Exploring the factors and differentials driving contemporary internal migration in South Africa

By

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ABSTRACT

This study explores the factors and differentials driving contemporary internal migration in South Africa looking at migration for South african citizens and then touch on inter-provincial migration. There is limited research done on internal migration in South Africa and globally. The bulk of studies done on migration focused the most on international migration and there is enough literature on international migration. However, internal migration has limited literature though moves mostly happen nationally rather than internationally. This study uses community survey 2016 (CS2016) data which was conducted by Statistics South Africa. The overall aim of this study is to explore migration factors and differentials driving internal migration between the year 2011 which was the year the last census was done and 2016 the year community survey 2016 was conducted. A quantitative research approach was adopted, and STATA 15 software was used to analyse data. A nested logistic model was used to explore the factors and determine differentials among the exploratory variables. It was evident in the study that all the independent variables chosen for the study does influence migration singularly and when combined with others. Nested models for the general population, females, and males were able to show the effectiveness of each independent variable in contributing to migration. The finding from this study can help the government in implementing policies since it shows how the South African population moves with the country at a municipal level and provincial level.

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To all above mentioned, it is to you that this dissertation is dedicated to.

DECLARATION

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. I confirm that an external editor was not used in the editing of this dissertation. It is being submitted for the degree of Masters in Population Studies in the College of Humanities, School of Built Environment and Development Studies, University of KwaZulu-Natal, Howard College, Durban, South Africa. None of the present work has been submitted previously for any degree or examination in any other University.

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Student signature

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Date

LIST OF ABBREVIATIONS

CAPI	Computer Assisted Personal Interview
CFA	Confirmatory Factor Analysis
CS	Community Survey
EFA	Exploratory Factor Analysis
GDP	Gross Domestic Product
IRR	Institute of Race Relations
KZN	KwaZulu-Natal
SES	Socio-economic Status
STATS SA	Statistics South Africa
UN	United Nations
UNDP	United Nations Development Programme
US	United States

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Chapter 1: Introduction

1.1 Research background

According to the Statistical South Africa (2016a) migration is defined as a person's displacement either from a permanent or usual place of residence. The period of the year 1994 in South Africa saw the end of more than four decades of the apartheid era (eigalaarmeets, 2018). One of the main features of the apartheid era political system was total control placed on the mobility and residence of population groups such as black African, coloreds and Indian/Asian opposed to white population group who enjoyed all the liberty and political support. Before democracy, in South Africa migration was linked with labor migration only, where the discriminatory policies guided, monitored, and limited the movements of blacks to urban areas for labor only (Kok, O'Donovan, Bouare, & van Zyl, 2003). Thus, black Africans moved constantly around the country for employment and their movements were strictly regulated. Given the restrictive dynamics that these above population groups experienced during the apartheid period, the accelerated internal migration flows or mobility by these groups over the past decade is not surprising at all (eigalaarmeets, 2018). Distinctively from the high regulatory measures that were put on people's movements during the apartheid regime, in the new democratic era, movements have been unregulated at all, giving the country's population to migrate internally as they wish (Kok *et al.*, 2003).

According to the South African bill of rights which is seen as a cornerstone of democracy in South Africa, everyone has the right to freedom of movement and every South African citizen has the right to enter, remain, and reside anywhere in the Republic of South Africa (www.gov.za). Therefore, the rights that South Africans have, has now given them all the liberty to migrate and the government has no right to interfere with such movements of people. As people committed themselves to this freedom of movement, an acceleration of urbanization emerged with strong flows of migration to urban areas from rural areas (Mlambo, 2018).

As of the year 1994, the demographic landscape of communities in South Africa has massively changed due to migration and it is clear and more visible both provincially and at a municipal level (Segatti and Landau, 2011). During the apartheid era, there were segregation policies for different sectors of the country which constituted the base for

various races in South Africa, for example, the cape province was purposefully demarcated to keep out black Africans and maintain whites and colored's as the majority population. Thus, the current domination of whites and colored's population group in the northern part of South Africa (Segatti, 2011).

