert. His biography mentions the following:

Daveed Gartenstein-Ross is a Senior Fellow at the Foundation for Defense of Democracies. He is also an Adjunct Assistant Professor in Georgetown University's Security Studies Program, a Fellow with Google's Jigsaw, an Associate Fellow at the International Centre for Counter-Terrorism – The Hague, and the Chief Executive Officer of Valens Global, a consulting firm focusing on the challenges posed by violent non-state actors (VNSAs).

Source: http://www.defenddemocracy.org/about-fdd/team-overview/gartenstein-ross-daveed/

Kigotho (2013)

In this newspaper article, Theodora Xenogiani is the most important expert. Her biography mentions the following:

Theodora Xenogiani is senior economist at the Directorate for Employment, Labor and Social Affairs of the Organization for Economic Co-Operation and Development (OECD). She works on projects related to international migration, the skills and labor market outcomes of migrants and migration and development. She is also teaching a graduate course at the Paris School of Economics. Previously, she worked as an Economist at the Employment Analysis and Policy division of the same directorate and contributed to the OECD Employment Outlook. Prior to that she worked at the OECD Development Centre on projects related to migration and development, informal employment and internal migration in China. She has also worked as researcher at the Overseas Development Institute in London and at the Centre for Research in Economics and Statistics (CREST) in Paris. Theodora holds a PhD from the London School of Economics, an MSc from the University of Warwick and a BSc from the Athens University of Economics and Business. Her research focuses on the issues of labor markets, social protection, migration and development, education and skills. She joined IZA as a Research Fellow in May 2011.

Source: http://www.iza.org/en/webcontent/personnel/photos/index_html?key=3612

NU.nl (2016)

In this newspaper article, Bart Vrolijk is the most important expert. His biography mentions the following:

Bart Vrolijk (59) is Head of Education from UNICEF in Syria. More than 25 years he put efforts in educating children in the conflict areas of the world, from Afghanistan to Rwanda, and van Guatemala to Kosovo.

Source: https://www.unicef.nl/nieuws/berichten/2016/02/de-drive-van-bart-vrolijk-hoofd-onderwijs-unicef-syrie/

Petzer (2014)

In this newspaper article, the Adcorp group is the most important expert. Their website mentions the following:

The Adcorp Group is South Africa's human capital powerhouse.

Celebrating 40 years of business since 1975, the Adcorp Group offers workforce management and resourcing solutions, permanent recruitment and selection, professional services, managed services providers (MSP), vendor management systems (VMS), Business Process Outsourcing (BPO), functional outsourcing, HR consulting, analytics, advisory and training. Specialist resourcing services, best-of-breed business practices as well as a solutions' based approach to talent acquisition and retention, means we do not only resource organizations but also add significant value to clients through effective project management, professional services, training and development.

Adcorp has a proud tradition of creating value for its shareholders, converting a high proportion of its profits into cash, adhering to the highest standards of corporate governance and providing quality services to its clients by way of its focus on operational excellence, innovative product offerings and service solutions.

Source: http://www.adcorp.co.za/Pages/AboutUs/AboutUs.aspx

Redmond (2015)

In this newspaper article, the UNHCR is the most important expert. Their website mentions the following:

For over 65 years, the United Nations High Commissioner for Refugees (UNHCR) has been protecting the rights and well-being of refugees all over the world.

We work to ensure that everybody has the right to seek asylum and find safe refuge, having fled violence, persecution, war or disaster at home.

Since 1950, we have faced multiple crises on multiple continents, and provided vital assistance to refugees, asylum-seekers, internally displaced and stateless people, many of whom have nobody left to turn to. We help to save lives and build better futures for millions forced from home.

Sikora (2015)

In this newspaper article, Antonio Guterres is the most important expert. His biography mentions the following:

António Manuel de Oliveira Guterres, United Nations High Commissioner for Refugees. On 24 May 2005, the Secretary-General proposed for approval by the General Assembly the appointment of António Manuel de Oliveira Guterres of Portugal as United Nations High Commissioner for Refugees for a term of three years effective 15 June 2005.

Mr. Guterres is currently President of the Socialist International, a position he has held since 1999. Since 2003, he has also been an Advisor to the Board of Portugal's second largest bank, Caixa Geral de Depósitos. He is an invited professor of the Instituto Superior Técnico, responsible for the Chairs of Sustainable Development and Innovation. Mr. Guterres was Prime Minister of Portugal from 1996 to 2002. He was also a Member of the Portuguese Parliament from 1976 to 1983 and from 1985 to 1995. In addition, from 1981 to 1983, Mr. Guterres was a Member of the Parliamentary Assembly of the Council of Europe, in Strasbourg. Apart from an extensive political, professional and academic curriculum, as well as a number of publications, Mr. Guterres has also been involved in the activities of many non-governmental organizations. He was a founding member, for example, of the Portuguese Refugee Council in 1991. He is also a Member of the Club of Madrid and of the Ibero-American Forum. Mr. Guterres has a technical background in engineering and a degree in engineering from the Instituto Superior Técnico, in Portugal. He also had an academic experience in the mid-1970s as an Assistant Professor of Physics and Telecommunications. Mr. Guterres was born on 30 April 1949 in Lisbon. He is married and has two children.

