

**UNIVERSITY OF ZULULAND**



**An assessment of the causes and implications of brain drain on South Africa's socio-economic development: The Case Study of the higher Education and Health Sectors**

**Halalisani Victor Mlambo**

**Student number: 201160774**

**Submitted in fulfilment of the academic requirements for the degree of Master of Administration (Public Administration) in the Faculty of Commerce, Law and Administration, University of Zululand, KwaDlangezwa, South Africa**

**Supervisor**

**Dr Toyin C. Adetiba**

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## **DEDICATION**

To My Mother, Nombuso Mkhwanazi, who made me!

## ACKNOWLEDGEMENTS

For the accomplishment of this work, I am extremely grateful to many people who have been there for me from the beginning.

Firstly, I would like to express sincerest gratitude to my supervisor, Dr. Toyin C Adetiba, for your dedication, support, leadership and determination throughout the journey of my progress in this work. I would like to extend my gratitude to Dr Gillo Momo Lekane, Dr Hakeem Onopajo, Prof Chris Isike and Dr Richard Ongunnubi for the supportive role that they have played throughout this journey.

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Finally, to my family, the world is a better place with you by my side. To my mother, my maker, my guider and role model; *Ngiyabonga, inkosi inibusise ngiyabonga ukungibekezelela*, this has not been an easy road but with you by my side, the journey has indeed been worthwhile.

## **DECLARATIONS**

I declare that this Masters project is my own work. It is submitted for the degree of Master of Administration in Public Administration, in the Department of Public Administration at the University of Zululand, KwaDlangezwa Campus. It has not been submitted for any other degree or examination at any other university.

## **ABSTRACT**

Countries around the world have continuously invested billions in educating their citizens, with the hope that the skills and knowledge acquired through education will help increase the country's productivity and contribute to the sustainability of economic growth. But over the years, globalization has resulted in the increase in the demand and competition for skilled workers around the world.

In South Africa, the higher education and health sector have been adversely affected by emigrating skilled professionals, South Africa is characterized by high levels of brain drain owing to many socio-economic factors. Fortunately for South Africa, highly skilled foreign nationals (especially from Africa) have continued to view South Africa a favourable destination.

This study aims to assess the causes and implications of brain drain and how it has affected South Africa's socio-economic development with reference to the health and higher education sectors. The main research problem focused on what causes South Africans to migrate; the pull and push factors, and what has been the implication for South Africa's socio-economic development.

Using secondary data, the study combed through various sources of information pertaining to the theme of the study, various sources such as, books, Journals, online accredited publications were used to garner the data needed for the successful completion of the study. Results indicated that the push factors driving South Africans to migrate include: increased crime levels, lack of law and order, government corruption and better economic opportunities offered in other countries. The study also found that skilled foreign nationals (Mainly from Africa) have contributed extensively to the socio-economic development of the country. The study also suggested that, government together with civil society need to come together to devise strategies on how to reduce brain drain in the country, to achieve this, the study suggests, the development of a South African green card lottery program, an increase in investments and funding for higher education, the training of competent health workers, A comprehensible immigration policy and an Increase in public-private collaboration maybe some ways which can help fight brain drain in South Africa.

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## ABBREVIATIONS

ANN7	:	African News Network 7
BBBEE	:	Broad-Based Black Economic Empowerment
BBC	:	British Broadcasting Corporation
BEE	:	Black Economic Empowerment
CDE	:	Centre for Development and Enterprise
DCs	:	Developed countries
ECA	:	Economic commission for Africa
FDI	:	Foreign direct investment
GDP	:	Gross Domestic Product
HIV	:	Human Immunodeficiency Virus
IFP	:	Inkatha Freedom Party
IMF	:	International Monetary Fund
IOM	:	International Organization for Migration
LDCs	:	Least developed countries
nGAP	:	New Generation of Academics Programme
NSFAS	:	National Student Financial Aid Scheme
OECD	:	Organisation for Economic Co-operation and Development
SA	:	South Africa
SADC	:	Southern African Development Community
SANC	:	South African nurses' council
SSA	:	Sub-Saharan Africa
UK	:	United Kingdom
UN	:	United Nations
UNDP	:	United Nations Development Programme
UNICEF	:	United Nations Children's Fund
USA	:	United States of America
WB	:	World Bank

## CHAPTER 1: ORIENTATION

### 1.1 Introduction and background

International migration has been a growing phenomenon ever since the end of the Second World War, from a global perspective, migration patterns have often been characterised by people moving from less developed to more developed regions (Kalekin-Fishman & Pitkanen. 2006). While understanding the motives and patterns of international migration has been at the forefront in terms of demographic and geographic studies, the imbalance of migration within countries themselves is a great threat to governments who are working to achieve inclusive socio-economic development (Lall & Selod. 2006).

Macura, Mac-Donald & Haug (2005) mention that political instability and economic uncertainty in regions such as Africa, Asia and South America have resulted in increased migration numbers to developed Western nations such as Germany, United States, Britain and France.

Li, Ahmed, Khan, & Hongwei (2016) note that the great inequality in terms of development between countries in the world will be a huge hindrance in trying to fight skilled immigration for developing regions. The authors make an example and state that the rapid development of the United States will serve as a pull factor for migrants in South America to go there, so will be the case for Germany and Britain, many migrants from Eastern Europe and beyond will risk everything to reach these destinations, hence the authors conclude that while international migration has been to a great extent disadvantageous for developing regions, it is nonetheless impossible to stop as the unequal development of countries will always be a contributing factor.

Castles & Miller (2003) state that while many potential African migrants frequently contemplate the idea of migrating abroad mostly to European countries, African countries such as South Africa, Nigeria, Senegal, Egypt and Kenya attract a large number of migrants from different countries in the continent.

Gebrewold (2013) opines that while these countries attract a large volume of migrants, the prospect of earning more in Europe usually results in migrants using these countries a stepping stone to their final destination which is usually Europe.

Mangala (2012) mentions that because of the perceived economic development in these countries, there are often viewed by migrants as an alternative to European countries, another factor is that inter-Africa migration is less demanding and dangerous compared to migrating to European migration.

While countries such as Nigeria, Kenya, Senegal and Egypt have been able to attract a large number of regional migrants, South Africa has been fortunate, in essence the country has been able to attract migrants from Africa and beyond (Segatti & Landau. 2011). The country has been able to utilise such skills to counter the negative effects of brain drain. However, Bourguignon Jacquet & Pleskovic (2007) mention that foreign skilled immigrants alone cannot be a final solution to fighting South Africa's brain drain problem, mainly because trends in international migration are unpredictable and that skilled migrants may pack and leave whenever they feel the need to do so, hence calling for a broad strategy to deal with skilled migration from South Africa. Migration patterns in South Africa are largely characterised by a huge number of people who move from rural to urban areas which are characterised by better educational, health and working facilities, often this has contributed to the unequal level of development in rural areas when compared to urban areas in the country.

The skills possessed by a country's citizens are very crucial for the development of that particular country socially, economically and by extension politically. South Africa (SA), no doubt is in greater need of expertise to facilitate socio-economic development on an array of issues that are currently affecting the advancement and development of the country (Badat. 2009).

South Africa's health and higher education sectors have been negatively affected by the brain drain problem. As a result, drawn by better salaries and better-working conditions, hundreds of South African academics have left the country for what they perceive to be a glorious and result orientated career abroad (Shinn. 2004). Universities across South Africa have numerous vacancies for academics, some of which have gone for years unfilled (SMPlacements. 2015). The mass exit of academics has not only crippled research output at South African universities, but it has also jeopardized the quality of education offered at institutions of higher learning (Kigotho. 2015). The brain drain of academics therefore, compromises the quality of

education, which results in South Africa producing graduates that find it difficult to compete with their counterparts internationally (Badat. 2010), thus reducing their capability to contribute to the socio-economic development of South Africa.

Apart from the higher education sector, the South African health sector has also been negatively affected by brain drain. The health sector in South Africa is highly characterized by a chronic shortage of skilled personnel, from doctors, surgeons, psychiatrists to nurses and nursing assistants (Goyal. 2013). The massive brain drain experienced by the health sector has not only compromised the quality of health care offered in South Africa (Padarath *et al.* 2003), but it has also cost the government millions of rands considering the fact that some of the doctors and nurses education were funded through government subsidies.

Considering the importance of the above-mentioned sectors for the South African economy, it is imperative for government to work together with the civil society in order to establish effective interventions while ensuring that skilled professionals in these sectors remain in South Africa and contribute to the country's socio-economic development for the long term.

Pre-1994, South Africa had a large number of white skilled individuals working in the country, post-1994 saw a large number of the same highly skilled white South Africans leave the country (Van Afrika. 2000). This has caused South Africa to experience a chronic shortage of skilled individuals to drive the economy as most white individuals who were educated and benefited from apartheid were now leaving the country (Van Rooyen. 2000).

To try and re-correct the inequalities of the past, the post-1994 South African government established numerous policies aimed at uplifting different race groups who were disadvantaged under the apartheid regime. Broad-Based Black Economic Empowerment (BBBEE), Black Economic Empowerment (BEE) and Affirmative action are the most notable policies that were established to try and correct the injustices of the past.

Prinsloo (2013) believes that giving preference to employing a certain race over the other has contributed to the loss of vital skills in the country. Brain drain is a global phenomenon that is affecting every country around the world, but it's full impact is

undeniably felt by developing countries who lose people with unique skills that are vital for the growth and development.

The primary aim of this study was to assess the causes and implications of brain drain on South Africa's socio-economic development with focus on the health and higher education sectors.

## **1.2 STATEMENT OF THE PROBLEM**

Chimanikire (2005) asserts that the emigration of skilled professionals from Africa threatens the economy of numerous states. This is because the migration of most of the middle-class citizens leads to a decrease in tax revenue, increasing unemployment, which further compounds Africa's socio-economic problems.

Showing the extent of brain drain in Africa, as observed by Adepoju (2006) more than 600 medical experts in Kuwait and Saudi Arabia are from Nigeria, 60 percent of doctors trained in Ghana in the 1980's have migrated, and more than half of health and social workers in Zimbabwe have migrated abroad.

Africa no doubt is in a race against time to stop the outflow of brains from the continent, numerous skilled professionals have left the continent due to unfavourable conditions. In Africa political (civil wars and poor governance) and economic factors (poor economic growth and poor salaries) have been the main reasons behind the emigration of skilled professionals (Chimanikire. 2005).

Although South Africa has been the best destination for other African skilled migrants who sought to migrate within the continent, (Kitimbo. 2015), the country itself is grappling with the problem of brain drain especially from the health and higher education sectors. For South Africa, the health and higher education sectors are characterized by numerous shortages of skilled professionals (Goyal. 2004). In the health sector, there is a serious shortage of skilled medical professionals to provide important services; this indirectly undermines the effective and efficient functioning of the sector (Jobson. 2015). It was reported that South Africa was in need of 44, 700 nurses and that the country was only producing 3500 annually (Cullian. 2015), presenting a major problem for the health sector in terms of providing quality healthcare. It is also reported that South Africa needs 14, 531 doctors to meet the country's growing population and with South Africa currently not producing sufficient

doctors, achieving the required number of doctors will undoubtedly remain a challenge. (Rondganger. 2013). Experts have noted that serious interventions are needed to prioritize the training of doctors and ensuring that medical professionals remain in the country.

The higher education sector is no exception to the brain drain problem, where hundreds of lecturers and researchers have left South Africa to work in other countries (Shinn. 2004). Drawn by better salaries, benefits apart from a good socio-political environment that drives the need for good condition of service, the mass exodus of skilled academics in South Africa has negatively affected the provision of quality education in higher education sector (Mattes & Mniki. 2007). South Africa is currently failing to replace skilled academics, which further complicates the challenges faced by universities in the country. Foreign academics have played a role in alleviating the brain drain problem at universities (Altbach. 2013). But it's undoubtedly clear that going forward, the country needs a clear strategy to ensure that skilled South African academics remain in South Africa for the long term or else the higher education system is at risk of total collapse (Kigotho. 2015).

The migration of skilled professionals from the country's health and higher education sectors has been catastrophic for the country's socio-economic development. Overtly South Africa has benefited from inter-Africa migration of foreign nationals. Between 2001-2003, 799 038 Africans immigrated to South Africa and between 2006-2010, 922 884 Africans migrated to South Africa (BusinessTech. 2015).

The above statistics raise serious questions, has South Africa perhaps benefited from the brain drain in Africa? Have the thousands of African immigrants in the country contributed positively to South Africa's socio-economic development? Can we, therefore, say the huge number of Africans immigrants have offset the brain drain problem in South Africa's health and higher education sectors? Is it, therefore, rational to say that South Africa's health and higher education sectors have suffered from brain drain considering the fact that a large number of skilled African professionals have been employed in these particular sectors? These are critical questions the study aims to answer.

Available literature and studies which have looked at brain drain in South Africa have mostly looked at the causes and effects, thus neglecting the high rate of skilled

African individuals who have entered the country and the impact this has had on South Africa's socio-economic development, in particular, their contribution to the country's health and higher education sector. Therefore, the study seeks not only to assess the causes and implications of brain drain in South Africa in South Africa's higher education and health sector, but it will also examine the flow of migrants into South Africa. As such, the study will examine whether the skilled immigrants have made up for the lost skills that have left South Africa's health and higher education sector.

### **1.3 AIM OF THE STUDY**

The primary aim of this study is:

- To assess the causes and implications of brain drain on South Africa's socio-economic development with special focus on higher education and health sector

### **1.4 OBJECTIVES OF THE STUDY**

The overall objectives of the study are:

- To examine the causes of brain drain and its implications for South Africa's long-term socio-economic development.
- To examine whether government policies which were meant to redress the imbalances of the past have contributed to brain drain in South Africa.
- To examine the causes and implications of brain drain on South Africa's health and higher education sectors.

### **1.5 KEY RESEARCH QUESTIONS**

- What are the causes of brain drain in South Africa and to what extent have they affected South Africa's long term socio-economic development?
- Can brain drain in South Africa be attributed to the policies that were implemented by government post-1994?
- What are the causes of brain drain on South Africa's health and higher education sectors and to what extent has it impeded the efficient functioning of the these sectors?

## **1.6 RESEARCH METHODOLOGY**

The study relied on secondary sources as a means of collecting the relevant data.

To accomplish this; the study employed a strict textual analysis of the available literature relevant to the topic under consideration. In essence, qualitative research method was be used in the course of this study. Berkwits & Inui (2007) assert that qualitative research uses methods such as participant observation or case studies which result in a narrative, descriptive account of a setting or practice.

Under qualitative methods, secondary data in form of books from the school (University of Zululand) library, newspaper articles, journals and reliable internet sources that are available and are relevant to the study were used to gather relevant data on the subject under examination. Online related literature that has been made available by scholars also formed part of the secondary sources that were utilised. Government publications, institutional reports from organizations such as the World Bank (WB), International Monetary Fund (IMF), United Nations (UN) and the International Organization for Migration (IOM) were also consulted.

The research method aimed at combining three methods of descriptive, exploratory and explanatory in trying to critically understand and derive information that was significant to the topic that was being studied.

Various scholars from various forums have tried to understand the root cause of this phenomenon, therefore there are rich sources of information, though these sources may not speak directly to the causes and implications of brain drain within African states, they nonetheless offer different views on the subject matter which were used to further enrich the study.

Other sources may include:

- All forms of relevant mass media

### **1.6.1 Data analysis**

Data collected was analysed using a qualitative method of analysis known as content analysis, Forman & Damschroder (2007) sees content analysis as a systematic approach to qualitative data analysis that identifies and summarizes

the message content. Such message content may refer to brochures, books, written documents, transcripts, news reports and visual media; this will make sense of all the data that has been collected from various sources.

### **1.7 RESOURCES**

This research had no special resource implications. Current resources were adequate and apart from the usual research and travel grants, no additional institutional resources allocations were required.

### **1.8 INTELLECTUAL PROPERTY AND INNOVATION**

Other than the usual copyright issues, not any special intellectual property rights were to emanate from this research

### **1.9 HARVESTING THE RESEARCH**

The research undertaken makes it a huge possibility of publishing articles from the findings generated. Available forums (workshops etc.) will also be used to present the study. If possible I will seek to present a conference paper on the research locally or internationally. The final research will be made available to the department of public administration in the form of a working paper for further review and discussion. I also intend to submit the excerpts of the study to accredited and renowned journals or other means of relevant publications.

### **1.10 BRIEF SUMMARY OF REMAINDER OF THE THESIS**

A brief summary of the remainder of the thesis is given below.

**Chapter 1** introduces the study and provides the overall background to the research topic. It will identify the research problem, aims, objectives and aims of the study and it will briefly touch on the research methodology applied to the study

**Chapter 2** takes a closer look at rate of in brain drain in Sub-Saharan Africa (SSA) and what has been done to mitigate or eradicate it. The chapter also looks at South-South migration and examines how South Africa has benefited; finally, the chapter looks African immigrants in South Africa and the role they have played in South Africa's socio-economic development.

**Chapter 3** examines the causes and implications of brain drain in the Africa. The chapter discusses the causes and implications of brain drain in Africa, from socio-economic to political factors.

**Chapter 4** formally introduces South Africa as developing country and as a country that has been affected negatively by brain drain. The chapter assesses the causes and implications of brain drain for South Africa's health and higher education sector. The chapter also seeks to understand the role that government can play in reducing the outflow of brains in the country. Finally, the chapter seeks to explore the challenges faced by South Africa in reducing brain drain and what lies ahead in terms of future prospects.

**Chapter 5** is solely devoted to the discussing the findings, recommendations and conclusion of the study.

## CHAPTER 2

### THEORETICAL FRAMEWORK: REVIEWS OF LITERATURE

#### BRAIN DRAIN, DEVELOPMENT AND HIGHER EDUCATION IN SUB-SAHARAN AFRICA

##### 2.1 Introduction

Developed countries have often been blamed for encouraging brain drain within developing regions to such an extent that the developing world is today is experiencing a chronic shortage of skills (Dodani. 2005). Programs such as the American, Canadian, and Australian green-card have encouraged Africans to apply for such programs considering the entry requirement is usually a degree (Sobel. 2009).

From a policy-making perspective, the issue of brain drain has become a focus point for numerous governments around the world as its far-reaching implications have been widely observed and experienced by the developing world for far too long (Shinn. 2004). The chapter begins by deeply engaging existing literature relating to the study and subsequently followed by an in depth explanation of the theoretical framework upon which the study rests upon.

##### 2.2 Migration: An Overview

Migration is a term that is often associated with many meanings; migration has different definitions according to different scholars from different disciplines. Kok (1999) defines migration as the gradual movement of people from one destination to another usually; they are motivated by economic reasons. Migration refers to the changing of locations either temporarily or permanently for different reasons (Datta. 2003). According to Bernstein & Wiener (2002) migration is the movement of people from one country to another through the will of individuals or families concerned (migration in this sense can be voluntary or involuntary), however Mangalam (2015) stressed that migration cannot just be defined as movement of people from one region to another, but definitions also have to incorporate the changes in the population structures in both countries.

Since the beginning of the 20<sup>th</sup> century, the migration of Africans heading to Europe had increased dramatically; experts have blamed this on Europe's own historical

actions such as colonialism and imperialism (Jonsson & Hansen. 2011). Migration in Africa began centuries ago, most notably in the 16<sup>th</sup>-19<sup>th</sup> century in the form of slavery and slave trade (Stuchtey. 2011). African migration has always been seen as multi-directional; Europeans have always seen Africa as a troubled continent which needs to be assisted and have come to Africa as settlers, administrators, soldiers and more recently policy advisors, journalists and aid workers (Fick & Thomas. 2007). The migration of Europeans to Africa has always been justified as a necessity for Africa to meet up with other continents, yet the migration out of Africa has always been seen as a threat or considered to be a big problem that needed to be dealt with (Reder. 2007).

The above statement clearly shows that migration is not an entirely a new phenomenon, it has existed for decades, currently migration is characterized by people moving from rural to urban areas for economic reasons, in the past migration was seldom motivated by religion, family or education (McCatty. 2004).

### **2.2.1 Types of migration**

According to Jesen and Wong (1997) there are two types of migration which are studied by sociologists and human demographers, namely: internal migration and international migration. Internal migration refers to when individuals or families change residences within national boundaries; it may be within a country, province, or municipality. An internal migrant is considered to be someone who moves from one administrative territory to another within state parameters. While international migration can be explained as the change of residence from one country to another either temporarily or permanently, international migrants are further classified as legal migrants, illegal migrants and refugees.

### **2.2.2 Difference between a migrant and a refugee**

Understanding the difference between migrants and refugees can be rather complex as both of them are viewed traditionally as choices made by individuals or families. A migrant is an individual who chooses to leave their original place of residence and travel to another place, region or country in search of a better life. A refugee, on the other hand, is an individual who is forced to leave their place of residence due to factors beyond their control (Davies. 2009).

### **2.2.3 Types of migrants**

People migrate for different reasons, some migrate by choice others by force and other simply by family recommendations. Schrover (2008) outlines the following types of migrants

#### **2.2.3.1 Economic migrants**

These are people whose movements are solely motivated by economic opportunities available in other countries or regions; economic migrants are usually from less economically developed countries

#### **2.2.3.2 Political migrants**

People fleeing political instability and civil war are considered political migrants. Such people migrate and do not return back home because of the fear of persecution and that fact that they may get little or no protection from their governments.

#### **2.2.3.3 Environmental migrants**

These are people whose livelihoods have been affected back home due to sudden changes in their environment, such changes may be made by events such as floods, famine, tornadoes and earthquakes.