The eradication of all discriminatory laws in the year 1994 in South Africa saw the opening of the provincial borders for all South African citizens to exploit as they wish and was supported by the bill of rights (Segatti, 2011). Following the election of the new government in South Africa, the country was re-demarcated from four to nine provinces, thus constituting the high spread of the population across the country (Hoogeveen and Ozler, 2006). Most black African population live in areas that were called "homelands or Bantustans" during the apartheid era. Though the country made the migration to be free for everyone after apartheid, large masses of the black Africans still live-in former homeland areas and the whites still live in the north of South Africa where the land is rich for farming (Makgetla, 2010). The four provinces before they were dismantled to 9 were Cape, Natal, Transvaal, and Orange free state. The Orange Free State and Natal provinces remained the same territories and only the names were changed to Free state and KwaZulu-Natal. However, the cape and Transvaal were broken down to form the remaining 7 provinces (Alexander, 2018). The cape was broken down into the Northern Cape, Western Cape, Eastern Cape, and the western part of the Northwest. On the one hand, the Transvaal was divided into Mpumalanga, Limpopo, the eastern part of the North West, and Gauteng (Alexander, 2018).

The South African constitution written in the year 1996 formulated the three spheres of government namely the national, provincial, and local governments. All these three spheres of government have their roles to play in how the country is managed in terms of the distribution of basic services. The national government's main responsibility is to formulate policies and laws and coordinate provinces and local municipalities. The economic and social development of provinces is the responsibility of the provincial government. The provincial government is guided by the province's provincial growth and development strategies (PDGs) and requires the local governments to produce their integrated development plan (IDP). Both the development strategies of the provincial and local government should be set with the legislation and policy framework of the national government. The three spheres of government have always been there since the year 1996

and as said above, people move around more specially to places where there's better distribution of basic services. However, migration has determinants, and some determinants are common in the field of migration.

According to Etzo (2008) migration may be perceived as a phenomenon that involves a selective process. Meaning some characteristics have been known to affect migration (Etzo, 2008). Demographic factors such as age and sex play a major role in selecting the propensity of a population to migrate (Champion *et al.*, 1998). Age in specific affects internal migration in a regular way especially in developed countries, for example, people in ages between 25-29 migrate the most, and males in working age of 16-60 migrate the most than females (Etzo, 2008). Another important migration characteristic that affects the propensity to migrate is education. According to (Etzo, 2008) people with high educational level have more difficulties in finding a suitable job compared to low skilled people. However, educated people are more likely to move quickly due to the efficient use of information than lower-skilled people (Da Vanzo, 1983). Italy's internal migration estimates for different educational attainments show that migration increases quite higher with education attainment (Etzo *et al.*, 2014). Other factors affecting propensity to migrate, scholars have found to be marital status, family ties, and employment status (Etzo *et al.*, 2014).

1.2 Justification of the study

This research focused on internal migration because, in the past decade, research on migration meant just international migration where scholars were more preoccupied with individual and household international movement and less attention was directed to internal migration (UNPD, 2009). According to (Landau, 2009) discussions on migration largely focused on migration from developing to developed countries of Europe, Northern America, and Australia although large movements are not taking place between developed and developing countries. It is further argued by (Landua, 2009) that between international and domestic movements, domestic movements are far more important in terms of numbers as the majority of migrant migrate within their own country more than they travel internationally.

According to (Kok, 2003) internal migration can be defined as a migratory move where the place of origin and place of destination is within the same country, and it's different

from international migration where moves are across country borders. According to the report by (UNPD, 2009), internal migrant's migration numbers globally were estimated to be approximately 740 million people in the year 2009. It is important to note that at the same time when the UNDP published their internal migration estimates, the numbers were almost four times as many as numbers of international migrants. Skeldon (2006) supported the facts of the UNDP report when he noted that approximately 40% of Asia, Africa, and Latin America urbanization is due to internal migration. King et al. (2008) is a great admirer of the nature of internal migration as he argued that it needs to be stressed that the age of migration is also an age of mass internal migration especially in less developed countries that are rapidly developing. The possible reason for much focus on international migration in the past decades even though it's inferior compared to internal migration was the political nature of international migration (King et al, 2008).