Chacko (2007)

This expert interview in journal is made by Elizabeth Chacko. She has the following background:

Professor Chacko received Bachelor's and Master's degrees in geography from the University of Calcutta in India. She also obtained a graduate degree in Public Health and a Ph.D. in geography from UCLA. Dr. Chacko has taught geography at various institutions including Loreto College in Calcutta, UCLA in Los Angeles, and the George Washington University. She is primarily engaged in research on human migration and its ramifications — the transnational connections between immigrants and their sending countries/societies, the creation and maintenance of ethnic spaces by immigrant groups in the receiving country, identity formation and retention among first and second generation immigrants, factors that aid or deter

immigrant inclusion in cities and the relationships between migration and development in the immigrant sending countries of Ethiopia and India. She has conducted field work for her research projects in India, Ethiopia, Malaysia, Singapore and the United States. Prof. Chacko was named U.S. Professor of the Year from the District of Columbia in 2006 by the Carnegie Foundation for the Advancement of Teaching and Council for the Advancement and Support of Education. She is the recipient of a Fulbright scholarship to research the integration of different streams of Indian immigrants in Singapore (Fall, 2013).

Source: https://elliott.gwu.edu/chacko

Varma & Kapur (2013)

This expert interview in journal is made by Roli Varma and Deepak Kapur. They have the following biography:

Roli Varma is professor and Regents' Lecturer in the School of Public Administration at the University of New Mexico, Albuquerque. Her research focuses on women and minorities in information technology, Asian immigrants in the science and engineering workforce, the management of industrial research, and professional ethics. She is the author of Harbingers of Global Change: India's Techno-Immigrants in the United States (2006, 2007) and Managing Industrial Research Effectively (2006). She served on the Association for Computing Machinery (ACM) Task Force on Job Migration in 2004–2005.

Deepak Kapur is a distinguished professor of computer science at the University of New Mexico, USA. He has conducted research in areas of automated deduction, induction theorem proving, term rewriting, unification theory, formal methods, program analysis, hardware verification, algebraic and geometric reasoning and their applications. In 2009 he received the Herbrand Award for distinguished contributions to automated reasoning.

Source: Article of Varma & Kapur (2013), see references

Bidwell et al (2014)

The expert interview in journal is made by Posy Bidwell, Pallavi Laxmikanth, Claire Blacklock, Gail Hayward, Merlin Willcox, Wim Peersman, Shabir Moosa and David Mant for the Global Health Action.

These experts are active in the following the departments: Bidwell, Laxmikanth, Blacklock, Hayward, Willcox and Mant in the Department of Primary Care Health Sciences, University of Oxford, Oxford, UK; Peersman in the Department of Primary Health Care and Family Medicine, Ghent University, Ghent, Belgium; Moosa in the Department of Family Medicine and Primary Health Care, Faculty of Health Sciences, University of Witwatersrand,

Johannesburg, South Africa

Taylor et al (2014)

The expert interview in journal is made by

Katherine Taylor, Claire Blacklock, Gail Hayward, Posy Bidwell, Pallavi

Laxmikanth, Nicholas Riches, Merlin Willcox, Shabir Moosa and David Mant for the Global Health

Action

These experts are active in the following departments: Taylor, Blacklock, Hayward, Bidwell, Laxmikanth, Willcox, and Mant in the Nuffield Department of Primary Care Health Sciences, Oxford University, Oxford, UK; Riches in the Centre for Primary Care, University of Manchester, Manchester, UK; Moosa in the Department of Family Medicine, Faculty of Health Sciences, University of Witwatersrand, Johannesburg, South Africa

Ganguly et al (2011)

This expert perception in policy document is made by Sumit Ganguly and Rahul Mukherji. They have the following biography:

Sumit Ganguly holds the Rabindranath Tagore Chair in Indian Cultures and Civilizations at Indiana University in Bloomington. He has previously been on the faculty of James Madison College of Michigan State University, Hunter College of the City University of New York and the University of Texas at Austin. He has also taught at Columbia University in New York City. He has also been a Fellow and a Guest Scholar at the Woodrow Wilson International Center for Scholars in Washington, DC and a Visiting Fellow at the Center for International Security and Cooperation at Stanford University. His research and writing focused on South Asia has been supported by grants from the Asia Foundation, the Ford Foundation, the Carnegie Corporation of New York and the W. Alton Jones Foundation.