The migration of African professionals has had negative impact human capital development in Africa. According to Dent (2010) migration tends to work against government efforts, in the sense that governments provide scholarships and finances to train and educate the population of a country, yet when the very same recipients of government scholarships migrate to other countries, the country's human capital capacity declines. Brain drain does not only decrease the tax for the government, but it also robs that country of its skilled human capital (Dunnett. 2015).

Johnson *et al* (2009) assert that international migration can help raise economic growth and reduce the overall poverty levels in the migrant's country of origin, he notes that an increase in remittances can lead to poverty reduction, he also notes that circular migration between developing and developed countries can produce more than \$150 billion per year, which could possibly benefit both developed and developing countries.

### **2.3 Migration in Africa: A historical Perspective**

Africa started witnessing an increase in the number of people moving across borders in search of better opportunities, right from the beginning of the twentieth century owing largely to mass industrialization across Europe, where there was a huge demand for manpower (Cogan & Derriccot. 2014), during this period, it was not only individuals who were migrating, but whole families were risking their lives crossing dangerous terrains motivated by the vast opportunities that were presented by the industrialised world (Gebrewold. 2013). Therefore, labour migration in Africa today is not a new phenomenon, it was first encouraged by Europeans, and migration in Africa today has been further influenced by the changing socio-economic issues in the continent (Shimeless. 2010).

Africa has a long history of people moving between different regions, dating back to pre-colonial Africa, in pre-colonial Africa, regional migration was considered an important element in creating new societies (Planet. 2000). Before the arrival of colonialism, migration was part of normal life in Africa; this included the permanent movements of people to open up new lands or to escape civil conflict (Mhlanga & Gatsheni. 2010).

Migration has always been a part of African culture and tradition before colonization or the industrialization of Europe, Africans travelled across regions as job seekers or cattle traders. During those times seasonal or circular migration was also involved in form of trade, agricultural development and religion (McCatty. 2004). Other than migrating in search of better economic opportunities, droughts, epidemics and ecological disasters were the other forces that pushed Africans to migrate from mostly Northern Africa to Central, West and Southern Africa (Lucas. 2013).

The colonialization of Africa coincided with the industrialization of Europe and America, this period sparked a new era in forced migration of Africans. Africans were forcefully taken to Europe and America to work as slaves, during the 1780s; more than 79,000 African slaves arrived at American ports every year (Klien. 2010). Early enough, Europe had developed greatly at the expense of under-developed Africa; this was done by extracting Africa's labour and commodities to invest in the development of European and American economies, while destroying economic and

political opportunities for Africa, the essential aim of colonialism was always to have control over human mobility (Rodney. 1973).

Robinson and Acemoglu (2010) states that when colonial powers left, they took everything with them, and left Africa underdeveloped and greatly impoverished, hence, the challenge for newly independent African states to rebuild the values, principles, and traditions that were destroyed by colonialism. Since the 1990's, the movement of people in Africa has increased dramatically, a lot of Africans states today have visa-free agreements with other countries around the world, such agreements have made it easier for Africans to travel the world either for economic or personal reasons (Leke. 2015).

Africa has come a long way in integrating itself back into the international system; aided by globalisation through the advancement in technology, communications as well as the easing of border control regulations (Nkurayija. 2011), however, globalization has also created a huge demand for skilled professionals around the world and this has created big problems for developing regions such as Latin America, Asia, and Africa (Li. 2008). Losing highly skilled professionals over long periods of time has made these regions weaker and vulnerable to poor economic growth and underdevelopment (Bacchetta *et al.* 2009).

It's therefore imperative that skilled Africans remain in the continent and aid in its development, if not the development of the African continent will continue to be in jeopardy.

#### **2.4 Brain drain in Africa: An overview**

The continuous migration of skills from South Africa will further pose challenges to the country's long-term developmental prospects as the country's will be losing people with skills who are contributing to the growth and developments of the country (Rasool & Botha. 2011).

Debatably, brain drain has contributed to the increase in health fatalities in Africa; Africa has seen a huge increase in the number emigrating medical professionals, thus leaving a huge gap in the health sector in Africa, not to mention a shortage of nurses and doctors, contributing to increased health challenges in Africa. African governments have been forced to hire expats medical experts and pay them huge

salaries because of brain drain. This statement is further supported by Columbus & Wusu (2006) who assert that the continuous outflow of professionals in Africa has cost the continent billions of dollars, because countries have had to hire foreign companies and experts to fill in the void that has been left by the professionals who have migrated.

The calamity of the brain drain problem in Africa is highlighted by Patterson (2007) who writes that Africa lost 27000 skilled personnel between 1960 and 1975, this figure rose sharply to 40000 between 1975 and 1984. Confirming this Nzegwu & Okpewho (2009) opine that the United States of America (USA) alone has the largest number of educated Africans who live and work in the country, as of 2002, there were over 1 million Africans immigrants working and living in the country.

Sub-Saharan Africa has been the most affected region in Africa due to brain drain, well-trained health professionals leave the continent every single year; their final destination is preferably Canada. In a region where life expectancy is below 50, the mass exodus of skilled health professionals definitely presents a significant challenge to the authorities (Mills *et al.* 2011).

Currently, 25 percent of graduates from African universities are unemployed, and the situation is only getting worse by the day. South Africa currently requires more than 500 000 skilled workers to fulfil her developmental objectives (Kigotho. 2015). One of the factors militating against this is owed to the fact that the universities are not producing the right people with the right skills set to contribute to the country's development

## **2.5 Globalization and development: forces driving international migration**

The flow of people from border to border has in no doubt increased over the last 50 years. As global economies grow, coupled with technological break-through, the demand for highly skilled individuals has sky rocketed. According to Keely (2009) a report by the Organisation for Economic Co-operation and Development stated that international migration is so rife that roughly 3 percent of the world's total population (roughly 190 million people) currently live outside their countries of birth. White & Marsella (2007) opine that, while international migration has gained a lot of recognition in the last century, migration globally has been largely characterised by

the movement of people from poor/less developed to highly developed regions. This has no doubt contributed significantly to unequal economic development in poor nations who have lost their skilled human capital.

While remittances flowing from developed to developing nations have increased substantially (\$2Bn in 1970 to \$216Bn in 2004), remittances alone cannot be relied upon as a key element in addressing the socio-economic challenges that are affecting developing nations (Ratha. 2011), especially the chronic shortages of skilled professionals. Payne & Nassar (2015) mention that with political instability and repossession, human right violations and poor rates of economic growth, these conditions are pushing more and more people out of their home countries, thus they seek green pastures in other countries which are characterised by satisfactory conditions. Political and economic freedom have been identified as the major contributors to international migration (Hirschman, Kasinitz, & DeWind. 1999).

With the ever-increasing gap between developing and developed countries, it is clearly unlikely that we are going to witness a decrease in the number of people engaging in international migration (Szirmai. 2005). While international migration has risen, not all countries are affected by migration, countries such as India and Haiti are the major contributors in the migration process rather than beneficiaries, whereas the United States receives by far the most number of international immigrants. European countries such as France, Germany, Italy and Britain also experience a high inflow of immigrants, mostly because of their strong economic foundations (Ratha. 2016). Doomernik & Jandl (2008) mention that geographical changes in the international system after the cold war presented numerous opportunities and challenges as to how migration can be successfully managed, where highly skilled and educated immigrants find it easy to migrant when compared to uneducated immigrants. Its undeniably evident that the rapid development of the global North in comparison with the global South will not only increase inequality in the global world, but it will also increase the rates in migration because of the huge economic imbalances that will be in existence (Jepma. 2013).

Claire Adida her book titled “Immigrant Exclusion and Insecurity: Coethnic strangers” mentioned that Africans engage in mostly continental migration, where they travel all over the continent in pursuit of better standards of living which will be accompanied

by satisfactory financial rewards (Adida 2014). Mekonnen (2015) states that Africans are the most mobile humans on earth, where roughly 36 million Africans have migrated to various parts of the globe including in many African countries. Jauhar, Ghani, & Islam (2016) opine that migration is often considered within the pretext of brain drain, rather than an opportunity mainly because it robs countries of their skilled human capital, which ultimately hampers development and growth. According to the World Bank (2016) if migration was to be properly managed in Africa, it would in a great way help reduce unemployment by means of contributing towards sustainable economic growth through remittances flows and by importing skills, technology and knowledge to both countries of origin and destination. Remittances inflow to Africa has quadrupled since 1990, reaching a staggering \$40Bn, and ultimately becoming the number one source of foreign direct investment in the continent (The Guardian. 2015).

Carbone (2017) opines that international migration in Africa is largely pinpointed to two regions, West and Southern Africa, the author states that Nigeria and Ghana in West Africa are seen as economically developed nations, thus they attract a huge number of immigrants from across the Economic Community of West African States (ECOWAS) region, while in Southern Africa, countries such as South Africa, Zambia and Botswana attract a huge number of foreign immigrants mainly because the region is considered to be economically stable and is characterised by numerous primary industries, mainly in the mining sector, this serves as a pull factor for many immigrants from across the continent. According to (Outlook 2015) this is notwithstanding the unequal level of economic development in Africa as another major driver of internal migration, some countries are achieving growth rates at very fast rates, while others experiencing sluggish economic growth rates, this undoubtedly creates a sense of migration.

Migration in South Africa has long been in existence pre-1994. Many unskilled people left predominately rural provinces (Limpopo, Eastern Cape, KwaZulu Natal and Mpumalanga) and headed to provinces characterised by rapid development and job opportunities (Kok. 1998), these provinces included mainly Gauteng and the Western Cape Province. While migration in a pre-1994 South Africa was restricted because of apartheid-era laws, post-1994 South Africa has seen a resurgence in the number of people moving from rural to urban South Africa (Thornton. 2008). **Post-**

apartheid South Africa has seen the Western Cape and Gauteng still being the preferred migration destinations in South Africa. according to Berkowitz (2012) between 2000 and 2006, more than 135 07 people from the Eastern cape migrated to the Western Cape and in the same period, 110 000 people moved from the Eastern Cape to Gauteng province.

Kok (2006) opines that migration in South Africa is mostly triggered by the need for better financial freedom, the author mentions that provinces characterised by mostly rural settings are the more affected by migration as they in the process, lose many skilled people to other provinces. It is undoubtedly evident that migration patterns globally will continue to some extent influence migration trends in Africa and South Africa, hence further advocating for the development of an implementable system that will help better manage migration, this might prove economically beneficial for Africa and South Africa going forward.

## **2.6 Education and Brain Drain in Sub-Saharan Africa**

Sub-Saharan Africa is a region characterized by high levels of brain drain, mostly because of unfavourable socio-economic conditions and political uncertainty (Shinn. 2004). With more than 46 countries that have a combined population of 800 million, the region seems to be fighting a lost battle against brain drain (Naicker *et al.* 2009). According to the United Nations (UN) (2010), Sub-Saharan Africa is estimated to be losing 6500 Medical experts per year due to brain drain, for a region that is engulfed by diseases, malnutrition and poor levels of governance, losing so many medical professionals who contribute to the stability of the health sectors is a big concern for governments within the region, and this requires urgent regional intervention.

### **Figure 2.1 Map showing sub-Saharan Africa**



Source: World health organization and United Nations children's fund (2006)

### 2.6.1 Tertiary education in Sub-Saharan Africa

In Africa, higher education has been greatly internationalized and African universities are now under pressure to improve the quality of education to stem the outflow of graduates, this is no doubt a major problem (Altbach *et al.* .2009). In Southern Africa, the impact of globalization together with the internationalization of education has been detrimental to universities as they have had to deal with inadequate infrastructure, shortage of staff, poor research facilities and the migration of their skilled academic professionals (Kigotho. 2015). This has been greatly evident at South African universities where the huge number of vacancies have compromised the quality of education offered and the research output, thus making the South African higher sector unattractive, replacing such skills, therefore, remains a challenge. The internationalization of higher education in Africa has seen a huge number of students opting to study abroad, thus further compounding the challenges that face the provision of quality tertiary education in Sub-Saharan Africa.

Uetela (2017) asserts that Africa needs to increase its investment in higher education, not only are we spending less but our research facilities are in a state of deterioration, we do not have enough funding and our programs are not globally competitive, with these problems how can we not expect losing our bright minds from the continent? How can we keep our bright minds on the continent if we keep investing less on education?

Addressing the UN general assembly, Ugandan president Yoweri Museveni stressed that education must not only produce literate people but is must also produce literate people who can be absorbed by labour markets internationally and locally (Mugimu. 2010). According to the United Nations Development Programme (UNDP) (2015) education empowers people and it is a powerful engine that encourages the production of competent human capital that contributes to economic growth and development.

Brain drain has cost African states millions of dollars, often those who opt to migrate are those whose education has been subsidised by the government at the expense of taxpayers, yet after the completion of their studies they decide to migrate to other regions inflicting huge losses on African countries (Pang *et al.* 2002). There is no doubt that Sub-Saharan Africa is losing a significant number of tertiary educated graduates due to brain drain and the region is struggling to deal with the problem. According to a report by the British council (2014) developed countries and foreign agencies have played a huge role in funding tertiary education in Sub-Saharan Africa over the years, yet there have been reports that the region has not produced enough postgraduate students (particularly doctoral students) with knowledge and expertise that will help promote development.

Tertiary education enrolment has increased from 200 000 in the 1970s to about ten million today, the increase in enrolment has been positive for the region, yet the failure to deal with brain drain has meant that more graduates migrate after completing their tertiary education (Shinn. 2004). This has led to experts stating that the huge investments in tertiary education that have been made by governments in the region has been left in total disarray because of the huge number of tertiary educated graduates who migrate (Tremblay *et al.* 2012).

Over the past decade, Sub-Saharan Africa has averaged an enrolment rate of 8.4 percent, almost double the global average which is 4.2 percent, there were approximately 4.8 million students in the region in 2009 (UNICEF. 2008). While the increase in the enrolment rate in Sub-Saharan Africa can be welcomed as good news, the region still lags behind when compared with other regions of the world (Africa-America institute. 2015). In 2009, 4.9 percent of university students in sub-Saharan Africa were internationally mobile; it was found that most students from the Southern African Development Community (SADC) enrolled for business and social sciences courses, with law being the most popular (Chien & Kot. 2012).

SADC has the highest rate of internationally mobile students, the regional bloc boasts of 6 percent of students who are pursuing their studies internationally, with nearly half of them choosing to study in South Africa, with millions of financial capital flowing within the region, this is good for regional economic development. (Chien & Kot. 2012)

As much as the increasing number of students enrolling for tertiary education is positive for Sub-Saharan Africa, the shortage of academics with advanced degrees, poor infrastructure development, inadequate internet access, libraries and laboratories are other problems affecting the quality of education offered at universities in Sub-Saharan Africa (Yizengaw. 2008). The shortages of such necessities further reduce the quality of research offered in universities (Tetty. 2009). These reasons; coupled with poor economic growth in Sub-Saharan Africa have contributed to tertiary educated graduates opting for a career abroad, and so far, governments in Sub-Saharan Africa have failed in trying to reduce the outflow of brains in their respective countries (Friesehanhn. 2014). It is, therefore, imperative that African governments try and reverse the brain drain of students, this can be done by increasing investments in institutions of higher education and ensuring that higher education is accessible to every citizen. Furthermore, African governments should make sure that those African students who are already abroad have a reason to come back and positively contribute to the growth and development of the continent. But with no significant investments in higher education institutions, Africa will continue experiencing a huge number of students migrating.

Of interest is the fact that despite the increase in tertiary enrolment in Sub-Saharan Africa, the region is still characterised by a huge number of people who have no formal education (Chien & Kot. 2012). Successive African governments have strived to make education accessible as much as possible to everyone, for example in 2003, Kenya implemented the free primary school for all initiative, where primary school learners were exempt from paying school fees, the initiative has spread throughout Sub-Saharan Africa, and it has played a positive role in increasing primary and secondary school enrolments (Kenya. 2008). However, significant challenges such as infrastructure, funding, resources and qualified academics are still preventing education from reaching people in remoter areas in Sub-Saharan Africa (Mwabu & Ackerman. 2013).

## **2.7 Higher Education and Brain Drain in South Africa: A Brief Overview**

Better salaries and better-working conditions abroad have resulted in hundreds of South African academics leaving South Africa's higher education sector (Shinn. 2004). Universities across South Africa have numerous vacancies for academics, some of which have gone for years unfilled (SMPlacements. 2015). The mass exit of academics has not only crippled research output at South African universities, but it has also jeopardised the quality of education that is offered at institutions of higher learning (Kigotho. 2015). The brain drain of academics compromises the quality of education, which results in South Africa producing graduates that cannot compete internationally (Badat. 2010), thus reducing their contribution to the socio-economic development of South Africa. Therefore, for long-term growth and development, the country has to ensure that skilled academics stay in the country (Havergal. 2015), otherwise the higher education sector risks total collapse.

## **2.8 Cost of brain drain for South Africa's higher education sector**

The higher education sector in South Africa begs for a drastic improvement to stem the outflow of academics (Nunn. 2005). According to Farber & Collins (2016) the recent events unfolding at South Africa's higher education sectors have further compounded the series of challenges already affecting the sector, this has resulted in academics quietly planning on leaving South Africa to seek employment in stable institutions elsewhere, the journalists also noted that potential PhD researchers will choose to do their research elsewhere and that would be a great disadvantage for

South Africa considering that much of the research which deals with challenges facing Africa emanates from South Africa.

According to (Dell. 2010) South Africa's inability to produce enough doctoral graduates to drive research and development is a challenge that has been acknowledged by the government for a long time. South Africa produced 1,403 doctorates in 2010 compared to another developing country Brazil which produced 2,244 (Skills-portal. 2016). It's also said that South Africa's academics are not adequately qualified, only 34 percent of academics in South Africa have doctoral degrees, such shortages of qualified academics have come at a great cost to South Africa's socio-economic development (News24. 2014).

The rates of academic brain drain in South Africa are alarming considering how well they are paid. According to Jansen (2013) South African academics are amongst the best paid in the world, yet the issue of brain drain still plagues the country's higher education sector. Just like money cannot eliminate poverty in Africa Emeagwali. 2003), high salaries alone cannot reduce academic brain drain in South Africa, but government together with society must work together to solve the root causes which contribute to brain drain (Shinn. 2008). One of the reasons South African academics leave is anxiety over retirement issues, and that universities in the US and the United Kingdom (UK) offered better retirement and pension benefits compared to South Africa (Jansen. 2013).

To make matters worse for South Africa, over the years graduate students have also opted to emigrate, the poor rates of economic growth in South Africa has forced many students to cross borders in search of better opportunities (Mattes & Mniki. 2007). It's no secret that the brain drain of academics greatly compromised the quality of education that students receive at universities and therefore, urgent interventions are needed to reduce the outflow of skills at universities (Kigotho. 2015). It is also reported that 1 in 10 new university graduate will emigrate, therefore interventions to solve brain drain in the higher education sector are urgently needed in South Africa (MacGregor. 2015).

Apart from brain drain, there are numerous challenges that are currently facing the South African higher education sector, of which some of them have indirectly contributed to problems being experienced by the country's higher education sector.

There is a 50 percent dropout rate at South African universities in the first year (eNCA 2015), furthermore the success rate of graduation is roughly 15 percent, this is a particularly concerning as the dropout rate coupled with the low rate of graduation further widens the skills gap in the country (Msthalil. 2013).

According to MacGregor (2015) Machika & Johnson (2014) Mngoma (2014) and the Parliament of South Africa (2015) there are numerous factors hampering South Africa's higher education sector, these include; insufficient funding, high dropout rate, shortage of academics, increased student debt, funding of students and transformational issues.

The above challenges have affected the higher education sector for years, government's failure to resolve such issues have contributed to the brain drain of academics (Badat. 2010). Brain drain has been absolutely devastating for South Africa, but this is not to say that South Africa has not been able to attract thousands of foreign skilled academics (mainly from Africa) who have filled up vacancies at South African universities that have been left by emigrating South African academics (Mello. 2013).

The challenges facing the higher education sector in South Africa have in no doubt affected quality of education offered at South African institutions of higher learning, although significant strides and initiatives have been taken by government to try and ensure that skills remain, failure to adequately address these challenges will make it difficult for government going forward to try and ensure academics remain in South Africa.

## **2.9 Brain Drain and health sector in South Africa: An Overview**

Like any other health sector, the South African health sector is characterised by multiple players (public and private) which render important services to the South African public (Econex. 2013). Health sectors in developing nations are often characterised by numerous challenges that impede their effective functioning and South Africa is no exception (Maillacheruvu & McDuff. 2014). The shortage of skilled professionals, poor working conditions and poor institutional management are some of the major challenges that are facing the South Africa's health sector (Rasool & Botha. 2011).

The growing population and the increase in demand for healthcare will pressure the government to increase funding and ensure accessibility to health care for South Africans (Mail & Guardian. 2011), but with poor economic growth, the health sector might face numerous challenges going forward.

The health sector in South Africa is highly characterized by a chronic shortage of skilled personnel, from doctors, surgeons, psychiatrists to nurses and nursing assistants (Goyal. 2004). The massive brain drain experienced by the health sector has not only compromised the quality of health care offered in South Africa (Padarath *et al* 2003), but it has also cost the government millions of rands considering the fact that some of the doctors and nurse's education was funded using government subsidies (Dixon. 2011).

Although over the years the government has benefited in terms of brain gain, with thousands of South Africans health professionals returning to the country over the past years (Ryan. 2015), winning the fight is long from over; this is owing to the fact that there are numerous push factors responsible for the mass emigration of health professionals (Brink. 2012). The South African health sector faces multiple challenges apart from brain drain and these challenges are hindering the effective functioning of the sector (Sriskandarajah. 2005), thus resolving these challenges is imperative to try and stem brain drain.