Migration is highly diverse, and it is shown that's there's variability across countries. According to (Resilence, 2017) in most countries, the share of rural households with migrants is almost the same in most countries, putting into exception South Africa because its portion of rural households' migrants is twice as much as countries such as Ghana and Kenya. In Africa, internal migration is more diverse than international migration in most countries except for Senegal, Burkina Faso, and Kenya (Resilence, 2017). Internal migration flows are more common than international migration for household families, especially in rural areas. One of the reasons stated by (Resilence, 2017) for internal migration to be superior to international migration is that international migration is expensive and that's one of the major reasons for its lower rate. Therefore, this study will focus on the drivers of internal migration in South Africa and seek to estimate overall movements across the country and inter-provincial movements.

Table 1.1 Interprovincial movement in South Africa, CS2016

Previous province		Province 2016								
Residence	Western cape	Eastern Cape	Northern Cape	Free state	Kwazulu-Natal	North west	Gauteng	Mpumalanga	Limpopo	**Total**
Western cape	81.44%	11.41%	2.09%	0.43%	0.73%	0.51%	2.93%	0.21%	0.24%	100%
Eastern cape	11.11%	70.34%	0.60%	1.09%	5.46%	1.78%	8.09%	0.88%	0.64%	100%
Northern cape	5.20%	1.31%	78.30%	2.99%	0.39%	6.26%	4.11%	0.74%	0.68%	100%
Free sate	1.52%	1.84%	2.30%	75.58%	1.20%	4.30%	11.12%	1.18%	0.96%	100%
KwaZulu-Natal	1.26%	3.30%	0.20%	0.96%	79.22%	0.46%	11.97%	2.26%	0.39%	100%
NW	0.83%	1.39%	3.55%	2.02%	0.34%	74.26%	13.55%	1.05%	3.01%	100%
Gauteng	1.96%	2.76%	0.60%	1.81%	2.70%	4.23%	78.87%	2.78%	4.29%	100%
Mpumalanga	1.10%	1.02%	0.45%	1.10%	2.15%	2.14%	18.78%	67.47%	5.79%	100%
Limpopo	0.49%	0.26%	0.35%	0.66%	0.41%	3.20%	27.87%	4.44%	62.32%	100%
Total	**10.93%**	**12.05%**	**3.17%**	**6.07%**	**12.38%**	**8.40%**	**32.24%**	**6.30%**	**8.46%**	100%

Sourced from CS 2016

The Western Cape and Eastern Cape provinces migrate between one another. 11.41% of the Western Cape population migrates to Eastern Cape, which is the highest migration rates compared to other provinces. Most of the Eastern Cape population also migrates the most to the Western Cape Province at a rate of 11.11%. The Northern Cape population migrates the most to North West Province and the rate of migration is 6.26%. The remaining provinces namely, Free State, KwaZulu-Natal, North West, Mpumalanga, and Limpopo all have the majority of their migration rates going to Gauteng province. The Gauteng and Limpopo province has small proximity between them. Therefore, movement between the two provinces is high and the majority of people moving from Gauteng go to Limpopo and Limpopo is the highest province that influx the Gauteng province as 27.87% of its migration rate goes to Gauteng. Overall migration levels in South Africa between 2011 and 2016 is that from other provinces Limpopo received 8.46%, Mpumalanga 6.30%, Gauteng 32.245, North West 8.40%, KwaZulu-Natal 12.38%, Free state 6.07%, Northern Cape 3.17, Eastern Cape 12.05%, and Western Cape 10.93%.