He serves on the editorial boards of Asian Affairs, Asian Survey, Current History, the Journal of Strategic Studies and Security Studies. He is also the founding editor of both the India Review and Asian Security, two referred journals published by Taylor and Francis, London. Professor Ganguly is the author, editor or co-editor of a dozen books on South Asia. His most recent books are Fearful Symmetry: India and Pakistan Under the Shadow of Nuclear Weapons (co-authored with Devin Hagerty) jointly published by Oxford University Press (New Delhi) and the University of Washington Press (Seattle) and More Than Words: U.S.-India Strategic Cooperation Into the Twenty-First Century (co-edited with Brian Shoup and Andrew Scobell) published by Routledge, London. He is a member of the Council on Foreign Relations, New York and the International Institute of Strategic Studies, London. He is currently at work on a book, India Since 1980, under contract with Cambridge University Press, New York. He received his PhD from University of Illinois-Urbana/Champaign in 1984.

Rahul Mukherji describes his biography as follows:

I was born in the ancient Indian city of Patna, spent a few years in Kolkata and0020grew up largely in New Delhi. In India one selects an honors subject before undertaking course-work. So I shifted from economics at the undergraduate level in Delhi University to international politics at the Master's level at the Jawaharlal Nehru University (New Delhi), and pursued doctoral work in political science at Columbia University.

I have maintained a lively interest in the political and economic aspects of development working on India's economic transition to globalization and market orientation, the welfare of its citizens and the delivery of public services and South Asian regionalism. My research demonstrates that development is a political and economic process. The political and economic aspects of development are so deeply intertwined that they cannot easily be separated from each other. I have a deep interest in comparative work on South Asia, the rest of Asia and other parts of world.

I began teaching at the Hunter College of the City University of New York in 1996 and have taught at the University of Vermont (Burlington) and the Jawaharlal Nehru University before joining NUS in 2008. Nothing gives me more pleasure than students carrying on the good work in the work place and in scholarly life – which is the best reason to be in the teaching profession.

I have edited India's Economic Transition (Oxford University Press, 2007); co-authored India Since 1980 (Cambridge University Press, 2011) with Sumit Ganguly; and have completed writing two books on the politics of India's economic and social development which will be published by Oxford University Press. I am editorially associated with journals such as India Review, Pacific Affairs and International Studies Review.

MPC Team (2013)

This expert perception in policy document is made by the MPC. Their website mentions the following:

The Migration Policy Centre (MPC) produces advanced policy-oriented research on global migration, asylum and mobility to serve migration governance needs at European and global levels, from developing, implementing and monitoring migration-related policies to assessing their impact on the wider economy and society.

Migration links each individual country to the rest of the world in a rapidly evolving scenario. Therefore, the MPC pools worldwide scholars, experts, policymakers and influential thinkers, to identify problems, research their causes and consequences, and devise sound policy solutions on migration and related matters. In doing so, it bridges research with action, providing stakeholders with data, sources, methodologies and results required by evidence-based policy-making.

Research at the MPC is carried out within three main frameworks: observatories, which forge the Centre's identity, core programs and projects

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Kabwe-Segatti et al (2006)

This expert perception in policy document is made by Aurelia Wa Kabwe-Segatti and Loren Landau. They have the following biography:

Aurelia Wa Kabwe-Segatti has been Research Director of the Institut Français d'Afrique du Sud in Johannesburg since 2004 (www.ifas.org.za/research). She holds a PhD in political science. Her thesis was devoted to the transformation of South African immigration policy in the post-apartheid period. Her research interests are public policy, immigration policy analysis, regional policy coherence and local migration dynamics.

Loren B Landau is Director of the Forced Migration Studies Program, University of the Witwatersrand, South Africa (www.migration.wits.ac.za). With a background in Political Science and Development Studies, his research explores sovereignty; migration and urban transformation; and state-society relations. Loren Landau has been with the FMSP since 2002.

Stephen Ellis is a historian, specializing in contemporary African history. In particular he is working on a study of the civil war in Liberia from 1989 to 1997, and on the role of the security forces in the transition in South Africa, between 1960 and 1994. He maintains a general interest in African current affairs. His current research is on the Political economy of the environment movement; Counter-Insurrection in South Africa, 1960-1994; the history of Madagascar; Religion and politics in Africa. Stephen is the current editor of African Affairs. He is based at the Afrika Studicentrum of the University Of Leiden.

Darshan Vigneswaran is Co-ordinator of The Migrant Rights Monitoring Program at the Forced Migration Studies Program, University of the Witwatersrand, Johannesburg. He holds a PhD in Politics from Monash University (Australia) on The Contours of Control: A Study of European Territoriality.

Gayatri Singh holds an MSc in Forced Migration Studies from Oxford University. She was coordinator of the Migration, Governance, and Health Initiative at the Forced Migration Studies Program and the School of Public Health, Wits Medical School, University of the Witwatersrand, Johannesburg in 2005 and 2006.

Source: Article of Kabwe-Segatti et al, see references.