It's no doubt that brain drain has cost the African continent billions of dollars (BBC News. 2002), it has impacted negatively on economic and sustainable development for the continent as numerous skilled professionals are leaving the continent (Kelland. 2011). Critical sectors like health and higher education have been left in chronic shortages of skilled professionals needed to drive socio-economic development across the continent (Dodani. 2005).

In South Africa, the health sector has lost thousands of skilled professionals to countries such as UK, Canada and Australia (Hamilton & Yau. 2004). The cost of this mass emigration has been that South Africa's health sector is not functioning effectively (Padarath *et al*. 2003), thus compromising the quality of services provided to the citizens. According to Labonté *et al* (2015) there are more the 23 400 health workers from South Africa in the big five countries (US, UK, Canada, Australia, New

Zealand). The net training losses incurred by the South African government were estimated to be in a region of \$1 billion (Martin. 2013).

The brain drain of health professionals has not only affected South Africa, but other countries in the region who depend on the country have felt the negative impact of brain drain, for example Zimbabwe, it is reported that of the 1,200 physicians that were trained in the 1990s, only 360 remain in the country in 2001 (Solimano. 2008).

Unfortunately for South Africa; the country's health sector has not been able to replace the lost skills over years (Roodt & Eddy. 2012). It was reported that South Africa was losing 17 percent of its qualified doctors every year since 2005 (Waters 2009); with most apparently not satisfied with the working conditions in the country's health sector. South Africa roughly employs 18,000 doctors in state-run hospitals but considering the increasing demand for medical services, it pretty clear that the country needs more doctors and nurses to cope with the increasing demand (Makoni. 2009).

The shortage of skills in South Africa is a major problem that threatens to cripple the country's health sector unless something is urgently done to try and rectify this problem. (Cullinan. 2016). Bongila & Pierre (2013) mention that the ethical ramifications of brain drain in South Africa amount to possible damage to the regional economy, it also affects the economic imbalance within South Africa itself given that it is mostly whites that are emigrating than black South Africans themselves. To reduce the social economic impact of brain drain, Ehman and Sullivan (2001) highlight that South Africa demanded that in 2001, Canada halts the recruitment of South African medical doctors, it is reported that South Africa has incurred a loss of \$1.41 billion on returns from its investments on its medical doctors that have emigrated.

It's undeniably clear that the mass exit of medical professionals from South Africa's health sector presents a significant challenge for the South African authorities. The effective functioning of any health sector is highly dependent on the availability of skilled professionals who are available to provide essential services to the citizens. Although over the years South Africa has witnessed an increase in South African medical professionals returning to the country, poor working conditions and unsatisfactory salaries are still major factors that contribute to brain drain in the

health sector, and unless these pressing challenges are adequately addressed, South Africa will always be at risk of losing its skilled medical professionals, thus affecting South Africa's socio-economic development.

## **2.10 Theoretical framework**

A theoretical framework holds or supports the theory of a research project. The role of a theoretical framework is to present and describe the theory that explains the problem under examination (Labaree. 2013). The study employed Lee's push/pull theory of migration to better our understanding regarding the motives behind the migration of skilled individuals in South Africa; other theories relevant to migration were consulted to further enrich the study.

According to Treiber (2014) Lee's push/pull theory of migration was a reformulation of Ravenstein's laws of migration, but the difference was that Lee's revised theory placed further emphasis on the internal (push) factors that drive people to consider migration. While the study utilised Lee's Push/Pull theory of migration as a point of reference, the study will also made use of the human capital theory to try and get a holistic view of reasons and assumptions behind human migration phenomena, this helped to further add depth to the study.

### Assumptions of Revenstein laws of migration

1. Revenstein asserted that migration is influenced by unfavourable circumstances at the place of origin, examples of these included; high taxes, unemployment, and crime, he called these push factors.
2. The primary cause of migration was to seek better economic opportunities
3. Migration usually happens in stages
4. Migration tends to have more females than males if the distance to be travelled is short.
5. Migration tends to flow from rural areas towards urban places (Zanker. 2008).

According to Lee's push/pull theory of migration, there are numerous reasons that account or perhaps influence people to migrate. Lee's theory of migration divides factors that cause people to migrate into two categories; these are push factors

which push people to leave a particular area or region and pull factors which pull or draw people towards a particular area or region.

According to Stockdale (2014) Lee argued that the decision to migrate depended on numerous elements such as: factors that are associated with the place of origin, place of destination, place of origin & destination and personal factors

According to Lee (1966) some of the push factors which cause people to migrate include discrimination, poor medical care, pollution, political instability, and religious censorship. The pull factors include an attractive climate, better living conditions, better education, security and better medical care. Lee also argued that social, economic and environmental factors contribute immensely in the decision to migrate or not. Lee named these as intervening factors which ultimately prevent some from moving (Virupaksha. 2014).

According to Dodani (2005) migration around the globe is motivated by the income difference that exists between the developing and the developed world; other factors that motivate migration are often superseded by the thought of earning better income and the financial stability that is associated with such. In 2000, it was reported that there were more than 175 million immigrants worldwide, 16,3 million of them were African. The primary reason for migration is economic prosperity, people leave their homes to look for better economic opportunities that will allow them to earn better wages to support their families back home (Yu *et al.* 2014).

A survey undertaken in New York found that 44 percent of African migrants currently residing in New York said that the major reason for them to migrate was to seek better employment opportunities; 21 percent said they migrated because of family reasons, and 11 percent said that their places of origin presented little or no opportunities for further growth and development in life (Bahl & Duncombe. 2013).

The assumptions of Lee's push/pull theory of migration are further supported by Chimanikire (2005) who states factors such as civil conflict, political instability, and poor economic growth are the major push factors that cause Africans to migrate, and the prospects of better wages, security and living standards are the major pull factors.

## **2.11 Migration in the lens of the Human capital theory**

The phenomenon – brain drain – has been explained by scholars using the human capital theory: it is, therefore, imperative that the basic assumptions of this theory be explained. The human capital theory rests on the supposition that education is very significant and it is, by all means, necessary in order to improve the production capacity of a country's population, hence, the argument by human capital theorists that an educated country is a productive country (Son. 2010).

According to the human capital theorist, all human actions are based on economic self-interest and that their ultimate aim is to operate freely within the markets. A reformulated version of the human capital theory stresses that education and training are the keys to a more united global economy (Lussier & Achua. 2001). The reformulated version of the theory stresses that education dramatically increases the productivity potential and efficiency of citizens by increasing their level of economic reasoning and decision making (Slaus and Jacob. 2011). According to the theorists, economic growth does not only depend on a country's physical capital, but also on the level of education that is acquired by citizens (Ainsworth. 2013), hence the argument that schooling promotes increased economic and social development largely because the benefits from the individuals will spill over to the whole of society.

Baron and Armstrong (2007) define human capital as a strategic approach that focuses on the human development aspect as the key success of any organizations. Human capital refers to the skills, expertise, knowledge, and competencies possessed by individuals that can be used to enable the creation of social, personal, interpersonal and economic development (van Leeuvan. 2007). According Slaus & Jacobs (2011), human capital is the vast knowledge which is acquired by individuals during their lifespan, knowledge which is then used to produce goods or ideas for market consumption and usage.

Watkins (2015) argues that human capital should be seen as a continuous project aimed at encouraging investment in humans through education and various training techniques to enable them to play a constructive role in society. Therefore, governments should ensure that adequate resources are available to promote educational development as an on-going cycle. Watkins believes that for humans to effectively develop through education and training, various mechanisms need to be

placed to ensure that not only are resources available, but they are widely accessible to the general public. This will ensure that citizens are able to access vital educational resources and increase their educational knowledge, thus the spill over effect for this will be extremely beneficial for a nation.

According to Rugh (2012) an educated population contributes immensely to a country's socio-economic development: it contributes to women empowerment, increased productivity and income for individuals and nations, consolidates democratic institutions and better health and educational facilities (Rugh. 2012). On the other hand, the disadvantages of a poor human capital include, increased levels of poverty, contributes to poor economic growth, increased the level of unemployment and by extension contributes to underdevelopment (Davidson *et al.* 2005).

Authors, scholars, and writers have always had opposing views as to whether migration affects human capital development. In Africa, one can conclude that the migration of skilled professionals has been detrimental to the continent's development (Osaretin & Akpomera. 2012). African governments have continued to invest millions in human capital development, but the effects of brain drain have left such investments in the limbo, the migration of skilled professionals in Africa has left the continent's future developmental prospects in tatters (Johnston & Bernstien. 2005).

Scott (2016) goes to make an example of Kenya and states that the country loses up to 600 doctors per year due to brain drain; he further states that if Kenya does not reduce the outflow of medical experts from the country, the health system will suffer major setbacks, and such setbacks will cripple the Kenyan health sector.

However, there are writers who refuse support the notion that migration has a negative effect on human capital development. Newland (2013) states that migration can be viewed as a positive element because when a country's diasporas return, they bring with them foreign currency and experience in different economic sectors which are important for a country's growth, although he acknowledges that it might take years for diasporas to return, he nonetheless stresses that when they eventually do return, economic growth and sustainable development can be achieved. In essence Newlands acknowledges the brain drain has negatively affected Africa, but

also positively asserts that should there be effective mechanisms to lure back skilled Africans who are abroad, their return will be beneficial for Africa's development because they will return with years of experience and expertise in different fields, thus when they are employed in Africa, the application of their skills will be positive for the continent.

## **2.12 Conclusion**

Brain drain has robbed African countries of skilled human capital for long periods of time, African migrants are scattered all over the world for different reasons, and in some countries, migrants have been welcomed, whilst in other countries, they have been rejected outright. In Africa, migration was a norm before the arrival of colonialism, which altered the traditions, values, and principles that were in place. During colonialism, Africans were forced into slavery and shipped to the new world to work as slaves. In a post-colonial Africa, we have seen Africa re-integrated into the international system, where globalization has helped Africa establish bilateral relationships with numerous regions around the world. This has presented opportunities for Africans who are now able to travel in search of better opportunities, a privilege that was not available during the colonialism era.

The increase in tertiary education enrolment in sub-Saharan Africa has been regarded as a positive trend that needs to be welcomed. Governments need to invest resources into universities to ensure that they are producing quality education that meets international standards, governments also need to ensure that graduates whose education is subsidized by the state stay in the country after the completion of their studies. Sub-Saharan Africa has taken significant strides in ensuring that education is accessible but the challenges still remain such as ensuring that education is accessible to people in remote areas within the region. As the region's population increases dramatically, the demand for higher education will increase with time, therefore, governments have to ensure that adequate educational facilities are available to support the increasing population.

Brain drain in Southern Africa has resulted in brain gain for South Africa where thousands of highly skilled professionals have chosen to stay. Immigrants have set up numerous types of businesses and employ South Africans, thus increasing government tax revenue and decreasing unemployment, therefore South Africa

needs to welcome skilled immigrants as they are playing a vital role in developing the country. Immigrants play a huge role not only in South Africa's labour market but also in the small business sector as they employ thousands of South Africans and transfer entrepreneurial skills to them too. (Mathebula. 2014)

As the demand for medical care and higher education in South Africa increases dramatically, it's very important the government work together with the civic society to ensure that skills remain in the country as the cost of brain drain in the health and higher education sector will have far-reaching implications for South Africa's socio-economic development. Brain drain is global problem that not only impacts developing but also developed nations to a great extent, hence the next chapter dwells more on the negative effects of brain drain on the African continent.

## CHAPTER 3

### BRAIN DRAIN AND DEVELOPMENT IN AFRICA

#### 3.1 Introduction

To understand brain drain problem in South Africa, it is important to critically analyse and understand the factors that contribute to the problem in the African continent as a whole, and whether these factors can be eliminated or mitigated. Not only in South Africa but Africa as a whole is in a race against time to stop the outflow of brains. Governments have had to now urgently develop and implement policies which not only aim at reducing brain drain but policies must also deal with factors that encourage it all together.

Migration, no doubt is a complex phenomenon, hence the plethora of terms associated with it. In essence, determining what migration means is a function of when and how it was used. To a politician, it may be interpreted as the movement of party members to another political party whereas to an economist it may mean what and how the movement of people from one country to another has affected the development of the recipient economically or otherwise.

To Chimboza (2012) human capital flight or brain drain refers to when a huge number of individuals with knowledge or technical skills emigrate to other countries or regions, normally due to conflict, limited career opportunities, political instability and environmental factors. Sometimes a country has a large number of professionals – experts – in a particular discipline to such an extent that not all of them can be absorbed into the country's economy, thus resulting in what economist call brain over-flow. By definition, brain overflow is seen as a situation where a country produces a large number of people with skills and knowledge, yet the demand for such skills in the country is low, thus some skills remain under-utilized, such skills may spill over, enabling them to be absorbed in other foreign markets (Fihel *et al.* 2007). Countries continually engage in platforms to share knowledge and expertise on an array of issues, this collaborative sharing of knowledge and expertise is known as brain exchange. The OECD (2012) defines brain exchange as a situation when there is an exchange of scholars, researchers or students between least developed countries (LDCs) and developed countries (DCs), or even among LDCs themselves for the benefit of sharing knowledge, training and increase

expertise. Brain exchange is usually a two-way process where skills flow in opposite direction.

Some skilled professionals leave their countries to go seek better opportunities in other countries, only to find once there, they find employment that does not make use of their acquired skills; this is known as brain waste; described as a situation where skilled migrants end up taking unskilled jobs in other countries (Sen. 2011), or better still, a socio-economic situation that forced migrants to take up jobs no commensurable to their skills but just for them to earn a living. Developed countries, with their developed infrastructure and thriving economic environment, are able to attract skilled professionals from across the world, thus resulting in what scholars call brain gain. Brewer and Sanford (2011) define brain gain as a country's, or city's ability to attract talented professionals with exceptional skills and knowledge, professionals who create new business, new jobs and contribute to the overall economic growth of that city or country (Brewer & Sanford. 2011). Some countries invest huge amounts of finances on educating their citizens solely for exporting their education citizens abroad for economic gain mainly through remittances, this practice is commonly known as brain export. Sajjad (2011) defines brain export as a strategy whereby a country educates its citizens and exports them to other countries. This is usually done to gain economic benefit through the income generated by those working abroad.

### **3.2 Factors that encourage brain drain in Africa**

There are numerous factors that encourage brain drain around the world. The huge economic gap that exists between the developed and the developing world has also been a determinant as to why people migrate (Dodani 2005). In Africa they are various reasons which have caused skilled professionals to migrate; these reasons have been categorized as socio-economic, political and economic.

#### **3.2.1 Socio-economic factors**

##### **3.2.1.1 Better Educational facilities**

Among students, education seems to be the key reason why they choose to migrate to other countries or regions, in Africa, the assumption that western educational qualifications are superior or better than those offered at African universities has

been one of the major reason as to why students have opted to study abroad (Sharma. 2009), those who eventually choose to stay behind and study in Africa, ultimately think about migrating once they have completed their studies (Lee & Sehoole. 2015). Education has also played a negative role in a sense that a huge number of educated African professionals have opted to migrate, leaving the development of Africa in jeopardy, for example in Ethiopia, it is estimated that 50 percent of the country's students who went to study in abroad in the past two decades have not returned to the country (Gedamu. 2002).

#### 3.2.1.2 Better Health facilities and working conditions

The inadequate health facilities in Africa have also been another major contributing factor to the migration of skilled professionals in the continent. This problem is further fuelled by political figures, according to Udeze (2009) whenever an African president, minister or governor is in need of medical treatment, they fly aboard to European countries to get medical help, rather than seeking medical help in their own countries, this according to Udeze, has created a situation where the population of Africa does not believe in the quality of medical treatment provided by the continent health sector.

The migration of skilled African professionals has further added to the assumption that the health facilities in Africa are not up to standard and that the working conditions in these facilities are not conducive enough (Mutume. 2006). It was reported that in 2000, more than 65000 African-born physicians and 70000 African born nurses were working in a developed country, these professionals declared that better-working conditions and health facilities for their families were the major factors that made them migrate (Clemens & Pettersson. 2008).

#### 3.2.1.3 Crime and violence

In Africa crime affects economic development at both international and national level, crime has also been identified as a huge stumbling block in attracting foreign direct investment (FDI) and it has been identified as a major contributor to capital flight and brain drain (Abala. 2014). In Jamaica, for example, the high level of homicide cases have been detrimental to the country's tourism sector and has contributed to brain drain as most skilled professionals have left the country to seek better lives, characterized by better security for them and their families (United Nations Human

Settlements Programme. 2008). In South Africa violent crimes have been fuelling brain drain, the South African institute of race relations, a Johannesburg-based think tank states that more the 800 000 white South Africans have left the country, of the 800 000, 550 000 of them reside in the United Kingdom alone, violent crime is undoubtedly the biggest driver of migration in South Africa (The Economist. 2008).

#### 3.2.1.4 Corruption

Corruption is another issue that has contributed to brain drain in Africa, the extent of corruption in Africa is frightening, corruption does not only affect investor confidence, it also undermines public government institutions which are meant to consolidate democracy and good governance (Hanson. 2009). The corruption problem in Africa is likely to be noticed and acted upon by highly skilled and educated professionals (Benedict & Ukpere. 2012). Corruption undermines long-term growth and the development of the continent, therefore to reduce the outflow of brains from the continent; it is necessary for governments to implement anti-corruption policies that will aim at fighting corruption (Lawal. 2007).

#### 3.2.1.5 Family/ relative connections

Family connections abroad play a huge role in influencing individuals to migrate, certain countries in the world do not allow immigrants to enter unless they have relatives or family members living in the country, as such, family networks abroad become a reason for Africans to migrate (Epstein & Gang. 2012). In India, 25 percent of nurses surveyed indicated that having family members who lived in the host country was a reason for them to migrate and in Lesotho, 47 percent of students interviewed said that their families would highly encourage them to leave the country and live with relatives in developed countries (Chappell. 2013). This highlights the huge role that is played by families in influencing individuals when it comes to migrating.

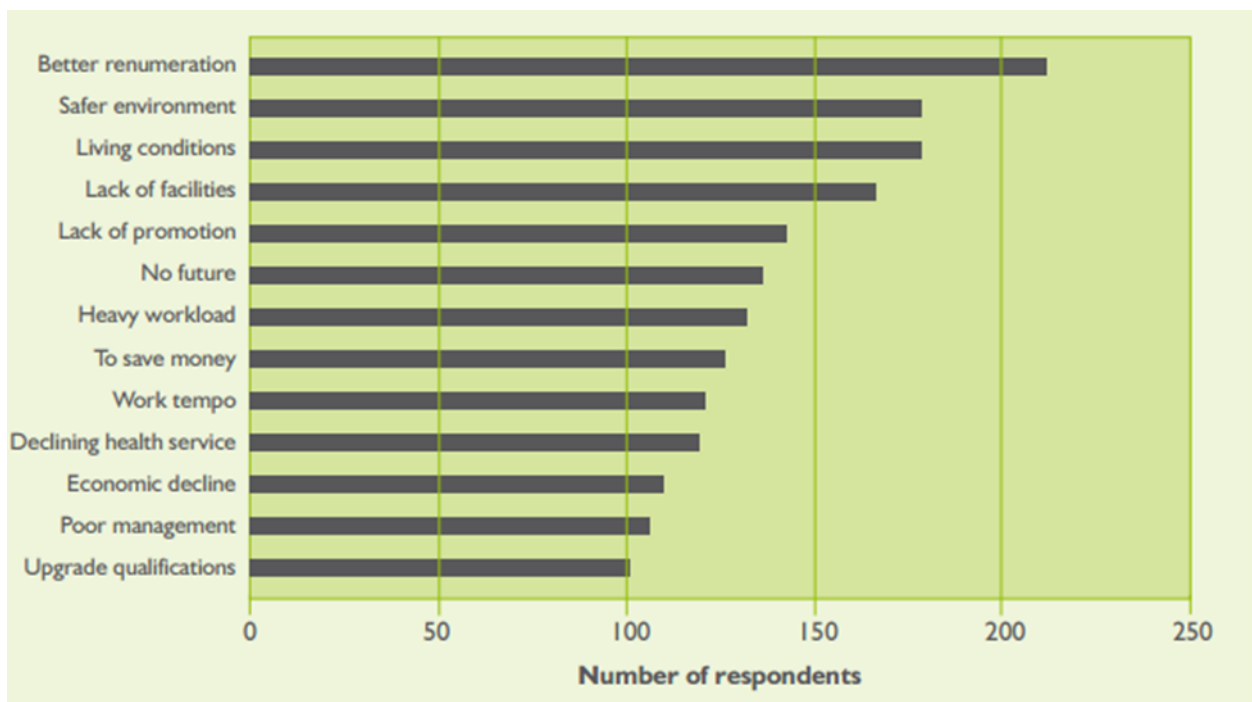
### **3.2.2 Economic factors**

#### 3.2.2.1 Slow Economic growth and poor salary packages

Poor economic growth and development is crucial for maintaining acceptable standards of living, the more a country's economy declines, more and more people are forced into poverty (Hull. 2009), thus skilled Africans who cannot find

employment because of poor economic growth choose to migrate and seek employment elsewhere, uneven economic growth has also been identified as a contributing factor to political instability and increase violence (Handley *et al.* 2009). A country that achieves poor economic growth cannot create employment for its people or offer attractive salaries, thus migration becomes an option (Oderth. 2002).