General internal migration in South Africa

This study has been able to find evidence to suggest that internal migration amongst South Africans is increasing as past studies have also suggested in their studies of internal migration. The results obtained for this study were generally expected results, however,

there is a need for validation of general thoughts through empirical evidence. It is important to note that the overall distribution showing the factors driving migration for this section showed only estimates of migrants only and didn't reveal the estimates of non-migrants. When exploring the demographic variables which include male and female, results showed that the South African female population had a 52,05% expected migration rate when compared to a 47,95% for males. However, though the percentage rate reveals that the female population migrated the most compared to males in community survey 2016, the odds ratio on the one hand favored the male population in having more chances of internally migrating when compared to females. As stated in (Statistics South Africa, 2016b), the overall sample population for the survey had more females than males. As previously said, the apartheid, though it's 25 years since it ended effect it hasn't completely eradicated as they still affect us even in the contemporary period. The male population dominated migration for longer periods in South Africa, and there were many reasons for that during apartheid, but labor migration was mostly the case (Von Fintel and Moses, 2017). Since males migrated and women had no right to migrate during apartheid, these effects are still in operation nowadays in some parts of South Africa especially in the black African population (Von Fintel and Moses, 2017). Therefore, justifying the odds ratio of this study in favoring males to having more chances than females of internally migrating. The odds of 0.961 meant that female chances of migrating when compared to males decreased by 4.9 percent.

This research also found that between the year of October 2011 to October 2016 when community survey 2016 was conducted, the black population dominated the migration numbers with 80.92% and the remaining percentages belong to the other 3 population groups. However, when looking at the general odds of migration for the population group, all three (Coloreds, Indian/Asian, and white) population groups had higher odds of internally migrating when compared to black Africans. However, we can ignore the results for the Indian/Asian population as they were deemed insignificant. Nonetheless, when comparing the levels of migration of this study with the community survey done in 2007, it was seen that the migration levels have increased rapidly. According to (Von Fintel, 2017) as years pass more people are expected to migrate than in previous years. Therefore, between the years 2007 and 2016 there is a difference of 15 years, thus justifies the huge difference in numbers between the two community surveys.

This study has also shown that there are high levels of South Africans migrating to the two affluent provinces in the country namely Gauteng and Western Cape. Results showed that people are more likely to migrate to the Western Cape than other provinces except for Gauteng. The Gauteng province receives very high numbers of internal migrants from other provinces. The high influx of people moving to Gauteng as found in this study supports the study done by (Oosthuizen, 2004) that people are more likely to migrate there because it is the country's economic powerhouse. The one interesting finding in this study is that the Gauteng province is also ranked 1st in terms of the people moving out of the province to other provinces. Thus, giving a picture of how populated the province is. However, the general conclusion about the contemporary internal migration levels in South Africa is that migration rates have increased from the last community survey and there's also an increase when comparing with census 2011 data.

Inter-provincial levels of migration

This study was able to find some interesting results about inter-provincial migration in the country. Previous studies done have shown that Gauteng is the most migrated into province in the country, and results from this study verifies previous literature as Gauteng province is the most travelled in too province when pupil leave their provinces. The Western Cape province was regarded by previous studies as the second most travelled to province behind Gauteng (Census, 2011). However, this study tends to show something contrary. In terms of moving from one province to another, the KwaZulu-Natal province is the second most province people migrate to when leaving their previous provinces. The third most travelled to province is the Eastern cape then followed by the Western Cape. The least travelled into province is the Northern cape and these results are not eye-catching as most of the migration research done always comes with the same conclusions about migration to the Northern Cape province. Eastern Cape is the most travelled into provinces according to this study, however, the same results have shown that migration to Eastern cape from other provinces is not evenly distributed. The high level of migration to the Eastern Cape is highly made of Western Cape migrants and levels from other provinces are extremely low. Therefore, though results point that Eastern Cape is the third most travelled to province, it can be argued that this isn't the true reflection as other provinces show low numbers of going into that province. According to (eigelaarmeets, 2018) as most people who migrate to the Western Cape are people from the Eastern Cape, the same high numbers of people migrating from the Western Cape to the Eastern Cape are native

residents of the Eastern Cape province. The findings from this study found that more people in the country when they leave their provinces they migrate to Gauteng (32,24%), Western cape (10,93%), KwaZulu-Natal (12,38%), Eastern cape (12,05%), Northern cape (3,17%), Free state (6,07%), North West (8,40%), Mpumalanga (6,30%) and Limpopo (8,46%). The Northern Cape province is still the least travelled to province in the country and even census 2011 results produced the same results.

1.3 Significance of the study

Internal migration, as it has been stated above has received very much little attention over the past decades as compared to international migration. Most studies conducted in South Africa on migration focused on in and out-migration in the country and not how movements are within the country amongst only South African citizens. Therefore, this study was motivated by what (Bell *et al.*, 2015) stated when he said that there has been good progress on international migration data and scant attention on internal migration statistical information.

Much research has been done according to (Bahns, 2005) on rural-urban migration in developing countries and it has been focused on the understanding relationship between migration and development and trying to identify economic factors of migration. Migration has been viewed as a demographic reaction to geographical imbalances in production factors like labor, capital, and land (Bahns, 2005). The division of migration determinants into the pressure that forces people to move from their place of origin and pressure of attraction to place of destination was caused by the push and pull factors. Therefore, the claim that population distribution in the developing countries is a result of the idea that migration is a response to geographic differences in the economic distribution of resources and opportunities is factual (Bahns, 2005). The argument made by (Bahns, 2005) supports the idea of the neoclassical theory that geographic differences are the major cause of migration. Gauteng, Western Cape, and KwaZulu-Natal's geography are not the same as Eastern Cape, Limpopo, and Mpumalanga. The first three have better services in terms of financial services, jobs, health care services, and other opportunities compared to the last three. Thus, due to these geographic differences, people from Eastern Cape, Limpopo and Mpumalanga, and other provinces will move to a province that's better than their native one and Gauteng, Western Cape and KwaZulu-Natal are one of the better provinces and that why people migrate to them the most especially Gauteng.

Statistics South Africa stated in their technical report that community survey data is there to bridge the gap between two censuses. The community survey 2016 data bridged the gap between census 2011 and the upcoming census 2021. Therefore, the following census needs to have some scope of what has been happening in South Africa on a small scale in terms of migration though it's not national but municipal. There has been a great appreciation that internal migration is an important demographic change component, and it provides needed information for services and infrastructure planning (Bell *et al.*, 2015). Looking through an academic perspective, obtained results from this study will contribute towards existing literature on the factors driving internal migration in South Africa.

1.4 Aims and objectives

This study aims to explore the factors and differentials driving internal migration in South Africa by examining biological variables, population group, Previous province, educational attainment, marital status, and socio-economic status variables as to how they each influence migration across South Africa.

The study aims to achieve two specific objectives:

1. To examine the demographic composition of internal migration in South Africa
2. To investigate the factors associated with internal migration in South Africa

The two main research questions derived from the objective above are:

1. What is the demographic composition in South Africa in relation to internal migration?
2. What are the factors associated with internal migration in South Africa?

1.5 Dissertation structure

This research is divided into 5 chapters. Chapter 1 is an introduction of the study and it provides a research background, justification of the study, and the significance of the study. After the significance of the study, the aims and objectives were presented for the study which was supported by the study's research questions. Chapter 2 is a literature review related to the study. Empirical and theoretical evidence of general internal migration from a global scale down to a national scale is well-reviewed concerning data and statistics available and a supporting theoretical framework is also written. The study's

independent variables are well broken down in chapter 2. Chapter 3 covers the methodology of the study where it presents all the variables to be manipulated in the analysis chapter. Research design, methods, and models are applied to aid fulfil the study objectives and research questions. This chapter also describes statistical tools to be used to analyze data where study variables relationships are examined. Chapter 4 is the presentation of detailed results, analysis of those presented results, and further elaborate on the obtained and produced results. Chapter 5 covers the discussion of the analyzed results and looks at whether the research questions were answered. The same chapter has research limitations, recommendations, and scope for future research.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 Introduction