**Figure 3.1: Health workers’ reasons for migration in four African countries (Cameroon, South Africa, Uganda and Zimbabwe).**



Source: World Health Organization 2006

In Zambia, the main factor causing skilled professional to migrate has been identified as poor salaries, so has the same reason been found in Kenya, where thousands of doctors have left the country (Economic commission for Africa. 2005). The level of economic development in Africa over the past years has been rather sluggish, while Europe together with Gulf countries have experienced a boom in economic growth, thus attracting thousands of skilled African nationals, those to choose to remain in Africa, usually seek higher wages and relocate to the city, automatically neglecting rural areas which might be in need of their skills (Mattis. 1983). The above statement is reinforced by eNCA (2015) which states that former South African president Thabo Mbeki said that since 1990, 20 000 academic professionals have left Africa and a

further 10 percent of highly skilled financial and information technology experts have left the continent in recent years. Apart from the international migration of skilled African professionals, it is also no doubt that Africa is characterised by a huge problem of rural-urban migration, most notably in the health sector where thousands of health workers prefer working the urbanized areas where working conditions and good salaries are prevalent. This, of course, can be rectified; this is according to Henderson & Tulloch (2008) who states that improving salaries of skilled professionals based in rural areas can go a long way in addressing the rural-urban migration of skilled professionals in Africa.

Low salaries have also have been detrimental to the governments in Africa as thousands of skilled public sector employees have migrated for better economic benefits. As long as Africa continues to witness sluggish economic growth, skilled professionals from the continent will leave for better salaries (Nayak. 2007).

### 3.3 Political factors

Rivalries between opposition parties in a country can cause political unrest, political instability tends to worsen the economic climate in Africa, in 1991, it is reported that political conflicts affected one-third of Africa's fifty-four countries, the beginning of 1994 saw Africa surpass Asia as the region with most refugees, of which most were located in sub-Saharan Africa (Smith & Vivekananda. 2007) .The fight for resource control in Africa has been at the forefront of the conflicts that have taken place over the years, ethnic clashes have also dramatically increased ,but political and economic factors are the still the major causes of conflict in Africa (Chimanikire. 2005).

Political instability is a major contributor of brain drain in Africa, the continent is very unstable politically and skilled professionals opt to migrate to places where the political atmosphere is stable rather than staying in a country where their future is uncertain (Shinn. 2004). In South Africa political uncertainty has made skilled entrepreneurs to migrate, some of these entrepreneurs have created great businesses which employ thousands of South Africans (Timm. 2013). The author notes that although the political climate in South Africa is relatively stable, there is growing uncertainty among the country's electorate as to which direction the country is taking politically. The situation in Africa is far worse where thousands of engineers,

doctors, researchers and academics have migrated because of political instability (Chimboza. 2012). Politically, Africa faces a huge battle in changing its image of a politically unstable continent, and should the political ambitions of certain African politicians continue to cause problems in the continent, more and more skilled professionals are bound to migrate in the near future (Ong'ayo. 2008).

### **3.4 Globalization and internationalization as factors that encourage brain drain**

As the world becomes more and more open and connected, more democratic and liberal, people have become more and more mobile. Globalization and internationalization have often been blamed for the mass migration of skilled individuals from developing regions around the world (Hugo. 2005). Globalization and internationalization have both encouraged free movements of goods, greater human mobility, the creation of alliances and treaties to better govern the global environment (Potocki. 2010). However, these terms are often confused, hence, the need to clearly distinguish them from each other.

#### **3.4.1 Globalization**

Globalization refers to the integration of global economies into one global economy, characterised by the free movement of goods, easy exchange of information and, easy flow of capital and the reduction in trade barriers (Potocki. 2010). To Daly (2008) internationalization refers to the forever increasing importance of international relations, international trade, treaties and the creation of alliances to strengthen cooperation in the international arena.

Globalization and internalization have greatly reduced the vast differences that use to exist between countries around the world to such an extent that the skills of a doctor or engineer from a developing country today are now highly marketable and portable around the world (Altbach *et al.* 2009). Globalization has effectively played a huge role in reducing trade, communication, education and most importantly human movement barriers that have existed for long periods of time (Mussa. 2000). This has allowed economies of the world to integrate and become one; globalization has indeed benefited African countries immensely as they have become more connected and integrated, thus enabling the free flow of information, capital, and goods (Murru. 2008).

However, and of recent, stiff rules and regulations have been enacted by receiving countries as means of curbing immigration, partly because of the fight against international terrorism (Greenblatt. 2008). The international migration of skilled labour has also become an issue of deep scrutiny; it has been reportedly argued that developing countries are losing vital skills and resources spent on training (Holdsworth. 2016). This has been identified as one of the major challenges that have been brought by a rapidly globalization world (Daly. 2008).

### **3.4.2 Has globalization benefited Africa?**

Globalization has opened up doors for Africa to reintegrate itself back into the international system; this has enabled the continent to enjoy the benefits that come with globalization (Lundahl. 2004). But there are scholars who argue that globalization has done more harm than good to Africa, they argued that through globalization Africa has been exploited enormously rather than aiding the continent in its development (Nkurayija. 2011).

### **3.4.3 Negative impact of globalization in Africa**

1. Globalization has enabled the free flow of labour across boundaries and has facilitated brain drain, it has contributed to brain drain in Africa, thus undermining the investments governments have made in developing human capital in the continent.
2. By embracing globalization, Africa countries have opened up their economies to foreign goods some of which do not meet local quality standards, they have opened up their economies to multinational corporations, and this has increased the prospects of Africa becoming a dumping zone for foreign goods and also increased the chances of environment degradation by multinationals that are driven by profit.
3. African norms, values and cultures have been eroded by globalization because of cultural domination from the outside world.
4. Globalization has also enabled international financial institutions to dictate how African countries should run their economies, thus decreasing the power and role of the governments.
5. Globalization introduces policies associated with anti-developmentalism by declaring the state irrelevant. It has prioritized policies of privatization and

stabilization, rather than policies focusing on growth, poverty eradication. This has increased inequality in Africa; globalization has also reduced the role that people can play in the social and economic processes of their countries (Ibrahim. 2013).

### **3.4.3 Positive impacts of globalization in Africa**

1. For Africa globalization has eased barriers on trade and commerce and has facilitated greater capital flow into African countries
2. Information and communication have rapidly connected people around the globe, thus enabling Africa to exchange important knowledge and expertise.
3. It has opened up Africa to greater international scrutiny and called for greater transparency and accountability.
4. Globalization has allowed Africa to share ideas and values with other regions of the world, thus promoting cultural diversity (Ibrahim. 2013).

## **3.5 How globalization fuelled brain drain in Africa**

### **3.5.1 Increase global competition for skilled workers**

Hanson (2001) stresses that globalization has dramatically increased the demand for skilled workers around the world, people with unique sets of skills move from developing regions to the developed world in search of better opportunities. Regions such as Latin America, Africa, and Asia have been greatly affected by brain drain which has been fuelled by a rapidly globalization world (Chimanikire. 2005). In Africa, the migration of skilled workers has been fuelled by the shortage of skilled workers and the growing economies of developed countries, coupled with attractive benefits and good living conditions; therefore, it has been hard for African skilled workers not to consider migrating (Rutkowski. 2007). Poor economic growth that is currently being experienced by African countries coupled with political instability in certain countries has further made it easy for African nationals to consider migrating (Slaughter. 1997).

### **3.5.2 Eased movement of people**

As global economies become connected and integrated, so have the nationals from different countries around the world, globalization has allowed for easy movements of people from country to country through the easing of border controls and visa

regulations (Koikkalainen. 2011). This has enabled skilled workers from Africa to travel to other countries for different reasons; the challenge is that the skilled professionals never return to their countries and this has resulted in huge losses for the African continent (Shinn. 2004). With Africa currently experiencing sluggish economic growth, the chances of such skilled workers returning in the near future are quite rare (Botma. 2015).

### 3.5.3 Erosion of sovereignty

Globalization has also opened up Africa to the world where financial institutions such as the IMF and the World Bank have intervened in African economies and have gone as far as dictating what and which policies should be prioritized by governments (Edigheji & Amuwo. 2008). This has eroded the power and role of governments in steering their economies and has led to poor governance, poor governance which has often resulted in political instability, which has led thousands of skilled professionals to migrate and seek stable countries which are democratically intact (Ibrahim. 2013). The intervention of International financial institutions has stalled development in Africa (Harsch. 2009).

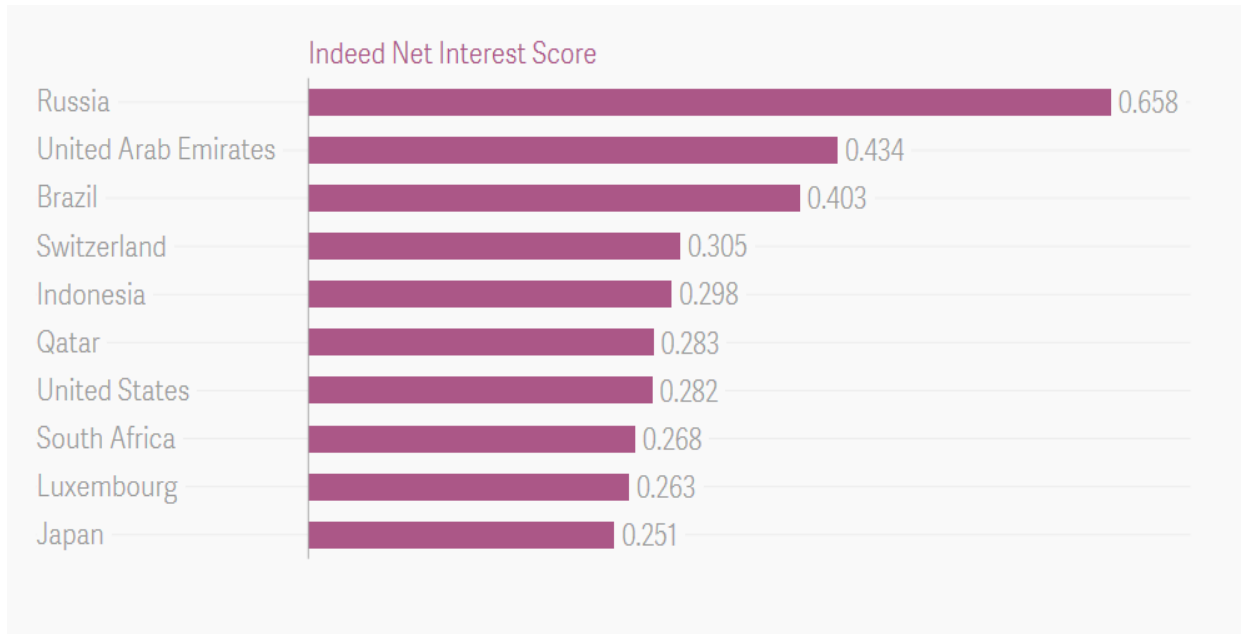
### 3.5.4 Internationalization of education

Africa is home to quality universities which offer quality academic programs; globalization has increasingly made studying abroad very easy through numerous scholarships that have been made available by international donors, now every African student wishes to study abroad (Altbach *et al.* 2009). This has made African universities lose out on the best brains in the continent and the negative element is that once African students complete their studies abroad, they are reluctant to return; rather they stay and seek employment (Knight. 2014).

Development plays a huge role in determining the rate of brain drain that is experienced by a particular country. The more developed a country is, the less likely its nationals are going to consider migrating, because development ensures economic growth and employability for the nationals. Whereas in a developing country that is characterised by poor levels of growth, there is an increased likelihood that its nationals might consider migrating. It's also worth to note that brain drain is characterized by numerous push and pull factors, yet there are some

countries which suffer the least when it comes to brain drain, and there are countries which experience high levels of brain drain.

**Figure 3.2: Countries with the least rates of brain drain**



Source: Indeed labour market outlook 2015

### 3.6 Implications of brain drain for Africa

The brain drain problem of skilled professional in from Africa has been detrimental to the development of the continent, more and more skilled Africans skills are migrating to developed countries, thus leaving African countries with little or no adequate skills to facilitate growth and development (Chimboza. 2012). In some African countries, brain drain has resulted in poor rates of economic, poor provisions of health services and increased rates of political instability (Shinn. 2004).

### 3.7 Socio-economic implications

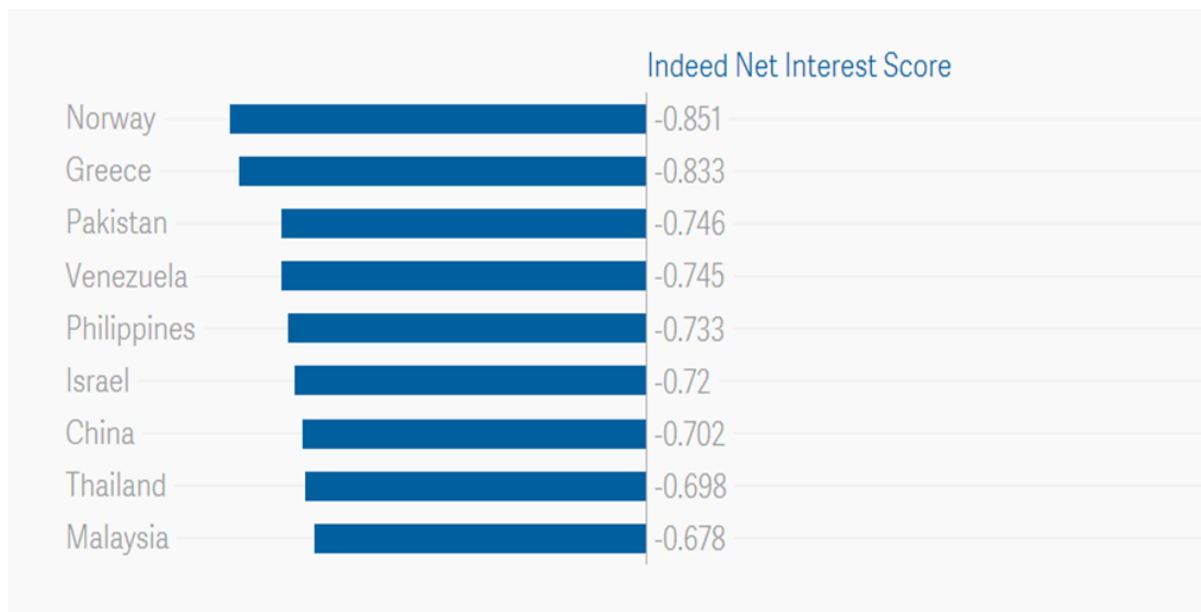
#### 3.7.1 Reduces numbers of dynamic and innovative people

Brain drain has been blamed for reducing the number of dynamic and innovative individuals in Africa, individuals who contribute to the development of their countries (Maphunye. 2009). Innovative people have left Africa so have their ideas and methods of doing things, thus the African continent has suffered huge losses as a result (Monfort. 2010).

### 3.7.2 Increases dependence on foreign technical assistance

It is argued that brain drain has increased Africa's dependency on foreign technical assistance, since the emigration of skilled professionals to more developed countries (Nunn 2005), African countries have lagged behind in technical expertise, and as a result Africa has had to spend a lot of money in hiring foreign experts to perform such jobs (Renzaho. 2016).

**Figure 3.3: Countries with the most rates of brain drain**



Source: Indeed labour market outlook 2015

### 3.7.3 Quality of education becomes poor

Education is an important tool in the fight against poverty and inequality. Universities are crucial institutions in Africa that aim at producing quality graduates who will aid Africa in its development (Makhanya. 2014). But the effects of brain drain on higher education in Africa had been disastrous, in Africa today, professional academics, researchers and even graduate students are opting to migrate to developed countries (Kapur & Crowley. 2008). As such brain drain has greatly affected research output from African universities, thus decreasing the quality of education offered at African universities (Yizengaw. 2008).

### 3.7.4 Poor quality of services offered

As more and more skilled public sector employees opt to migrate, the quality of services offered have questionable and poor, and the true brunt of this has been felt by society who are the sole recipients of such services (Marchal & Kegels. 2003).

### 3.7.5 Depleting human capital

With higher salaries and better-living conditions, African skilled professionals are tempted to migrate, this automatically reduces the number of skilled human capital in Africa (Kahyarara. 2010), as more and more skilled human capital migrate, the rate of growth in Africa decreases as skilled professionals who bring new ideas and have abundant experience are leaving, hence their ideas leave with them (McCoy *et al.* 2008). For example, brain drain has been disastrous for Ghana's health sector as thousands of medical professionals have left the country, thus decreasing skilled human capital available, automatically effecting health services offered at medical institutions in the country (Fan & Stark. 2002).

In the period of 2000-2002, it was reported that Ghana lost approximately \$7 million because of the migration of roughly 56 of the country physicians (Tsikata. 2011) and by 2003, half Ghanaian doctors were already working abroad. It is estimated that 69.4 percent of medical professionals trained in Ghana have migrated abroad during that period (Dovlo & Nyonator. 1999).

## 3.8 Economic implications

### 3.8.1 Decreased tax revenue

Income tax is an important source of revenue for African governments, as taxes collected are redistributed for welfare and developmental services (Emmaunel & Dennis. 2014). When skilled professionals emigrate, they decrease the tax government can collect, thus decreasing government revenue, this decreases the governmental budget hence the allocation of finances to critical services and projects are affected (Rivera. 2013).

### 3.8.2 Effects on economic growth

In any country skilled workers are needed for the economy to take off, losing some of these skills can be devastating for the country's economy, and since brain drain affects the human capital of a country, it adversely affects economic development too (Johnson *et al.* 2009). Skilled professionals tend to earn higher wages before

they migrate, and usually they have saving rates which are higher than the normal rates in the economy thus when they migrate, they can pull down the average saving rate of the remaining population, thus affecting investments and hurting economic growth and development (Rajan & Rienert. 2009).

### **3.9 What can be done to address the brain drain problem in Africa?**

Addressing brain drain in Africa is rather a complex task, this is because there are so many factors that are influencing the issue (Ukessays. 2015), there have been solutions which have been brought forward to try and reduce the outflow of brains from the continent, below I have discussed a few of these suggestions.

#### **3.9.1 Training of more health professionals**

Training more health professionals in Africa would solve the brain drain problem for the short term, considering the fact that those who have migrated eventually return to their countries of origin after some time (Benedict & Ukpere. 2012). Although this approach may help produce more health workers in the short run, one disadvantage of this approach is that there might not be enough skilled specialists to train health professionals because these specialists might have emigrated, nonetheless, it is a recommendable solution to addressing the chronic shortages of health professionals in Africa (Muula. 2005).

#### **3.9.2 Encouraging return**

Encouraging the return of Africans abroad is another approach which could be used, although skilled African professionals abroad may require certain conditions to be met prior to their return, even so encouraging their return is a good method of trying to reduce the effects of brain drain in Africa (Tettey. 2010). For example, the Fogarty institute offers African academics and researchers a top-up salary package as an incentive for them to return back to their countries of origin (Muula. 2005). The disadvantage of this is that it may cause feelings of unhappiness among the local skilled population because of the fear that those who are returning from abroad might have unique and advanced skilled sets compare to those in the local areas, nonetheless the more skilled individuals a country has the better (Shinn. 2004).

#### **3.9.3 Stopping recruitment from developing countries**

Perhaps if developed countries stopped recruiting from developing countries, the brain drain problem in Africa would be solved or greatly reduced (allAfrica. 2004), although this too cannot be regarded as a long-term solution to the problem, but should developed nations cooperate, brain drain can be greatly reduced in Africa (Desalegn. 2013)

#### 3.9.4 Improving remuneration

One of the common causes of brain drain in Africa is that skilled professionals in the continent are poorly remunerated for their work (BBC. 2002). Therefore, governments must strive to ensure that skilled professionals are adequately remunerated as this would reduce the probability of them emigrating (Hamilton & Yau. 2004). Developed countries offer salaries that cannot be matched by countries in the developing world, which further encourages the emigration of skilled African professionals (Zimbudzi. 2013). To avoid this African government should try and match those salaries, not only match them but also improve working conditions, these two important elements might reduce the rate of emigration among professionals from Africa, although these two elements cannot be regarded as long term solutions as brain drain is characterized by multiple factors (Dodani. 2005).

#### 3.9.5 Train for Africa not the world

One of the reasons as to why African states are losing skilled professionals is because professionals are trained with global curricula, for example, the medical curricula in Malawi, Zimbabwe and Zambia was organized by the British and it is very similar to that of the British medical curricula, therefore a doctor trained in Malawi is highly marketable in Britain (Muula. 2005). The training curricula in Africa must be designed or adjusted to serve the needs of Africa, this will greatly reduce brain drain, mostly of medical professionals (Kariwo & Shizha. 2011).

### **3.10 Conclusion**

The eradication of brain drain in Africa will depend on how African governments deal with factors that encourage it. Some of these factors can be mitigated through government policies that are effective and that will encourage economic growth and development in Africa. The role of globalization in Africa's development has been viewed differently by different scholars and authors, globalization has helped re-

integrate Africa into the international system, it has helped Africa in terms of commerce and trade and the free flow of information , but it has also created a huge demand for skilled workers globally which has seen Africa lose thousands of skilled workers to developed countries, globalization can undeniably help Africa develop economically, but its influence on brain drain in the continent needs to be scrutinized effectively. Globalization has done harm to Africa by robbing it of the skills that are meant develop the continent.

The implications of brain drain have been devastating for Africa's development as most sectors in the continent have experienced some form of brain drain. Most worrying is the depletion of the continent's human capital which threatens the Africa's future development, as every country needs skilled individuals to drive the economy forward, therefore the African continent is in a race against time to reverse brain drain as the developmental prospects of the continents will be tatters. South Africa has not been immune to the negative effects of brain drain, numerous medical professionals and educational professionals have left the country to seek green pastures abroad often with devastation repercussions for South Africa, brain drain in South Africa shall be discussed in the next chapter.