According to Skeldon (2017) of all population variables, migration is the most challenging and that is evident in almost all countries. Migration is unlike birth and death events that define a person's lifetime, migration can come in multiple events (Skeldon, 2017). The measurement of migration according to (Skeldon, 2017) depends on how it is defined across time and space. Some basic questions are needed to be answered before concluding on to what migration is. For a person to be defined as a migrant, how long should the person reside at the place of destination? How far does the same person have to travel to be defined as a migrant? (Skeldon, 2017). One of the accepted definitions of a migrant is that an individual has to stay 12 or more months or less than 12 months but to remain in the area for longer than 12 months (United Nations, 2009). Another way of defining migration across time and space is through the existing world divided into states and in internal migration, those states are divided into administrative political divisions such as provinces, states, perishes, and districts (Skeldon, 2017).

2.1 Global internal migration

2.1.1 Systems of internal migration

According to Skeldon (2017), a great number of migrants choose to move within their own country's boundaries as internal migrants. Skeldon (2017) alludes that the key question now is knowing how to measure internal migration and figure the number of internal migrants existing in the world. According to (UNDP, 2009) around the year 2000, approximately 740 million people worldwide were found to be internal migrants and this figure (UNDP, 2009) was an underestimated figure. Skeldon (2017) states that the more populated the country, the bigger the number of internal migrants, for example, the united

nation development program took the states of India and the provinces of China to define internal migration because these two countries have the largest administrative unit because of their high populations. However, despite the estimates by the UNDP, defining internal migration is still problematic.

Skeldon (2017) argues that defining migration concerning space is not the only problematic issue in defining migration but also the questions asked to work out the duration of residence at the destination place also raises other problems. Only a few countries worldwide have registration systems that can record a change from usual residence and migration data for these countries are generated through hoary instruments that collect information through questions relating to a person's last residence, usually a year or five years back, birthplace, and where the individual last resided before coming to the current place (Skeldon, 2017). It is argued by (Skeldon, 2017) that the volume of internal migration gathered contrasts prominently with the question asked. The question about the birthplace is argued to generate unsatisfactory estimates, however, it is continued to be asked by these countries (India and China) because it's the easiest to ask to get reliable answers (Skeldon, 2017). However, the question about the last place of usual residence is argued to provide the finest estimates of recent flows. In the country of Thailand during the 1992 national migration survey, when they used a fixed point of 5 years to measure migration of people from birthplace to destination place of residence, their census estimate showed that 8% of the population had moved from usual to destination place over the 5 year term period (Chamratrithirong, 1995). However, when using the previous place of residence and disregarding the birthplace over the same five-year period gave results of 14.6% of people have moved within the period. Therefore, it can be concluded that using a previous place of residence in measuring migration provides reliable results as compared to birthplace because an individual's birthplace does not mean it's his last place of residence. Skeldon (2017) argues that the above information from Thailand confirms that a large number of micro studies of migration in developing countries show that a great number of people prefer to move for short periods over short distances. The desire to be mobile is an inherent trait of all populations unless if there are policies or other influences limiting people's mobility (Skeldon, 2017).

According to Deshingkar (2005), internal migration is essential to almost everywhere globally, however in some countries it is more important than international migration. An approximate figure of about 120 million people in China was expected to internally

migrate in 2001, whereas a sheer 458000 people were expected to migrate internationally for work (Deshongkar, 2005). Five years before the 1999 census in Viet Nam, approximately 4.3 million people internally migrated and international migration in the country was less than 300 000 (Deshongkar, 2005). Also, in India, the number of internal migrations reaches a million whereas international migration is a small fraction of this (Deshongkar, 2005). Therefore, internal migration is an important form of migration and it plays a crucial role in the development of a country, that why countries such as China and Viet Nam have an ever-increasing economy, it's because internal migration exceeds international migration.

2.2 African migration trend

According to Awumbila (2017) in this twenty-first century, urbanization is largely becoming recognized as an increasing issue. Over half of the global population live in towns and cities and by the year 2050 this figure is projected to surge up to 75% and most of the growth will be concentrated in Africa and Asia (Awumbila, 2017). However, one cannot deny that migration is a significant contributor to the urban process and urban growth as people migrate in search of opportunities, social, economic, and moving away from deteriorating environments (Awumbila, 2017). Nonetheless, space is limited in urban towns to cater to the increasing migrants and urban towns now find it hard to provide employment, land, and basic services to the increasing population. Thus, the government, city authorities, and multiple communities are feeling the pressure of urbanization, and that sometimes leads to negative policy positions for those in power on migration into urban regions (Awumbila, 2017). The African urban growth has a negative view on its back, however, despite that, the urban areas in Africa are becoming dominant for humankind and an engine room for human development (Awumbila, 2017).

According to Awumbila (2017), a great percentage of African migration happens within the continent as people move around Africa mostly looking for economic opportunities. For example, in Sub-Sahara Africa, intra-migration is happening more than any migration to other regions at a rate of 67%, and one of the destination countries within Africa are Nigeria, South Africa, Ivory Coast, and Ethiopia (Awumbila, 2017). However, western Africa is the part of Africa that experienced the largest intra-regional movements in Africa and the movements make about 84% (Awumbila, 2017). Information about the intra-regional migration dominance in Africa shows that from the years of 1980s there has been an increase and diverse emigration destinations from outside the continent. However,

though international migration debates have had more attention in recent years, internal migration within African states is more important in terms of the size of people involved in migration (UNDP, 2009). Nevertheless, within the mobility flows that happen within Africa, the dominant stream of migration remains to be rural-urban migration of which is internal migration (UNDP, 2009).

2.2.1 Patterns and trends of emigration in Africa

According to Russel et al (1990), the earliest documentation of migration patterns in Africa especially from Sub Saharan countries indicated a huge flood of human movement that even went beyond the global average. However, while the emigration rate increased over the last decades in Africa, they are currently one of the lowest worldwide (Shimeles, 2010). According to Shimeles (2010), estimates by the World Bank pointed out that in the year 2010, the number of people residing in countries other than their own would be around 215 million, and out of this figure, 31 million are from Africa which is 2.5% of the total world population. This indicates that Africans have now started to lower their migration out of the continent and are increasingly engaging in intracontinental migration. Shimeles (2010) states that movements across the globe, half of them at least take place in the same continent and the other half consists of transcontinental movements. In Africa, the intra-Africa migration rate when being compared to Europe and Asia is the lowest, however, figures are high for countries in Sub Saharan Africa (65%), which is the highest intra-continental movement in the world (Shimeles, 2010). According to the World Bank (2010) out of the emigrants of Africa in 2010 which were 29 million from the world population, approximately 23% come from North Africa and the remaining figure comes from Sub-Saharan Africa. World Bank (2010) further gives statistics showing that above 90% of Northern African migrants prefer to migrate outside the African continent.

According to Shimeles (2010), the cross-border movements within the continent is dominated by the western Africa part, where close to 90% of migration happened in the same sub-region. The Southern Africa part is also a hotspot for migrants as people are attracted by the powerful economy of South Africa which also attracts people from East Africa to come and seek opportunities in the country (Shimeles, 2010). As pointed out before, the North African part is the only African part where few people move in the same region, instead, people choose to migrate to East Africa or Central Africa (Shimeles, 2010).

2.2.2 Patterns and trends of immigration in Africa

According to Shimeles (2010), immigration to Africa by foreign continent people was estimated at 2.4 million in 2010 which makes up 16% of the total in-migration to the continent, and the rest accounts for migrants within the African region. The destinations that immigrants favor the most in Africa are Cote d'Ivoire which consists of 16%, South Africa (12%), and Burkina Faso which is 6% (Shimeles, 2010). Countries such as South Africa and Egypt are ranked high among countries that receive immigrants from other regions outside Africa as they receive large numbers of migrants from countries such as Australia, Yemen, Lebanon, West Bank, etc (Shimeles, 2010).