## CHAPTER 4

### BRAIN DRAIN AND DEVELOPMENT IN SOUTH AFRICA: A DEEP ANALYSIS

#### 4.1 Introduction

Despite its strong economy and relatively stable political atmosphere, there's no denying the fact that South Africa has been a victim of brain drain, partly owing to the increased international competition for skilled professionals (Mahadea & Simson. 2010). While official estimates vary, South Africa has been losing skilled workers for quite some time, yet there has been total confusion among policy makers as to why South Africans migrate and others stay behind, whether those who migrate do so for good and whether brain drain will only get worse in the future (Lehohla. 2006).

For South Africa to grow economically, it is important for government not only to asks how many and why people are leaving but it's imperative that authorities also probe who is leaving, understanding who migrates will help authorities to better understand the motives for emigration, as some of these motives may not be acknowledged or recognised by authorities (The Southern African migration project. 2002).

As a developing country, South Africa needs skilled people to drive the economy, obviously the shortfall of skilled South African workers can be addressed by allowing more skilled immigrants to enter the country (BusinessTech. 2015), but that cannot be regarded as a long term solution as immigration itself is unpredictable and undependable (Segatti & Landau. 2011). Therefore, uncovering the motives as to why skilled South Africans migrate will better aid authorities to formulate policies that will fight against the migration of skilled South Africans to ensure that skills remains in the country.

#### 4.2 A population breakdown of South Africa

South Africa is a country with diversity of different races, cultures and nationalities. Accounting for these diversities are the blacks (the most predominant race), the whites, coloured as well as Indians all make up the population of the country. Of importance is the nationalities that are from different countries in Africa and Europe who are highly skilled and have since made South Africa their home, hence the question of brain gain as would be seen later in this work.

**Table 4.1: South African population**

<b>South African population</b>		
	<b>Male</b>	<b>Female</b>
African	21 168 700	22 165 000
Coloured	2 305 800	2 465 700
Indian/Asian	677 000	664 900
White	2 214 400	2 340 400
<b>Total</b>	<b>26 366 000</b>	<b>27 635 900</b>
Total Population		<b>54 002 000</b>

Source: Statistics South Africa 2014

### **4.3 A demographic interpretation of emigrating South Africans**

#### 4.3.1 Gender

Migration patterns globally tend to differ between genders, it is argued that males tend to consider migration more compared to females (Boyd & Grieco. 2003). A study by Fourie (2006) found that in South Africa, migration is mostly undertaken by males, however, the study found that:

- Women would prefer to live outside South Africa on a temporary basis, whereas males would prefer to relocate permanently.
- Roughly two thirds of women indicated that they couldn't afford the costs that are associated with migrating
- Women overall seemed to be more satisfied with their current life in the country compare to males, this further strengthens the notion that males are more likely to migrate than females.

Over the years, it is mostly men who have been migrating in South Africa; to some extent women have embraced this trend to a great extent (Dodson. 2002).

### 4.3.2 Age

International migration is likely to be undertaken by young people because of little or no personal attachments (Berhanu.. 2012). According to survey of 1500 students in South Africa undertaken by the student confidence index, it was discovered that a whopping 54 percent said they want to migrate abroad for work purposes after their graduation, major reasons influencing such decisions were poor economic growth and the increasing rate of unemployment in the country (Careersportal. 2016). Another study undertaken by Ray and Esipova (2011) found that young individuals who were well educated and financially well off were more likely to migrate.

### 4.3.3 Race

Given the history of the country, one may look at race as a starting point in trying to understand the migration patterns between different races that make up South Africa (Lerner *et al.* 2009), because of the demise of apartheid, coupled with the prospects of unemployment as a result of new policies, it is widely believed that white South Africans are more likely to migrate than their black counterparts (Steyn. 2001).

Although statistics show that its mostly whites that have been migrating in large numbers, black South Africans have since embraced the idea of migration, coupled with better pay and better career opportunities abroad (Fourie. 2006). The new South Africa today has come to a phase where black South African women are now really considering migrating, because of better salaries abroad, hence, their acknowledgement of endless opportunities that exists for them abroad (Magubane. 2016).

## **4.4 Factors that contribute to the emigration of South Africans**

There are numerous factors that contribute to emigration among skilled South Africans, these factors are a combination of political, economic and social, and together they have contributed to thousands of South Africans migrating to other countries (Bamford. 2015). For authorities it is very important to understand the major causes which have encouraged South Africans to migrate. Bamford (2015) & Qukulu (2015) mention that factors such as load shedding and its effect on everyday life, high crime rates, corruption among government officials, and lack of law and order are fundamentally, the major push factors that cause South Africans to

emigrate, whilst pull factors such as better health facilities, more stable economy, decreased crime rates and a stable political environment are the main factors pulling South Africans abroad

It is also very important for us to understand that it is not every skilled South African that migrates because of corruption, crime and other related push factors. Prior to the 2008 global financial crisis, South Africa's economy had slowed significantly in terms of growth, and even after global financial crisis, the country's economy has somewhat never fully recovered, hence the country has not been able to absorb certain skills into the economy (Fin24. 2016). Thus it is highly probable that these skills may spill over to other regions. One such example highlighting this problem can be found in South Africa's engineering sector.

South Africa's slow economic growth and a lack of projects has resulted in big companies retrenching a considerable number of civil engineers, and often these engineers go a long time without finding stable employment within the country and not only are experienced engineers not finding employment, graduate engineers (mostly civil and chemical) are also battling to find employment, this resulting in a situation where these are skills which are not absorbed into the economy, hence increasing the likelihood that these skills might seek employment in other parts of the world (Skiti. 2016).

#### **4.5 Higher education and brain drain in South Africa**

In the early 2000's, it was clear to the new South African government that the country had lost numerous skilled nationals and that something needed to be done to replace skills that had been lost. One of the major sectors in South Africa that has been affected by the mass exodus of professionals is the higher education sector. After 1994, the sector experienced a mass exodus of skilled academics due to the uncertainty in the political direction that the country was about to take. It's undeniably clear that academics play an important role in a country's socio-economic development, not only are they involved in (human development) lecturing, they are also involved in critical scientific research and experiments, they are also involved in government research with the aim of helping government to develop and implement policies that are contributing towards growth and development. It is worth to note that of late, South Africa has been experiencing an increase in the shortage of academics

in the country's higher institutions of learning. This has not only complicated the provision of quality education but it has also affected the quality of research produced as more and more skilled academics opt for better salaries and living conditions in other countries., thus exerting pressure on the South African higher education sector.

#### 4.6 The problem of funding higher education in South Africa

For poor South Africans, accessing university education for somewhat reasons has been proving to be very difficult, although the government has over the years launched and implemented several schemes to try and ensure that every qualifying and deserving South African can access higher education (Malele. 2011). Government grants have played a huge role in funding higher education in South Africa, but the increase in demand for higher education will further exert pressure on government resources (Nkwanyana. 2015).

A study by Price Water Coppers (2015) found that the cost of delivering higher education in South Africa cost R50 billion annually. The study also found that from 2010 to 2012, tuition fees increased from R12, billion to R15, 5 billion, and at the same time student debt had increased from R2, 6 billion to about R3, 6 billion. Therefore, the increased in tuition fees is exerting significant pressure of government financial resources (Higher education South Africa. 2008), nonetheless, the South African government has played a key role in funding education in South Africa.

**Table 4.2: South African Higher education income sources**

Year	Year
<b>2000</b>	<b>2013</b>
Sources	Sources
<b>Government</b> R 15.93bn	<b>Government</b> R 21.21bn
<b>Third stream</b> R 8.78bn	<b>Third stream</b> R 14.26bn
<b>Student fees</b>	<b>Student fees</b>

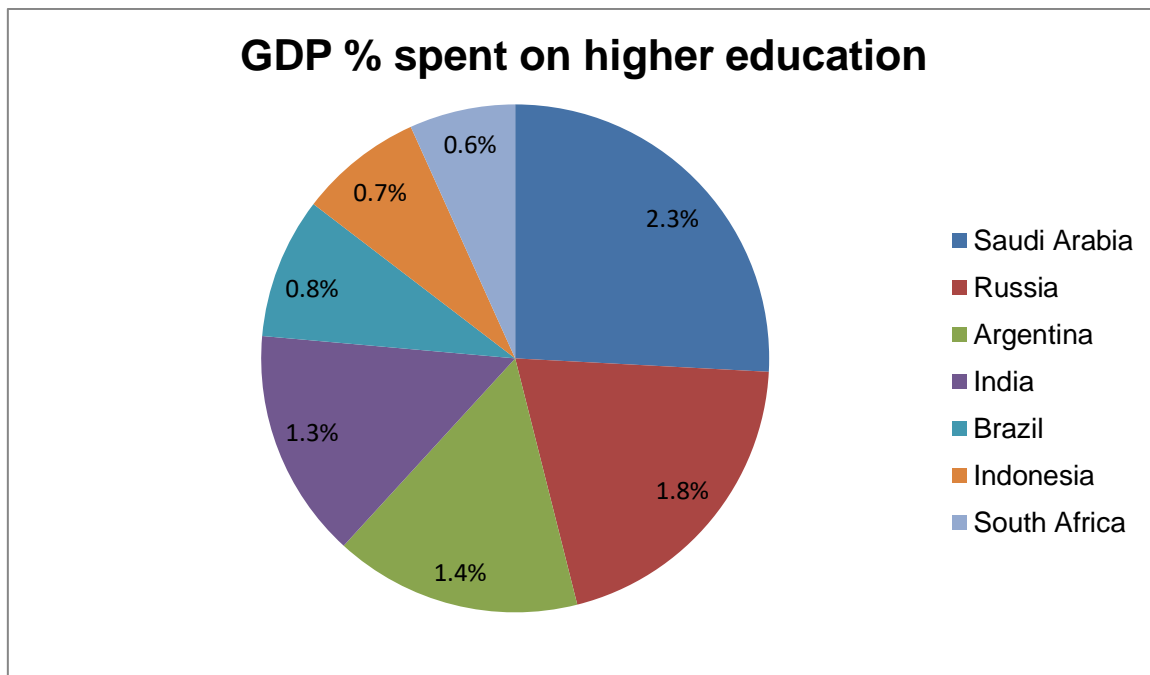
R 7.80bn	R 17.83bn
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Source: Cloete (2015)

The above table illustrates that government in South Africa plays a key role in South Africa’s higher education sector. The funding for South Africa’s higher education sector has increased by over R80 billion in a period of five years, from R169 billion in 2009/10 to R249 billion in 2013/14 (Statssa. 2015). Price Water Coppers (2015) states that South Africa spends 0.75 percent of its gross domestic product (GDP) on higher education, where countries like Germany and UK spend 1 and 0,9 respectively.

Although over the years the government has steadily increased the funding for higher education, South Africa still lags behind other developing economies in terms of the percentage for GDP that is allocated to higher education.

**Figure 4.1: Higher education funding (GDP) in selected G20 countries**



Source: John, 2014

The above pie chart shows that South Africa only invests 0, 6 percent of it GDP on higher education, whilst other developing nations such as Brazil, Argentina, India and Indonesia are continually investing more on higher education. Considering that

economically, South Africa is similar to these countries, spending such a small amount of its GDP on higher education is concerning, hence government has been slowly increasing the percentage of GDP its invest in higher education.

The question of who should fund higher education in South Africa has always been brewing for years, with government calling on the private sector to play a bigger role as it benefits from the skills and graduates from South African universities (Petersen. 2016)

Although it is highly likely that going forward the private sector will play a more visible role in funding the higher education going forward, it's still undeniably clear the government will continue being the key player in ensuing that deserving South Africans have access to higher education.

#### **4.7 Making higher education accessible in South Africa: The role of government**

There's no denying that after 1994, the demand for higher education in South Africa has increased astronomically, thus putting South African Universities at a precarious position of the need to cope with the increase demand for higher education (MacGregor. 2014). The post-1994 South African government acknowledged that the demand for higher education was going to be on the steady increase and that something needed to be done to ensure affordable and accessibility of higher education (Badat. 2010).

Over the years, government has taken measures to ensure that South Africans access higher education regardless of their financial situation (Ngcaweni. 2013), one of the most notable initiatives launched to address this was the National Financial Aid Scheme.

#### **4.8 National financial Aid scheme (NSFAS)**

The National Financial Aid Scheme (NSFAS) which incorporated the Tertiary Education Fund of South Africa is a loan and bursary scheme. Established by the South African government in 1996, the goal was to ensure the qualifying South Africans had access to higher education through loans and bursaries that were granted by the government (Department of higher education and training. 2016). The scheme has thus far ensured that thousands of South Africans have access to

university education, and since its inception the scheme has assisted over 1.5 million students' across South Africa and more the 50 billion rand has been disbursed. (Ngcobo. 2016)

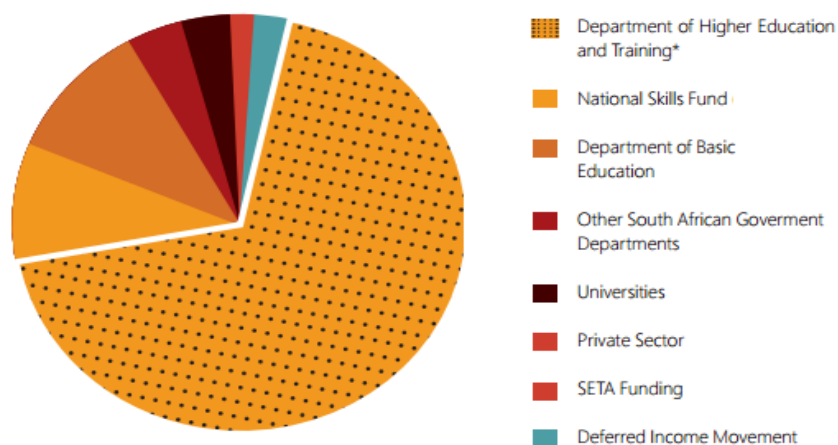
**Table 4.3: Government spending on NSFAS from 1991 – 2014**

1991	1992	1993	1994	1995	1996	1997
21.4M	41.3M	55M	70.4M	154.3M	333.3M	350.9M
1998	1999	2000	2001	2002	2003	2004
394.4M	441M	510.8M	635M	733.4M	893.6M	985.4M
2005	2006	2007	2008	2009	2010	2011
1.2BN	1.3BN	1.7BN	2.3BN	3.1BN	3.6BN	5.6BN
2012	2013	2014	2015	2016	2017	
7.7BN	8.7BN	9BN	9.5BN	10bn	10bn +	

**Source:** NSFAS 2014 & Buchule 2016

The total allocation for NSFAS form government in 2015 amounted to R9.5 billion and is expected to increase to R10 billion between 2016/17 (NSFAS. 2014).

**Figure 4.2: Sources of revenue income for loans and bursaries**



**Source:** NSFAS 2015

The importance of the scheme (NSFAS) in the South African higher education is highlighted by the schemes ever increasing budget, Ngcobo (2016) asserts that the budget will increase from R9, 3 billion in 2015 to R10 billion in the years 2016/17. In 2016 alone more than 400 000 qualifying students received loans and bursaries from the scheme (Namane. 2016). Although the scheme has done well in ensuring that needy qualifying South African access university, the scheme has experienced challenges which have often made it leave a number of students not funded.

#### **4.9 Challenges facing NSFAS**

The following according to Makoni (2014) & Tandwa (2016) are the major challenges facing NSFAS, these include; employed recipients of loans not repaying them back, increase demand for higher education, insufficient government funding for higher education and Student dropout.

One of the most pressing challenges for the scheme is the increasing demand for higher education, the demand has increased dramatically over years (De Villers & Niewoudt. 2010), meaning more money has had to be pumped into the scheme to accommodate the increasing number of students. Another challenge currently battling the scheme is the high rate of dropout among students, according to Timeslive (2016) 65 percent of NSFAS sponsored students have dropped out over a 5-year period, whilst only 32 percent have graduated.

With the demand for higher education set to increase in the future (Cloete. 2016), it remains to be seen whether the scheme will be able to cope with increasing demand for higher education.

#### **4.10 Addressing skills shortages in South Africa: role of government**

To address skills shortage issue in South Africa's higher education sector, the government has through the department of science and technology established the New Generation of Academics Programme (nGAP) (National research foundation. 2016). The main aim of this program is recruit highly capable scholars as future academics at South African universities (Dugmore. 2015).

Although such recruitments will take place against a designed and balanced equity consideration, the nGAP is nonetheless a program designed to try and address the skills shortages currently affecting the higher education sector (Department of higher

education and training. 2015). According to Dugmore (2015) by 2020, South Africa will be short of roughly 7000 academics, 50 percent happen to be professors who are set to retire. Faced with such realities, the government hopes that the nGAP program will in future address such challenges.

**Table 4.4: Number of professors to retire by 2024**

<b>Universities</b>	<b>Number set to retire</b>
University of South Africa	241
University of Cape Town	179
North west university	158
University of Stellenbosch	157
University of Pretoria	165
University of Western cape	79
Rhodes university	55
University of Limpopo	45
Walter Sisulu university	28
<b>Universities of technology</b>	<b>Number set to retire</b>
Durban university of technology	10
Central university of technology	9
Mangosuthu university of technology	1

Source: Timeslive 2014

The above table clearly illustrates the bleak picture that is facing South Africa's higher education sector, with such a huge number of skilled and experienced the academics set to retire, whether the sector can handle this will depend on whether it can fill the vacancies that will be left retiring academics.

#### **4.11 Fighting academic brain drain in South Africa: the role of foreign academics**

Brain drain in South Africa has left a huge number of vacancies in different South African sectors (higher education, health, Information Technology and recently the farming sector); some of these sectors have had critical vacancies that have gone for months unfilled because of skills shortages in South Africa (Steyn. 2015).

The importance of combating the brain drain in the higher education sector is so real that the minister of home affairs Melusi Gigaba once said that South Africa would welcome foreign students who graduated and wished to stay in South Africa, the minister said that the government was working on initiatives that would allow them to do so (ImmigrationSA. 2015), it's worth to note that South Africa attracts numerous professors from other African nations who significantly help universities fill vacancies that have long been left unfilled (Altbach. 2013).

The role of foreign academics in South Africa's higher education sector has benefited the country immensely, not only are they lecturers, they are involved in the primary education sector as teachers (Human Rights Watch. 1998), thus their contribution to the whole educational system in South Africa is immense, thus the above statement further reinforces the statement by (Kokkonen. 2016) that as much as South Africa has been a victim of brain drain, the country has also been a huge recipient of skills from Africa, this is evident by the fact that in 2011 the country issued out 100 000 temporary visas and 10 000 permanent residency permits. This goes to show that as much as brain drain has adversely affected South Africa, the country continues to attract skills from Africa and beyond, thus benefiting in the form of brain gain.

The contribution of foreign student to South Africa's higher education sectors is vital for South Africa socio-economic development, not only do they contribute to racial transformation, but it's been noted that they also contribute efficiently (through completing studies effecting) and quality (through quality publications and writing skills) (Cloete & Mouton. 2005), thus it's clear that foreign academics and students will continue to play a huge role in South Africa's socio-economic development (Tlhabye. 2015).

#### 4.12 Skills shortages at South Africa's higher education sector

South African universities are in no doubt in chronic shortages of skills. The shortages of skills at universities has resulted in some universities paying professors huge salaries in order for them to stay (Universityworldnews. 2008), South Africa currently is planning on increasing the retirement of age from 60 to 80, this measure is largely seen as trying to deal with the skills shortages issue (News24. 2012). Such cases paint a clear picture of the bleak future facing South African universities. A snap survey found that as of 2008, there were 600 vacancies for academics at 5 universities in South Africa (Universityworldnews. 2008).

**Table 4.5: Vacancies in 6 SA universities as of 2008**

Universities	Vacancies (No of Posts)
University of Johannesburg	142 lecturers and 28 associate and full professors in nine faculties.
University of Pretoria	127 posts
University of Cape Town	75 academic vacancies after 40 resignations this year.
University of Zululand	14 professors.
University of Zululand as of <b>(2016)</b>	18 professors 19 Senior Lecturers 28 Lecturers
University of Limpopo	182 academic staff.

Source: Universityworldnews (2008) and University of Zululand Faculty handbooks (Arts, Education, Science and Commerce, law and administration and HR department)

#### 4.13 Foreign Academics at the University Zululand: A story of brain gain

There is no denying that foreign academics have played an enormous role in South Africa's academic development. Over the years South Africa has been fortunate enough to attract a large number of skilled academics from across the globe, some of which have gone to receive permanent residence permits in South Africa. Currently the University of Zululand hosts a number of foreign academics who have

gone to receive permanent residence, thus enabling academics to stay in South Africa and contribute to the country's socio-economic development, directly resulting in brain gain for South Africa.

**Table 4.6: Foreign academics at the University of Zululand**

Foreign Academics	16	<b>Total</b>  <b>41</b>
Foreign Academics with permanent residence	25	

Source: University of Zululand human resource department 2017

The above table further goes to emphasize the important role that foreign academics are playing at the University of Zululand alone. A total of 41 foreign academics constitutes to massive brain gain for the University of Zululand and South Africa at large, with most of them having received permanent residence permits, this allowing not only the University of Zululand, but other higher education institutions in South Africa to fill vacancies that have been left by emigrating South African academics. Thus the brain gain on South Africa's part has been very significant. It's undoubtedly clear that foreign academics will continue to play a significant role in South Africa's higher education sector going forward

According to Govender (2014) 1430 professors are set to retire in the next 10 years, a staggering 200 professors from Wits University alone. Such figures present a gloomy picture for the higher education sector in South Africa hence, an urgent intervention to address skills shortages.

The rates of academic brain drain in South Africa are alarming considering how well they are paid. According to Jansen (2013) South African academics are amongst the best paid in the world, yet the issue of brain drain still plagues South Africa's higher education sector. Just like money cannot eliminate poverty in Africa (Emeagwali 2003), high salaries alone cannot reduce academic brain drain in South Africa, but government together with society must work together to solve the root causes which contribute to brain drain (Shinn. 2004). One of the reasons South African academics leave is anxiety over retirement issues, and that universities in the US and UK

offered better retirement and pension benefits compared to South Africa (Jansen 2013).

**Table 4.7: Academics' pay by country**

Country	Average salary ( \$ *)
Canada	7, 196
Italy	6, 955
South Africa	6, 531
India	6, 070
US	6, 054
Saudi Arabia	6, 002
UK	5, 943
Australia	5, 713
Netherlands	5, 313
Germany	5, 141

\*Ranking among 10 countries for average monthly academic salary in US dollars adjusted for purchasing-power utility

Source: Grove 2012

The fact that South African academics are one of the best paid in the world and yet still emigrating further goes to strengthen the notion that salaries alone cannot fight brain drain, but rather the root causes of brain drain need to be identified and extensively dealt with for South Africa to reverse the brain drain of academics.

#### **4.14 Brain drain in the Higher education sector: future prospects**

It's undeniably clear that there are numerous challenges facing higher education in South Africa and these challenges need urgent interventions. For South Africa to effectively build a knowledge based economy, challenges in the higher education sector need to be resolved, and most importantly skilled academics need to remain in the country for the long term. South Africa needs to ensure that skills remain at universities, failure to address these challenges will result in numerous academics

leaving the country and with the academic profession in South African not attractive, and replacing such skills will be difficult for higher education sector.

#### **4.15 Brain drain and brain gain in South Africa's health sector**

It's undeniably clear that South Africa is experiencing a high shortage of health workers. The provision of better salaries and living conditions in countries like Canada, Australia and the UK has resulted in thousands of South African health workers migrating. The mass migration of health workers from South Africa has exerted tremendous amounts of pressure on the health sector in the country, where numerous critical positions have gone for years unfilled due to the unavailability of skilled medical professionals. It's also worth to note that South Africa has thousands of foreign medical professionals who are employed in the country to reverse the loss that has been inflicted by the brain drain of medical professionals, through the signing of numerous bilateral agreements with countries such as Tunisia and Iran, foreign doctors have been employed in South Africa. In 2007, 258 Tunisian doctors were selected for deployment in South Africa, in 2006, a similar agreement with Iran enabled 36 experienced doctors to work in South Africa, and this was a massive brain gain for South Africa (Department of health. 2008). While such agreements have resulted in brain gain for South Africa, South Africa's increased dependency on foreign medical professionals goes to show the true extent at which brain drain has robbed South Africa of its skilled medical professionals over the years.

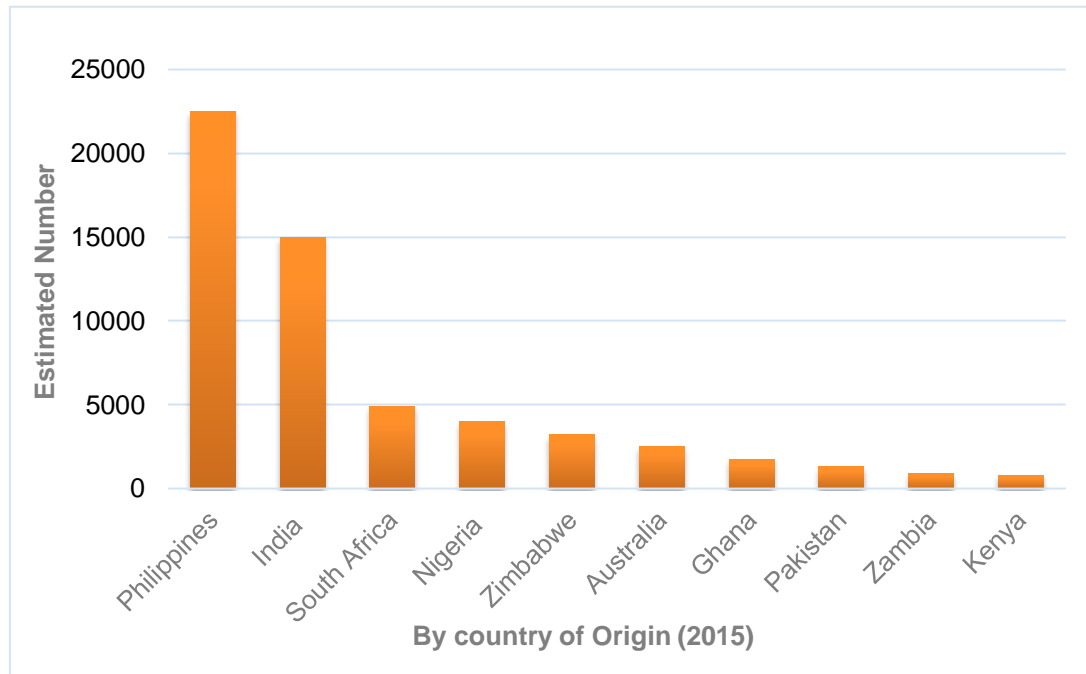
#### **4.16 The extent of skills shortages in South Africa's health sector**

The effective functioning of any health sector around the world is highly dependent on the quality of health care provided by health care institutions (World Health Organization. 2007). But when there is a dearth shortage of qualified medical professionals on ground, the effective functioning of the health sector becomes a huge problem (Jobson. 2015). North West university professor of nursing Abel Pienaar, said that if South Africa intends to meet its goal of achieving universal health standards, it needs to address the chronic skills shortages of nurses in the health sector (Pieterse. 2016).

In 2010, it was estimated that South Africa was in need for 44 700 nurses, yet the country was only training 3500 annually (Cullinan. 2015). There was a decline of 854 (25%) of specialist and sub specialists in the public health sector, the massive

decline of such specialists further affects South Africa's goal of providing quality healthcare services to its citizens (Strachan, Zabow & Van de Spuy. 2011).

**Figure 4.3: Number of foreign nurses in the UK**



Source: Dreaper (2015)

The above figure illustrates the extent of the skilled emigration of nurses from South Africa, there are roughly 5000 South African nurses living and working in the UK, although this is a fraction compare to the number of nurses from the Philippines, it nonetheless presents significant challenges for South Africa, as the country's public health sector is in chronic shortages of medical professional from nurses, doctors and physicians.

Ehman & Sullivan (2001) highlight that South Africa demanded that in 2001, Canada halts the recruitment of South African Medical doctors, it is stated that South Africa has incurred a loss of \$1.41 billion on returns from its investments on its medical doctors that have emigrated. Kelland (2011) asserts that in South Africa to train a doctor cost approximately \$59000 only to see them migrate once they have completed their training.

Pillay (2007) mentions that more than 23, 407 South African medical professionals were working and living in five OECD countries, with South Africa battling the HIV & AIDS pandemic, the migration of skilled medical professionals will present an enormous challenge for authorities (Tawfik & Kinoti. 2006).

**Table 4.8: Destination countries for South African health workers**

Destination countries	Medical doctors	Nurses and midwives	Other health professionals	Total (N)
Australia	1114	1085	1297	3496
Canada	1345	330	685	2360
New Zealand	550	423	618	1596
UK	3625	2923	2451	8999
USA	2282	2083	2591	6956
<b>TOTAL</b>	<b>8921</b>	<b>6844</b>	<b>7642</b>	<b>23407</b>

Source: Organisation for Economic Co-operation and Development (2004)

The effects of medical brain drain have been devastating for South Africa's health sector, it has resulted in chronic shortages of skills, and it has made the health sector more vulnerable and has exerted huge amounts of pressure on government resources which are already strained (Mortensen. 2008). There are more than 600 South African doctors who are registered and practising in New-Zealand, 10 percent of hospital based physicians in Canada graduated at a South African university and 6 percent of the total health sector workers in the UK are from South Africa (Sidley. 2004).

According to the Southern African migration project (2002) the brain drain of medical professionals in South Africa has further impacted negatively on the workplace moral of those professionals who have stayed behind because they now have to work long hours in order to make up for the shortage of skilled professionals. This has inevitably lead to exhaustion, burn out and fatigue among medical professionals in the country (Labonte *et al.* 2015). Thus leading to absenteeism, poor treatment of

patients and counter-productive behaviour that will surely effect the overall functioning the of South African health sector (Padarath *et al.* 2003).

The migration of skilled health professionals may also affect the attitudes of trainee young medical professional in the country, given the fact that when skilled professionals migrate, there is no one left behind to train younger medical professionals, which might also make them consider migrating (Awases *et al.* 2004). South Africa needs 14351 doctors and 44780 nurses, experts have said that such figures are alarming for a country that is growing rapidly and they acknowledged that finances should be readily made to train people (Rondganger. 2013). For government it's very imperative to ensure a conducive working environment for health professionals, this would play a huge role in ensuring that skills remain in the country (Dodani & LaPorte. 2005). An effective and clear retention strategy is also important for retaining skills in the health sector.

#### **4.17 Retaining skills in the health sector**

With a growing population each year, the health sector cannot afford to be losing skilled professionals who render vital services to the public (Econoex. 2015). What this suggests is that health sector needs to urgently redesign its retention strategy that will ensure that South African skills remain in the country.

According to Mokoka, Oosthizen & Ehlers (2010) the following initiatives can be implemented at both general and organizational level to try and retain medical practitioners in the country. Generally, retaining skills would mean that government must; invest in employee professional development, provide adequate rewards and benefits and ensure better working relationships among professionals as well as tolerant of others. On the other hand, retaining skill at organizational level would involve; improve strict safety in the work place, invest in organizational development, ensure effective resource utilization as well as improve organizational culture.

What the above suggests is that in the face of a massive brain drain problem, the South African health sector needs and must ensure that the retention of skills is top priority (Louis *et al.* 2009).

Although a comprehensive skills retention programme would help skills remain in the health sector, it is worth to note that South Africa's health sector is characterised by

numerous challenges that need to be solved (Broomberg. 2011), hence a retention strategy might fail to work unless these challenges are resolved

#### **4.18 Challenges facing South African health sector**

With a series of challenges hindering the effective functioning of the South African health sector, this has resulted in the sector being thrown into physical shambles and service disarray (Smith. 2015). Debatably these challenges have long been in existence, a situation that has also contributed to the massive brain drain South Africa is witnessing today.

According to O'Brien & Gostin (2011) & Nyathi & Jooste (2008) below are some of the challenges that are adversely affecting South Africa's health sector, this includes: insufficient planning for the health needs of the country, massive shortages of skilled workers, increase HIV infection rate has placed a huge burden on the health sector, poorly trained workers, poor working conditions.

Skills shortage in South Africa health sectors has now meant that the sector has been able to attract thousands of highly qualified foreign nurses and doctors (Labonte *et al.* 2015), and these professionals have tried to alleviate the brain drain problem in the country's health sector.

#### **4.19 Brian gain in the South African health sector**

The shortage of South African medical professionals has not stopped the health sector of attracting hundreds of foreign skilled nurses (Bateman. 2012). Numerous foreign skilled professionals have come to South Africa to seek employment (Labonte *et al.* 2014), not only are they seeking employment but indirectly they are helping South Africa deal with the brain drain problem. In the face of continuous brain drain of skilled professionals, the government has over the years launched several initiatives to try and address the brain drain problem in the health sector (Makoni. 2009).

#### **4.20 Training of medical doctors in Cuba**

From 1994 onwards it was clear to the incoming government that the skill shortage in the country will negatively impact economic growth for the country (Rasool & Botha. 2012). It is this reason that in 1996 the South African government signed a bilateral

agreement with Cuba; this agreement entailed South Africa sending students to study medicine in Cuba for a certain period (Jordaan. 2016)

Although the program aims at ensuring that South Africa has adequate doctors in the future to meet a growing population, the initiative has been highly criticized particularly from those in the political circle in South Africa owing to its costs. According to Bloom (2015) to send a medical student to Cuba costs the South African government around R875, 000 per student, in 5 years that amount would have equalled roughly R5 million, while training a doctor at the university of Cape Town as of 2012 cost roughly R1.3 million for a period of 5 years.

Despite criticism, the South African government has kept sending students to study medicine in Cuba; this is one of the initiatives that the South African government has taken to ensure that the shortage of skills is addressed in health sector (Bateman. 2013).

Whilst the true results of this program are yet to be seen, it's quite clear that should there be adequate resources poured into the program (Bateman. 2013), the return of these doctors will help address the skills shortage problem in the country's health sector.

#### **4.21 Foreign medical professionals in South Africa**

Most of South African medical professionals prefer working in urbanized areas; hence people in the rural areas often are neglected and have trouble accessing quality medical care (Reid, Couper, & Volmink. 2011), a vacuum that has been filled by foreign medical professionals working in rural areas across South Africa (Reardon, Enigbokan & George. 2014). The brain gain for South Africa has been immense; the country has been able to attract hundreds of nurses and doctors from Africa and beyond to work in the country (Bateman. 2012).

This has helped ensure that medical care is offered for residents who are residing in rural areas and they have contributed immensely to the fight against brain drain (Reardon, Enigbokan & George. 2014). As much as foreign nationals have helped fight the brain drain problem, there are still numerous challenges that are faced by foreign workers wishing to work in South Africa

## **4.22 Challenges faced by foreign health professionals wishing to work in South Africa**

According to Health-E News (2011) Bateman (2012) & Buthelezi (2015) there are numerous challenges affecting foreign health professionals who wish to work in South Africa, particularly nurses and doctors. These challenges include; application procedures, the bureaucracy of the South African nurses' council (SANC), registration hurdles, issuing of work permits and the constant threat of Xenophobia

One may have assume that considering the skills shortage in the health sector, the immigration process for skilled professionals would be simple, thus allowing them to quickly integrate into South African society (Buthelezi. 2015). Rather they are faced with numerous challenges, going forward, it is imperative that government ensures that the processes for skilled foreigners wishing to work in South Africa are streamlined to be effective and efficient; thus encouraging that South Africa continues to attract foreign skills.

## **4.23 Brain drain in the health sector: future prospects**

With a growing population and the increased competition for health workers around the world, the brain drain of medical professionals from South Africa presents a serious challenge for the authorities. It's therefore imperative going forward that the root causes contributing to the brain drain are effectively investigated and resolved, failure to address these root causes will result to a continue cycle of medical brain drain which threatens not only the South African economy, but also South African citizens at large.

## **4.24 Implications of brain drain on South Africa's socio-economic development**

### **4.24.1 Health Implications**

The performance of any health sector in the world is dependent on the availability of skilled medical professionals. In South Africa, the health sector is characterised by substantial amounts of skills shortages (Department of labour. 2008). According to MoneyMarketing (2016) 70 percent of nurses in South Africa admitted to working overtime and during holidays because of the shortages of medical personnel in the country.

According to the Medical-Chronicle (2016) in 2010 alone, there were approximately 81, 925 vacancies in the South African health sector, most of these vacancies were for nurses. Various causes have been blamed for the shortage of medical experts in South Africa, such causes include, lack of investment in the public health sector, brain drain and inadequate working equipment (Makhubu. 2016).

Brain drain has been singled out as the major culprit, according to Sparke (2012) South African nurses are in demand around the world, this owing to the fact that South African nurses are well trained in all nursing disciplines, thus allowing them to be portable around the world. The loss of so many South African medical professionals has been devastating for the country's health sector (Wildschut & Mqolozana. 2008), and will be even more devastating for South Africa's socio-economic development.

The continuous mass exodus of skills from the South African health sector will have disastrous consequences for the sector as a whole. According to Fin24 (2011) Sue (2005) & Mortensen (2008) the brain drain of medical professionals has had the following implications of the South African health sector.

- Substantial decline in the domestic health care delivery capacity
- Loss of training investment on immigration health professionals
- Loss of moral and dedication on remaining staff
- Increased shortage of skills
- Increase pressure and workloads on remaining professionals
- Reduced efficiency in the functioning of the health sector.

#### 4.24.2 Economic implications

It is usually said that an educated population is a productive population, therefore if the population of a country is educated, there are likely going to contribute towards the economic development of that country by applying their skills in different sectors of the economy (Buchanan. 2012). Countries like South Korea, New-Zealand and Switzerland have invested immensely on educating their citizen knowing very well that educated citizens are productive (McCarthy. 2015). These countries have also suffered from the brain drain, but the effects of brain drain have been rarely felt

because of the high number of educated individuals who make for lost skills (Mugimu. 2010).

South Africa has one of the highest investments rates in education, yet still a large percentage of the population; particularly the black population, do not have tertiary education, and therefore every skilled professional that leaves the country costs the country's economy greatly (Vrbicek. 2015). A report found that the migration of South African skilled workers has made it difficult for the country to rise above the 3 percent economic growth that it has been achieving over the years (LeMay. 2004). In 1999, 39000 South Africans left the country to join up with the 1.6 million who were already residing abroad (BBC. 2002), According to (LeMay 2004) brain drain cost the South African economy over 2.5 billion rand between 2002 and 2003. With the South African economy growing at very poor rates, the emigration of skilled professional is likely to worsen the rate of brain drain in South Africa as the economy is not growing and lack sustainable job creation (Rasool & Botha. 2011).

Since 2008, the economic implications of brain drain in South Africa have been reduced due to the large number of returning South Africans from abroad (Hoppli. 2014), Steyn (2014) reiterates that 360 000 South Africans expatriates have returned to the country, and most of them are highly skilled in sectors such as finance and engineering.

Skilled African immigrants have also played a role in offsetting the challenges that have been brought by brain drain in South Africa (Shinn 2004), immigrants from Africa are involved in various professions in South Africa, such as lecturing at universities, doctors and are involved in the various types of informal trading (Khubeka 2017), thus their contribution to the South African economy is unquestionable. According to the Centre for Development and Enterprise (CDE) (2000) South Africa is in need of skilled immigrants to drive the economy, as most of these immigrants have skills and immense knowledge in sectors such as IT, entrepreneurship, finance and higher education, it is said that more skilled immigrants in South Africa will help enhance the economy, enabling it to grow and become more competitive (Kuznetsov. 2006).

#### **4.25 Post-apartheid government policies and brain drain in South Africa**

Certain race groups (Coloured's, Indians and Blacks) were in some way disadvantaged during the apartheid regime in South Africa (Pillay. 2015), they were prohibited from travelling freely and most importantly they were prevented from working in certain sectors and holding certain positions in the workplace (Horwitz. 2001), rather these groups were employed in labour intensive industries such as mining and farming (Aaronson & Zimmerman. 2018).

After the collapse of apartheid, the new democratically elected South African government wanted to correct these injustices through the introduction of Black Economic Empowerment and Affirmative Action policy that would enable previously disadvantaged groups to command the same authority as their white counterparts in the economy of the country (Jeffrey. 2014). However, much has been written about the consequences of these policies rather than their benefits, journalists, writers and authors have argued that these policies have cost South Africa greatly (Mashaba. 2015). They argued that these policies have contributed to brain drain, and do not promote reconciliation (Ssekasozi. 1999).

Some journalists have urged that these policies need to be abolished and replaced with policies that encourage development and inclusivity in South Africa. Aardt (2006) states that these policies have made skilled and experienced white business executives, researchers and doctors leave the country in search of employability elsewhere in the world where there are no such policies. According to BusinessTech (2015) these policies have benefited blacks the least, although there have been a 277 percent increase in the number of black millionaires in the past 15 years; but it is the Indian population that has largely benefited from these policies.

**Table 4.9: SA Millionaire growth 2000-2014**

<b>Group</b>	<b>Millionaires (2000)</b>	<b>Millionaires (2014)</b>	<b>Growth %</b>
Whites	16 300	32 100	97%
Indian	1 200	6 500	442%
African	1 300	4 900	227%
Other	1 100	3 300	200%
<b>Total</b>	<b>19 900</b>	<b>46 800</b>	<b>135%</b>

Source: BusinessTech 2015

#### **4.26 Affirmative action**

Affirmative action is a method of making sure that the workplace is representative and fair. It ensures that qualifying people from previously disadvantaged groups have equal opportunities in the workplace environment (Zopedol.. 2014). These groups are (Black South Africans, Coloureds and Indians) women and people with disabilities. Badat (2010) states that due to apartheid, historically these groups have been underrepresented in certain sectors of the economy (and over-represented in some).

##### **4.26.1 Aims of affirmative action**

In South Africa, affirmative action is aimed at ensuring that qualifying people from previously disadvantaged groups have equal opportunities to find employment, i.e. they must be represented in all levels and job categories in the workplace (Tladi. 2001).

##### **4.26.2 Implications of non-compliance**

Should a particular employer fail to comply with what has been outlined within the affirmative action policy, under the employment equity act, the department of labour may impose penalties, fines and prosecution on that particular employer (Dupper & Garbers. 2009).

#### 4.26.3 How affirmative action has contributed to brain drain in South Africa

The hasty implementation of the Affirmative Action policy in South Africa has forced thousands of white skilled professionals to emigrate; Inkata Freedom Party (IFP) leader Mangosuthu Buthelezi said, the IFP leader stressed that whites needed to be incentivised so that they can stay in the country, thus using their skills and expertise to contribute to development of South Africa (Mail & Guardian. 2011). The IFP leader also stressed that country must abolish Affirmative Action to ensure that the country employs people who are competent and qualified to ensure economic growth and development.

According to Siddique (2004) Affirmative Action has been singled out as a major contributor to brain drain in South Africa, the above statement is further supported by Edigheji (2007) who states that the migration of whites in South Africa has been influenced by the government's affirmative action policy, which has favoured black South Africans. According to Wagstyl (2002) the loss of one skilled South African costs up to 10 unskilled jobs.

From the Economist (2008) majority of white South Africans have migrated because they have lost faith in the government, they are overlooked on jobs positions and possible promotions on the basis of their skins, and because of Affirmative Action, the situation has gotten far worse.

According to Katiyatiya (2014) Affirmative Action has done more harm than good in South Africa, it has: increased inequality, It has been used as a tool of revenge rather than equality, It has hindered the reconciliation process and it has led to a situation where unskilled individuals are appointed due to their colour, further hindering economic growth and development.

Sadly, enough despite wide spread calls for Affirmative Action to be abolished, the South African government has so far refused to do so. Timeslive (2016) states that South African president Jacob Zuma has repeatedly said that the government will continue to implement BEE and Affirmative Action related programmes in the country, his statement was further supported by former labour minister Mcebisi Mdladlana who said that Affirmative Action will never be abolished in South Africa,

as it is meant to give previously disadvantaged groups an equal chance in the country, a chance they never had under the apartheid rule (Webb 2007).

The apparent reluctance of South African authorities to abolish affirmative action raises a very serious question, it is possible that affirmative action is not only used as a tool to re-correct the injustices of the past but also as an electioneering tool for the ruling party? (Khalfani 2006). One may agree and say yes, basing his arguments on the fact there have been repeated calls for it to be scrapped but to no avail, considering the reported implications that Affirmative Action has had on brain drain and skills retention, one would have assumed that affirmative action would have been scrapped a long time ago.

The future of the affirmative action policy in South Africa will undoubtedly remain a focal point for critics, whether the policy has really contributed brain drain or not, seemingly it is still very much rooted in a post-apartheid South Africa and its abolishment is something out of the question for the South African government.

#### **4.24.4 Black Economic Empowerment (BEE)**

Black Economic Empowerment similar to affirmative action is aimed at correcting the injustices of the past by seeking to substantially and equally transfer the management, ownership and control of South Africa's economic and financial resources to majority of the citizens; it seeks to enlarge the role that is played by black South Africans in the economy (Kalula *et al* 2009).

#### **4.24.5 Aims of black economic-empowerment**

BEE is a racially selective post-apartheid program launched by the South African government; the program seeks to correct the injustices of the past by giving previously disadvantaged groups economic benefits that were previously not available to them during the apartheid era (The presidency. 2004). However, as good (productive) as this program seems to be it has succeeded in creating more money bags within the South African society. BBE has been lambasted for enriching a few individuals who are politically connected; often no government tenders have been awarded to individuals who are politically connected with higher officials in government, this enriching a few black South Africans and neglecting the majority of people that the policy was meant to uplift (Brown. 2005). BEE has resulted in fronting

where black people are appointed into organizations to create a diversion, and usually the benefits acquired by the business because of its compliance with BEE do not go to those black individuals (Ntingi. 2011).

It has been argued that BEE just like Affirmative Action, has contributed to brain drain in South Africa, as business executives and entrepreneurs have fled the country in defiance of the new policy (Booyesen & Tswana. 2015), they argue that BBE has virtually made it impossible for corporate bodies to get rid of non-productive and surplus employees (Prinsloo. 2013), as a result this has made South Africa a less favourable destination for foreign investment. BEE to Newman (2013) has contributed immensely to brain drain in South Africa, where white skilled workers with qualifications and the technical know-how are forced join forces with BEE owned businesses which do not represent what they are looking for, thus discouraging white South Africans from establishing businesses in the country. Many of them have opted to establish their businesses in countries whose economic policies are less discriminative. Debatably, these policies directly or indirectly have succeeded in inflicting huge human capital loses on the country (Gumede. 2015). From the Institute of Race Relations (2015), only a few black South Africans have benefited from BBE which is not what the policy was designed to achieve.

#### **4.29 Migration and economic growth in South Africa and Southern Africa**

Economic growth in South Africa and Southern Africa will increase the rate of migration to South Africa (Rotberg & Mills. 1996); given the fact that economic growth in South Africa will lead to better infrastructural development, better educational facilities and better communication systems. By implication; the increase in economic growth and development in South Africa underpins the rate of migration.

With Southern Africa being favourite destination of migrants from Central and North Africa, it means economic development in the region will also increase the number of migrants who will come to the region in search of better economic opportunities (Mpedi & Myeni. 2016). This will increase the financial capital flow in the region, though it will also put pressure on government resources as governments will have to cater for an increased population in the country (Nafziger. 2012). Other challenges are that the region might witness is the increase in the number of unskilled migrants whereas the region is in need of skilled and experienced migrants (Department of

labour. 2007), nonetheless Southern Africa and South Africa can expect an increase in migration in the near future, as the regional economy develops, it is bound to attract thousands of migrants (Ganster & Lorey. 2005)

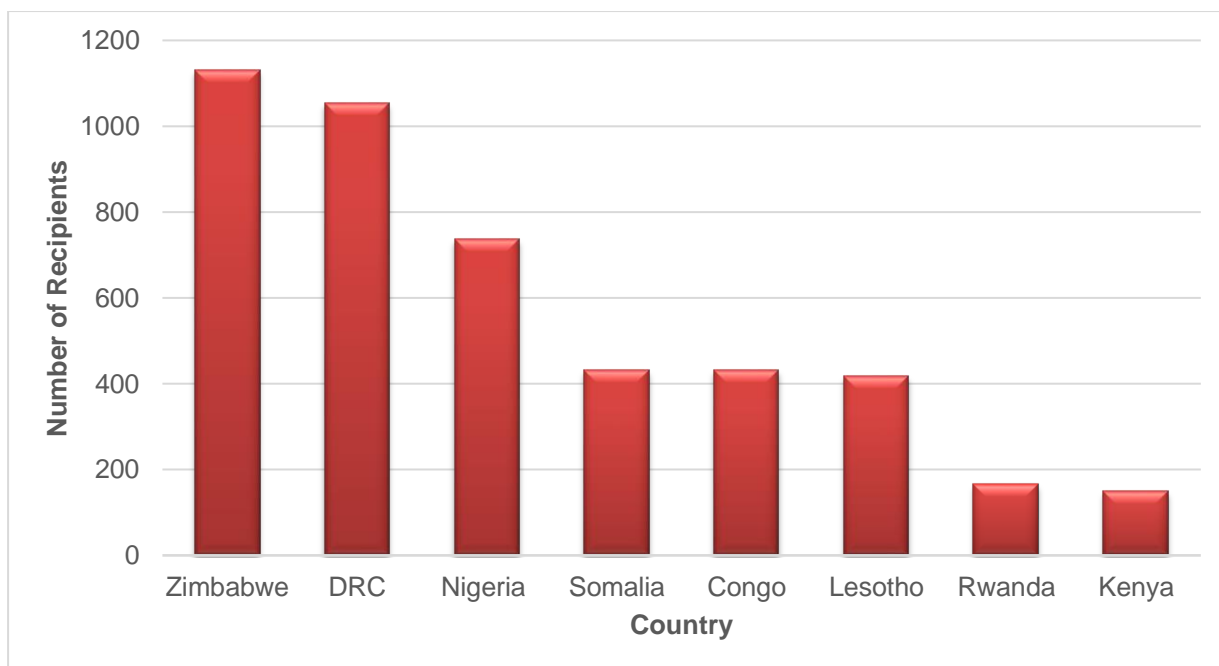
#### **4.30 South-South migration: How South Africa benefits**

More than 20000 migrants travel through-out the Great Lakes and Southern African Development Community (SADC) region to try and reach South Africa (Kalitanyi & Visser. 2010). Most migrants from North and Central Africa prefer South Africa as their destination of choice. With its strong economic position in the continent, Southern Africa experiences high volumes of migration due to various work opportunities in sectors such as mining, manufacturing, and agriculture (Crush. 2006). Grandi (2012) opined that the United Nations High Commissioner for Refugees mentioned that South Africa has the largest number of migrants in Southern Africa, with more than 2.4 million currently in the country, 447 000 in the Democratic republic of Congo (DRC) and 316 000 in Zimbabwe.

The number of people legally crossing borders through-out Southern Africa has increased dramatically over the years. The number has increased from 1 million in the 1900s to over 5 million today (Crush *et al.* 2005).

Factors such as a relatively stable economy, political stability and better standards of living enable South Africa to attract thousands of skilled individuals from across Southern Africa and beyond (Interactions Council. 1993). Zimbabwe is the largest contributor of migrants in South Africa today, since the slowdown of the Zimbabwean economy, thousands of individuals and families have crossed the border legally and illegally to try and pursue a better life in South Africa (Mambo. 2016).

**Figure 4.4: Number of recipients of permanent residence permits from the eight Sub-Saharan leading countries, 2011**



Source: Statistics South Africa, 2011

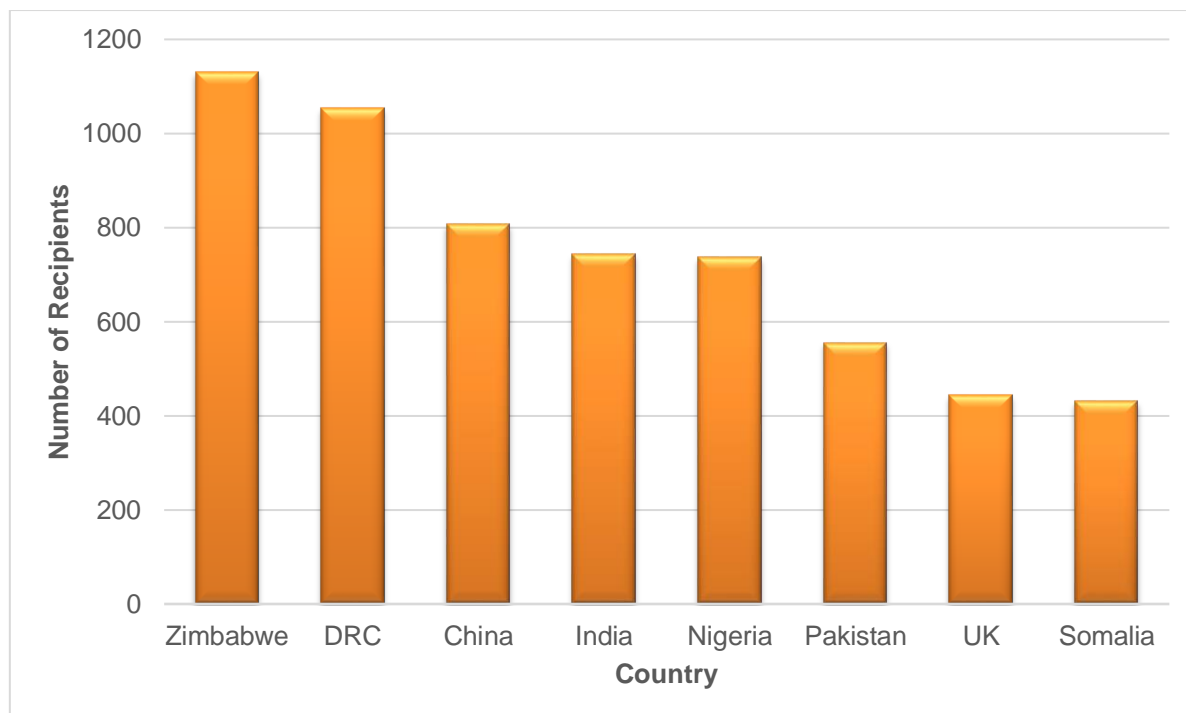
Before the tightening of immigration of laws in South Africa, South Africa experienced a high number of African nationals coming to the country. This was to allow more foreign skilled workers to enter the country to try and offset the challenges that have been caused by mass migration of professionals in South Africa (Crush. 2006).

**Table 4.10: Number of recipients of permanent residence permits by type of status, 2011**

Type of status	Frequency	%
Relatives	5 653	56.5%
Work	2 060	20.6%
Retired persons	1 664	16.6%
Business	318	3.2%
Refugee	316	3.2
<b>Total</b>	<b>10 011</b>	<b>100%</b>

Source: Statistics South Africa, 2011

**Figure 4.5: Number of recipients of permanent residence permits from the eight leading countries, 2011**



Source: Statistics South Africa, 2011

**Table 4.11: Number of recipients of permanent residence permits by sub-region, 2011**

Region/ sub-Region	Frequency	%
<b>Overseas</b>	4 084	40.8%
Europe	1 252	12.5%
North America	149	1.5%
Central and south America	62	0.6%
Australia	34	0.3%
Middle east	68	0.7%
Asia	2 519	25.2%

<b>Africa</b>	5 922	59.2%
SADC	3 210	32.1%
East and central Africa	1 642	16.4%
West Africa	979	9.8%
North Africa	91	0.9%
<b>Unspecified</b>	<b>5</b>	<b>0.0%</b>
<b>Total</b>	<b>10 011</b>	<b>100.0</b>

Source: Statistics South Africa, 2011

#### **4.31 Immigrant entrepreneurs in Cape Town: a success story**

A study by Kalitanyi & Visser (2010) titled “*African immigrants in South Africa: job takers or job creators*” was undertaken in Cape Town to determine whether African immigrants were job creators or job takers as they are popularly labelled in South Africa.

The main findings of the study were:

- Majority of immigrant entrepreneurs came from Southern African countries
- More than 80 percent of African immigrant entrepreneurs who were interviewed employed South Africans in their businesses.
- The study also found that entrepreneurial skills were been transferred from immigrant entrepreneurs to their South African employees.

The study also found that the major reasons for coming to South Africa are as follows: political instability; perception of business opportunities; economic reasons; visit; and other reasons.

The above information clearly shows that despite the existing brain drain problem in South Africa, foreign nationals from across the Africa continent have come to South Africa to seek employment and establish various business ventures, therefore one may conclude that foreign nationals have greatly helped South Africa in the fight against brain drain.

The findings of the study also show that as much as South Africa has been negatively affected by brain drain, the country has continued to attract thousands of African skilled professionals who are employed in South Africa. South Africa also hosts thousands of foreign nationals who are employed or self-employed in the informal sector, mostly as mechanics, street vendors and barbers. Considering that the informal sector contributes 5 percent of South Africa's GDP, it's undeniably clear that the foreign nationals both skilled and unskilled are and will continue to play a huge role in South Africa's socio-economic development going forward.

#### 4.32 Conclusion

With South Africa a victim of brain drain, it is clear that urgent action is needed to tackle the push factors that are causing skilled South Africans to emigrate. In South Africa today, emigration can no longer be associated with a particular race, gender or age group, because from the statistics, it is pretty clear that more and more South Africans whether males or females are now embracing the concept of emigration. With the UK being the most favoured destination by South Africans, it is not wonder that the country is losing vital skills to the UK, where a majority of South African nurses are working and living. The implications of this have been devastating for South Africa, where the health sector has experienced continuous shortages of skilled workers, which has further complicated the functionality and efficiency of the South African health sector, economic implications have also added to the country's problems. The mass emigration of skilled South Africans further affects the economy of the country as these are people who contribute to economic growth and apply their skills in different sectors of the economy, thus their emigration further compounds South Africa's economic growth.

Perhaps South African government policies such as BEE and Affirmative action have been contributing to brain drain in South Africa, whether these policies have really contributed to brain drain in South Africa, in particular white emigration, they are still undoubtedly rooted in a post-apartheid and their abolishment is something really not on the cards for the South Africa government. The first step in stopping brain drain in South Africa is to understand whether it has been categorised as a serious problem, seemingly with the absence of policy aimed at combating brain drain, one may argue

and say that the South African government has not looked at brain drain as a serious problem that needs to be solved with utmost urgency.

The future prospects of brain drain in South Africa remain high, with sluggish economic growth, the economy cannot grow, thus complicating the process of job creation for skilled South Africans, hence skilled South Africans may opt to widen their search for employment to foreign borders. With no sign of economic stability in neighbouring Zimbabwe, it is predicted that Zimbabwean immigration to South Africa is likely to continue in the near future, economic growth in South Africa will attract thousands of migrants from across the continent, with more migrants coming from Southern Africa countries, therefore going forwards, South Africa is likely to experience a huge numbers of immigration. The next chapter alludes more on the summary, conclusion and recommendations of the study.

## CHAPTER 5

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

The main aim of this chapter is to present the findings, conclusions and recommendations relating to the data which was collected during the course of the research.

It is not doubt that the brain drain phenomena has adversely effected South Africa to a great extent. The aforementioned chapters have in detail elaborated on the most common push and pull factors which have contributed to warm up migration of skilled South Africans. The previous chapters have also looked at the effect that brain drain has on development and growth. In reality, with the constant increase in demand for skilled workers around the world, it is undoubtedly clear that developing nations will continue to feel the effects of brain drain for years to come. It is imperative that going forward, South Africa needs to develop and implement socio-economic polices that will enable the country to reverse brain drain otherwise the country's long term developmental objectives will be in great jeopardy.

The primary aim of the study was to assess the causes and implications of brain drain on South Africa's socio-economic development. To achieve this aim, as a point of reference, the study focused on two sectors in South Africa, namely, the health and higher education sector. The effects of brain drain on these sectors has been enormous, therefore, the study drew conclusions based on the information derived from these particular sectors.

The study had to also answer the following research questions.

- What are the causes of brain drain in South Africa and to what extent have they affected South Africa's long term socio-economic development?
- Can brain drain in South Africa be attributed to the policies that were implemented by government post-1994?
- What are the causes of brain drain on South Africa's health and higher education sectors and to what extent has it impeded the efficient functioning of the these sectors?

## 5.2 FINDINGS OF THE STUDY

There's no denying the fact that long term sustainable development is a priority for South Africa, but achieving this will be a challenge for the country considering the mass exodus of skilled professionals who are meant to contribute towards the achievement of such. The study discovered that the key factors pushing South Africans to migrate included among others; an increase in crime levels, political uncertainty and poor economic growth as major reasons that have made them emigrate.

The impact of which have been so enormous on South Africa's educational and health sector. Currently, and across different sectors of the country, there are numerous academic vacancies which have not been filled, some of which have gone for years. Business development has been greatly affected as entrepreneurs are emigrating for what they perceive to be greener business pastures abroad. Nurses and doctors who were working in rural areas have migrated, thus complicating the provision of quality medical care for rural dwellers. Decrease in tax collection has also been a negative implication, the more skilled professionals migrate, the less tax income for the government. South Africa's reputation as a fast developing country is greatly affected as the more skilled professional's migrate there are fewer professionals available to help contribute towards sustainable socio-economic development.

Significantly, this has greatly undermined the country socio-economic development. Like any other country, South Africa's socio-economic development depends on the availability of skilled professionals to contribute to development, but currently, South Africa is failing to fight the constant outflow professionals from its shores, thus complicating and impeding South Africa's effort towards achieving efficient and sustainable socio-economic development going forward.

According to the findings of the study, it's undeniably clear that policies such as Affirmative Action and Black Economic Empowerment have not succeeded in rectifying the injustices of the past; rather they have contributed to the establishment of an environment where certain individuals benefit immensely and enrich themselves through political connections and *tenderpreneurship*. This has not only resulted in people with critical of skills not being employed, but it has also contributed

to brain drain as those people who cannot find employment in South Africa because of the Affirmative Action have simply migrated to other countries to seek for employment.

Critics have repeatedly called for the scrapping of these policies as they hinder workplace inclusivity and increase the likelihood of brain drain. Rather than addressing past injustices, these policies have created a toxic environment, where under BEE, a few politically connected individuals have benefited and there's been an increase in fronting. Affirmative Action has resulted in people with critical skills to migrate because they cannot find employment in South Africa due to their race. This goes to show that brain drain will continue to plague South Africa unless corrective policies that are meant to promote growth and development are prioritized going forward.

A well-functioning health sector is the backbone of any country's social stability, but South Africa's continuous loss of skilled medical professionals has resulted in poor medical services being offered, which automatically reduces the quality of medical care provided by South Africa's health sector. The study uncovered that for years, South Africa's health sector has been characterised by numerous skills shortages which have over the years hampered the provision of quality health services in the country. Factors such as poor working conditions, poor remuneration and inadequate management have been signalled out as being the most prevalent causes of brain drain among health workers in South Africa. The brain drain of medical professionals from South Africa has been disastrous for the country's health sector. The massive exodus of skilled professionals from the health sector has compromised the quality of health services provided, where some critical procedures in hospitals have had to be suspended due to the lack of professionals to undertake them.

Rural areas have also been greatly affected as migrating health professionals have made it difficult for rural citizens to access quality health care. For those health workers who remain behind, because of the skills shortages, some of them have work long hours to make up for the shortfall, which often results in absenteeism among nurses in particular. The study also found out that improving the working conditions and remuneration of health personnel would contribute towards medical professionals staying in the country and not migrating. The study also found that

better retention policies are needed to ensure that health workers remain in the country and continue to contribute towards South Africa's socio-economic development.

The demand for higher education has increased dramatically over the years, not only in South Africa but countries around the world have seen an increase in those looking to enrol for higher education. The increase in demand for higher education has resulted in countries around the world spending an increased portion of their GDPs on higher education. Unfortunately, compared to other developing countries with the same economic bracket, South Africa spends far less on higher education as a percent of its GDP.

The study found that better salaries, better living and working conditions abroad have been the major factors that cause South African academics to migrate. Whilst South Africa academics are one of the best paid in the world, insufficient funding and investment in the higher education sector has led to many academics to question the direction of the higher education sector in South Africa, and with the recent fees must fall instability across South African universities, academics will be rallied to find stable and conducive working environments characterized by investment and adequate funding.

By implication should there be no policy intervention, brain drain in the academic sector will be disastrous for South Africa, hence the need for quick action to address the situation. The mass exodus of academics has not only compromised the quality of education offered at universities but it has also impacted government negatively given the role that academics play in research and development, which aid government in policy formulation. Academic brain drain will also affect the research output at South African universities, it will lead to the production of graduates not equipped with the needs of the economy, it will make it hard for South African universities to compete internationally, it will negatively impact the ranking of South African universities and most importantly, the migration of academics will negatively affect South Africa's socio-economic development considering the role they play in society.

The study also revealed that foreign nationals employed in the health sector and higher education sector have contributed immensely to the development of South

Africa. Not only have they filled critical vacancies in numerous sectors of the country, they have in particular helped South Africa in the fight against brain drain. The study also uncovered that foreign medical professionals in South Africa have improved the provision of medical care for rural citizens of South Africa. Skilled South African medical professionals who were based in rural areas and then migrated left a void that has been filled by foreign medical professionals, thus contributing to health care accessibility in rural areas.

### **5.3 CONCLUSION**

There's absolutely no denying that South Africa has been adversely affected by brain drain over the years. The continuous exodus of skilled South Africans has not only negatively impacted economic development, but it has also contributed to numerous vacancies that exist in South Africa's health and higher education sectors today.

For the higher education sector, the degrading quality of education, decrease levels of research output, low output of postgraduate students, have been some of the most noticeable consequences of brain drain.

Absenteeism, moonlighting, poor medical provision and the degrading quality of medical care given to patients have been some of the noticeable consequences of brain drain on South Africa's health sector.

Brain drain is a global problem that does not only effect developing nations, but developed nations too are under tremendous pressure to urgently find solutions to reverse the outflow of skilled professionals. Debatably, one may opine the developing nations are far worse off when compared to their developed counterparts.

In Africa, political uncertainty, poor economic growth, ethnic and religions conflicts and the ultimate search of better economic opportunities have been the main push factors behind the migration of skilled professionals, often leaving African without the required skills and technical knowhow needed to drive development and sustainable economic growth. Although, brain drain has been devastating for Africa, it is worth to note that some countries have benefited from brain drain through remittances, the continuous loss of skilled professionals further complicates economic growth and development regardless of the role played by remittances.

Although crime, lack of law and order, better economic opportunities abroad and overall government corruption have been identified as the main push factors behind the emigration of skilled South Africans, it is also worth to note that not all skilled South Africans migrate because of the above mentioned push factors, some simply cannot find employment in South Africa, thus migrating makes complete sense in that regard. Policies such as BEE and Affirmative Action have also made it difficult for South Africans to stay in the country, let alone start their own businesses. These laws have undeniably to some extent contributed to brain drain of mostly white South Africans who view these laws as unfavourable to them and repressive, thus their migration robs South Africa of skilled professionals and future entrepreneurs.

Fortunately for South Africa, skilled foreign nationals especially from Africa have filled the void that has been left by emigrating South Africans. Foreign nationals have been employed in various sectors of the economy and that has enormously helped South Africa buffer the negative impact of brain drain. It is no doubt that brain drain has affected South Africa negatively and therefore there is an urgent need for government and civil society to act in order to try and reduce the mass exodus of skilled South Africans.

As much as the country can appreciate the huge number of foreign nationals who have played a role in the country's development, it is nonetheless very imperative that root causes of brain drain are identified and dealt with going forward. A country cannot develop without its skilled workforce, therefore for South Africa, reversing brain drain and ensuring that skilled professionals remain in the country will be imperative for the South African government going forward.

#### **5.4 RECOMMENDATIONS**

To ensure that South Africa's future socio-economic developmental goals are not in jeopardy, it is imperative that government together with civil society develop and implement realistic and pragmatic solutions to try and reduce the outflow of brains from the country, if not South Africa's long-term development will be in great jeopardy.

Addressing brain drain in South Africa's higher education and health sector could be done using the following ways:

## **5.5 How South Africa can reduce brain drain: A lesson for government**

With the rapid increase of the impact of globalization, the free movement of people around the world will also increase dramatically (Global Policy Forum. 2000), though governments cannot stop the emigration of skilled professionals, they can formulate policies that are aimed at ensuring that skilled individuals remain in the country (Dodani. 2005). In South Africa, with Affirmative Action and Black Economic Empowerment still in practice, it is difficult to see how the South African government will persuade skilled white South Africans to stay in the country let alone return. (Malala. 2012), and with black South Africans now starting to warm up to the idea of migration, the future of South Africa remains in great question. It's undeniably clear that brain drain has a devastating impact on developing nations around the world, but developed nations to have also been negatively impacted by brain drain to such an extent that developed nations such as Germany have taken significant strides too reverse brain drain. (allAfrica. 2004).

Landler (2007) states that more than 1.5 million Germans have left Germany in the past decade, statistics show that 138 000 left the country in 2015. At the same roughly 128 100 German returned to the country. According to experts, this was the first time more Germans left the country than those who returned. For Urbina (2003) the above statement shows that Germany has suffered immensely from brain drain; with mainly the migration of scientists and medical professionals, which has impacted negatively on Germany's development. To reduce the outflow of skills the German government has unveiled an \$82 million package aimed at beefing up the scientific talent in the country the packages will be used in the form of granting scholarships and bursaries to international students and then allowing them the opportunity to study and work in Germany (Koenig. 2001).

India has suffered substantial amounts of brain drain, from teachers, nurses and physicians (Dodani. 2005). The United States is the major beneficiary of Indian skills (Migration policy institute. 2014). The Indian government has recently asked for opinions on how the country can reduce brain drain, India having the second largest population in the world, the emigration of skilled professional's present's significant challenges for the country's developmental goals (Mishra. 2013).

Reducing brain drain in India can be done the following way according to opinions of the country citizens; the establishment of an industriousness environment, characterised by conducive and simplified ways of doing business, research and the environment that will enable people to be innovative and dynamic (Ohja. 2014). It was also suggested that Indian politicians need to be accountable to the public, this will increase the public's trust in the government and as a result, skilled professionals might be tempted to stay after seeing that the government is accountable and transparent and not characterised by corruption and maladministration which happens to be one of the major causes of brain drain in India.

The effects of brain drain around the world have been devastating, it has hampered development and growth and it has also decreased skilled human capital in Africa (Chimboza. 2012). The big question now is what has the South African government done to reduce the out flow of brains from the country? What concrete steps has the South African government taken to ensure that skilled professionals remain in the country? Has the government prioritised reducing brain drain in South Africa? Does the government acknowledge that South Africa is battling with brain drain? Does the government associate brain drain with poor levels of growth? Can immigration make up for the skills that have been lost in South Africa? Can immigration be considered a long term solution to fighting brain drain in South Africa?

### **5.6 Reducing student brain drain in South Africa**

It is being said that there are numerous ways, in which the South African government can reduce the emigration of graduates from South Africa, some of these measures include:

- Improve the quality of education offered at our universities (BBC. 2004).
- For students whose education has been subsidized by government, a clause must be inserted that binds them to stay and work in the country for a certain period of time (Buchanan. 2012).
- Government could also require that students undertake some form of national service in return for government funding their education (Perld & Omar. 1997).

For skilled professionals such as doctors, nurses, engineers, academic and teachers the retention strategy that needs to be applied by government needs to be different

all together (Dodani. 2005), reason being that these people are already employed and earning an income, yet they chose to migrate because of various pull factors, the South African government can reduce this by developing policies that are effective and encouraging.

Experts have brought forward several suggestions in terms of what these measures can be, some of these measures include:

- Developing policies that encourage economic growth and development, a report found that skilled professionals in developing countries were more likely to stay behind if the economy of the country was growing (Newland. 2013)
- The South African government should remunerate skilled professionals based on their experience and qualifications (Chappell & Glennie. 2010).
- Provide training and further education advancement opportunities for skilled professionals in the country, so they could further upgrade their skills (Mutume. 2006).
- The government must provide better job opportunities for skilled professionals irrespective of race (Johnson *et al.* 2009)

As much as these suggestions may actually help to reduce brain drain in South Africa, the biggest barrier for the South African government is to find effective ways of keeping skilled and experienced South Africans at home (HSRC. 2005), even if the government did manage to find ways to keep skilled South Africans in the country, this requires a long term approach and its success rests on other several factors such as safety and security and quality service delivery among other things (Johnson. 2009). The South African government could also further relax immigration laws of the country to attract the best and brightest individuals from around the world (Centre for Development and Enterprise. 2000), as stopping or eliminating brain drain all together is rather very difficult to achieve.

### **5.7 Brain drain in South Africa: future prospects**

With sluggish rates of economic growth and increasing uncertainty in the political environment in South Africa, one can only imagine if the country is going to witness an increase in the rates of emigration.

With no signs of improvement in security provisions, economic growth and an end to corruption in South Africa, the brain drain problem will seemingly persist. Although the number of those migrating will be far less when compared to the period of 2000-2010 (Ong'ayo. 2008), nonetheless, the migration of skilled and experienced individuals cannot be justified, hence the need for South Africa to act immediately to reverse the trend of brain drain. (ANN7. 2016). According to Cohen & Yoo (2016) with the increasing rate of unemployment in South Africa and the continuous downgrading of the country by rating agencies, it is only a matter of time before the country's economy crumbles and when that happens South Africa will lose thousands of skilled individuals, a move that will further cripple the country developmental efforts.

Seemingly brain drain in South Africa will not go away anytime soon, nonetheless the country remains a key destination for skilled African migrants (McNamme *et al.* 2015), the country continues to attract thousands of skilled migrants who come to South Africa mainly to seek employment automatically contributing the country's development (Kalitanyi & Visser. 2010), so the fact that South Africa is suffering from brain drain, the country also stands to gain immensely from brain gain.

### **5.8 Brian gain for South Africa: future prospects**

With the recent implementation of new immigration laws in South Africa, immigrating to South Africa has rather become more strict and difficult, ironically though, it is worth to note some of the key intentions of the South African immigration act are to:

- To attract highly skilled workers that are needed to fill skill shortage positions (Cronje 2014)
- To facilitate and encourage entrepreneurial investment (Bosman 2016).
- To establish a conducive environment for attracting foreign direct investment into South Africa (Apleni 2015).

Despite the implementation of these new and more rigorous immigration laws, the law does however; realise that the attraction of skilled immigrants to South Africa is very important.

### **5.9 Other suggestions that might help South Africa fight brain drain**

### 5.9.1 Development of effective government policies to increase economic growth

Fighting brain drain requires clear-cut and objective policies. Therefore, it is imperative that government develops & implements policies that would encourage economic growth. This would increase the confidence and enable South Africa to economically prosper. It is worth to note that one of the major causes of brain drain among skilled South Africans is poor remuneration. It is therefore suggested that the elimination of rigorous laws and the attraction of foreign direct investment would enable the South African economy to achieve significant growth, thus enabling the South African government to competitively remunerate its skilled professionals. This will help in ensuring that skilled professionals remain in the country and contribute to the country's socio-economic development.

### 5.9.2 A comprehensible immigration policy

It is undeniably clear that immigration plays an enormous role in a country's development, especially skilled immigration. In the fight against brain drain, the South African government must ensure that skilled foreign professionals who possess scarce skills and who seek employment in South Africa are prioritised and treated with matter of urgency, this will help not only South Africa's fight against brain drain, but it will also encourage skilled foreign nationals to consider south Africa a possible employment destination, thus their presence in South Africa would greatly contribute to the country's socio-economic development.

### 5.9.3 Development of a South African greencard lottery program

It is no longer news that developed countries like the US, UK and Canada have benefited immensely from recruiting skilled foreign professionals from other countries, this has been done through their lottery programs. Perhaps going forward South Africa probably can develop its own greencard program to attract skilled professionals considering that the entry requirement for such programs is usually a tertiary qualification. This would not only help South Africa's fight brain drain, but it ensures that the country has the required skills to aid its development for the long term

### 5.9.4 Increase investment and funding for higher education

Given the fact South Africa spends less on higher education compared to other developing countries with similar GDPs, it is imperative that government increases funding for higher education. One of the reasons as to why skilled academics migrate is because of inadequate funding for higher education in South Africa; perhaps an increase in the funding would enable academics to see that government is committed to academic excellence and educational development. This will likely ensure that academics stay and play their role in moving South Africa's development forward.

#### 5.9.5 Prioritize the competent training of health workers

To train health workers itself is not enough, South Africa needs to ensure that it trains competent and dedicated health workers who are willing to contribute to South Africa's development. South Africa has to ensure that it trains health workers who are equipped to deal with health challenges facing the country, rather than train worker based on international standards, this makes them more likely to be targets of international poaching by other countries, thus resulting in a huge loss for the South Africa health sector. To stop health worker brains drain, it's no doubt that government needs to provide continuous support and development to health workers, at the same time improving working conditions and salaries, this would undoubtedly reduce the number of health workers considering migration.

#### 5.9.6 Increase public-private collaboration

It is no doubt that private institutions are known to be more efficient and effective. Therefore, government should prioritize closer collaboration with these private institutions on an array of developmental issues. The government should adopt techniques and mechanisms used in the private sector to try and ensure the effectiveness and efficiency in the public sector. This would increase and restore the integrity of the public sector thus contributing to the fight against brain drain.

#### 5.9.7 Increase accessibility and the quality of education through the increase in scholarships and bursaries

The South African government should prioritise the accessibility of education for South Africans. The government should put emphasises on rural based medical and higher education institutions. The belief is that the increase in the accessibility of

education by citizens may result in educated people from rural areas going back, starting up businesses and creating employment, this directly contributing to South Africa's socio-economic development and at the same time decreasing the possibility of brain drain. It is also worth to note that the accessibility of education itself may not be sufficient to permanently stop brain drain unless the education that is offered is of quality. Universities, especially in Africa have been victims of the internationalization of higher education, especially higher institutions in South Africa, while this trend widens the accessibility of education for people, it is disadvantages in the sense that it carries a significant likelihood of brain drain, mainly because the curricula is international in nature hence skills mobility in moving from region to region becomes very probable. The quality of education must be improved to suit the needs of the South African economy, this will help reduce brain drain as skilled professionals would be highly trained in skills and solving dynamics in the South African context rather than the current internationalized system.

#### 5.9.8 Prioritising entrepreneurship development

Africa has numerous innovative and entrepreneurial minded people, yet African states have not devoted adequate resources to groom and play a bigger role in developing these bright minds. South Africa's National Youth Developmental Agency (NYDA), which was solely created to provide young potential entrepreneurs with the adequate training, funding and resources for them to kick-start their business ventures has been a beneficiary of billions of rands from the South African government yet there has been little output in terms of successful business ventures that were funded and are running now as a result of the agency's funding, rather, the agency has been plagued by rumours of corruption, irregularities and nepotism, were loans have been given to politically connected people at the detriment of innovative people who have great business ideas. Besides the NYDA, the South African government has tried to establish other methods to assisting upcoming business entrepreneurs, through the department of trade and industry with adequate funding and training. But with South Africa's political and economic climate in dire strain, it means that government's financial allocation to these departments/agencies may decrease, this increasing the likelihood that potential entrepreneurs with good ideas may take their ideas elsewhere because of the limited funding needed to kick-start their businesses. Entrepreneurship is no doubt an important element to fight brain

drain, entrepreneurship also significantly decreases pressure on government as the major employer as it creates self-employment for people.

#### 5.9.9 International Diasporas networking platform

Academics and health professionals who have migrated abroad have experience and the technical knowhow of how other medical and higher education institutions function. It is very imperative that government harnesses this valuable information for the health and higher education sector to exploit, it is very important that government together with civil society work together to establish a South African diaspora for international professionals where these experts can interact with their South African counterparts, share information, methods and skills with the aim of improving the efficient functioning the South African health and higher education sector. This strategy may help fundamentally in using their skills and knowledge to improve the health and higher education sector's operational effectiveness.

#### 5.9.10 The use of international resources/donors

It is undoubtedly evident that developed countries have contributed to the development of health care institutions around Africa. The South African government should build networks and lobby with donors around the world to rally investments in the health and higher education sector in the country. Such investments may be carried out via funds received from donors to modernise medical and university infrastructure, possibility of constructing new structures and the training of professionals to upgrade their skills. This would ensure that South Africa has adequate resources to invest in upgrading the health and higher education sector. The continuous flow of investments into these sectors will significantly play a role in decreasing brain drain as they would dramatically improve the availability of resources to help skilled professionals carry out their jobs more professionally. This strategy of bringing international partners to help strengthen South Africa's health and higher sectors may prove to be beneficial in the long run as health and university professionals from donor countries may be encouraged to work in South Africa, of course this would require separate bilateral agreements.

#### 5.9.11 Increased government support towards infrastructure development

One of the most important resources needed for professionals to carry their functions optimally is the availability of moderate infrastructure characterised by the availability of resources especially considering that it is mostly skilled professionals from rural areas that tend to migrate. While infrastructure development alone will not solve the migration of skilled South Africans especially from rural areas, it is nonetheless worth to note that basic infrastructure provision is a necessity for optimal functionality. Therefore it is imperative that government prioritises the provision of quality infrastructure especially in rural areas to stem the brain drain problem.

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## **APPENDIX**

Appendix 1: Ethical clearance certificate

Appendix 2: Confirmation of project registration

# ETHICAL CLEARANCE CERTIFICATE

**UNIVERSITY OF ZULULAND  
RESEARCH ETHICS COMMITTEE**  
(Reg No: UZREC 171110-030)



## RESEARCH & INNOVATION

Website: <http://www.unizulu.ac.za>  
Private Bag X1001  
KwaDlangezwa 3886  
Tel: 035 902 6887  
Fax: 035 902 6222  
Email: [ManqeleS@unizulu.ac.za](mailto:ManqeleS@unizulu.ac.za)

## ETHICAL CLEARANCE CERTIFICATE

Certificate Number	UZREC 171110-030 PGM 2016/327						
Project Title	An assessment of the causes and implications of brain drain on South Africa's socio-economic development with special focus on Higher education and health sectors						
Principal Researcher/ Investigator	HV Mlambo						
Supervisor and Co- supervisor	Dr C Adetiba						
Department	Public Administration						
Nature of Project	Honours/4 <sup>th</sup> Year		Master's	x	Doctoral		Departmental

The University of Zululand's Research Ethics Committee (UZREC) hereby gives ethical approval in respect of the undertakings contained in the above-mentioned project proposal and the documents listed on page 2 of this Certificate.

**Special conditions:**

- (1) This certificate is valid for 2 years from the date of issue.
- (2) Principal researcher must provide an annual report to the UZREC in the prescribed format [due date-31 October 2017]
- (3) Principal researcher must submit a report at the end of project in respect of ethical compliance.

The Researcher may therefore commence with the research as from the date of this Certificate, using the reference number indicated above, but may not conduct any data collection using research instruments that are yet to be approved.

Please note that the UZREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the documents that were presented to the UZREC
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research

**Classification:**

Data collection	Animals	Human Health	Children	Vulnerable pp.	Other
					X
Low Risk		Medium Risk		High Risk	
X					


The table below indicates which documents the UZREC considered in granting this Certificate and which documents, if any, still require ethical clearance. (Please note that this is not a closed list and should new instruments be developed, these would require approval.)

Documents	Considered	To be submitted	Not required
Faculty Research Ethics Committee recommendation	X		
Animal Research Ethics Committee recommendation			X
Health Research Ethics Committee recommendation			X
Ethical clearance application form	X		
Project registration proposal	X		
Informed consent from participants			X
Informed consent from parent/guardian			X
Permission for access to sites/information/participants			X
Permission to use documents/copyright clearance			X
Data collection/survey instrument/questionnaire			X
Data collection instrument in appropriate language		Only if necessary	
Other data collection instruments		Only if used	

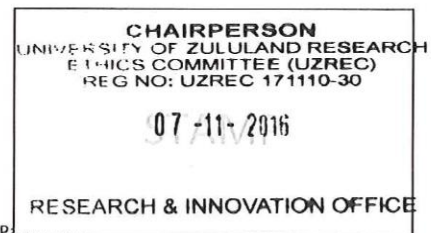
The UZREC retains the right to

- Withdraw or amend this Certificate if
  - Any unethical principles or practices are revealed or suspected
  - Relevant information has been withheld or misrepresented
  - Regulatory changes of whatsoever nature so require
  - The conditions contained in this Certificate have not been adhered to
  
- Request access to any information or data at any time during the course or after completion of the project

The UZREC wishes the researcher well in conducting the research

  
 Professor Gideon De Wet  
 Chairperson: University Research Ethics Committee  
 Deputy Vice-Chancellor: Research & Innovation  
 07 November 2016

HV Mlambo - PGM 2016/327



## CONFIRMATION OF PROJECT REGISTRATION

**UNIVERSITY OF ZULULAND  
HIGHER DEGREES COMMITTEE**



**RESEARCH & INNOVATION**

Website: <http://www.unizulu.ac.za>  
Private Bag X1001  
Ezofikizwenza 3886  
Tel: 035 902 6887  
Fax: 035 902 6222  
Email: [ManqelaS@unizulu.ac.za](mailto:ManqelaS@unizulu.ac.za)

### Confirmation of Project Registration

Registration Number	S970/16			
Project Title	An assessment of the causes and implications of brain drain on South Africa's socio-economic development.			
Principal Researcher/ Investigator	Mlambo HV			
Student number	201160774			
Supervisor and Co-supervisor	Dr TC Adetiba			
Department	Public Administration			
Nature of Project	Honours/4 <sup>th</sup> Year	Master's	<input checked="" type="checkbox"/> X	Doctoral
				Other

Dear Student

I have the pleasure of informing you that the Higher Degrees Committee, at its meeting held on 23 September 2016, approved your research proposal.

Please note: Your proposal can now be considered for ethical clearance after which you can apply for research funding. Kindly provide this letter with your ethical clearance certificate when submitting your final thesis for external examination.

Yours sincerely,

**Mr. Siyanda Manqela**  
Post-graduate Studies  
21 June 2016