It is argued by (Shimeles, 2010) that one of the factors behind people deciding to migrate is a desiring vision for a better life. The differences that exist in the living standards elucidates a substantial part of the difference in the intra-African migration rate (Shimeles, 2010). As can be seen in the emigrant data above, it is evident that middle-income countries excessively migrate outside the continent, whereas those emigrants from poor regions prefer migrating to the neighboring countries within the Continent, for example, the Sub-Saharan countries (Shaw, 2007). Shimeles (2010) argues that the poorer the country, the more emigrants will stay within the continent just as it is happening in Sub-Saharan Africa as it is the poorest region in the continent and people migrate within the region.

2.3 South Africa migration trends

According to Posel (2004), much of the research on migration in South Africa put more focus on the migrant labor system during the periods of 1970s to 1980s. Posel (2004) defines labor migration as an individual which is absent from home for more than a month annually due to employment and seeking employment. Focus on migrant labor changed during the 1990s and attention shifted towards immigration since laws that restricted internal migration and urbanization of Africans were abolished (Posel, 2004). Therefore, in the so-called new South Africa after apartheid, people were expected to change their migration patterns not just to migrate for labor but also to settle permanently at the places where they work. Thus, labor migration patterns were expected to decline in the post-apartheid era. However, that was not the case according to (Posel, 2004) as evidence on national data for the time from 1993 to 1999 showed that internal labor migration has not dropped. Rather, there has been a rise in rural African household female labor migration (Posel, 2004). According to Jozi (2015), the studies done by stats SA in South Africa are

descriptive regarding their method of analysis on internal migration. Jozi (2015) states that internal migration causes impacts on demographic factors that include age structure, population size, sex ratio, etc. It is a mere fact according to (Jozi, 2015) that migration causes changes in the distribution of the population in the place of origin and place of destination. Jozi (2015) further argues that the change in population distribution affects the economy and demography of the provinces as well as South Africa both negatively and positively.

The place that experiences departure loses its labor force more especially the active youth while the receiving region gets a frequent supply of labor, but it faces a challenge of making sure that the social and economic infrastructure keep up with the growing population (Jozi, 2015). The Gauteng province is the one that receives high numbers of internal migrants in South Africa (Oosthuizen & Naidoo, 2004). Thus, that means there has been a loss in population numbers from other provinces which negatively affects them, and an increase in numbers for Gauteng which makes it face the challenge of keeping up with the growing population in providing social and economic services. Therefore, it of vital importance for a country to do research and publish statistical estimates of internal migration. Publishing the estimates helps enlighten reasons why some regions lose population while others gain (Congdon, 2010).

According to Jozi (2015), the South African bill of rights chapter 2 of 21 (3) gives South African citizens freedom of movement and residence. The Bill of Rights states "Every South African citizen has the right to enter, to remain in and to reside anywhere in the Republic" (Jozi, 2015: 12). Thus Henry, Boyle, and Lambini (2003) concludes by suggesting that places with high rates of migration cause a challenge for planning. According to Nkomo (2009) due to the high number of migrants moving to Gauteng, the province has the challenge to provide for everyone especially the government. Planning becomes a challenge because many people in the province. Therefore, the Gauteng government will always have planning problems because the Province is increasing in numbers yearly (Nkomo, 2009).

"In census 1980 and census 1996 the spatial unit of analysis for both places of origin, of the last move and place of enumeration was the magisterial district of usual residence" (Posel, 2004: 7). However, when comparisons are done with 2001 census data, it is somehow complex as data on migration during this time was made accessible concerning

current main and usual place of residence or where a person was enumerated, and also the place of origin where a migrant migrated from was not seen as the main residence. Therefore, (Posel,2004) argues that the level of migration in a province, district, or country is reflected by a proportion of people that have migrated over a specific period. (Kok, 2003) argues that migration patterns have altered. A shift has happened and is continuing to happen where migration is not involving magisterial districts or metropolitan areas but inter-provincial migration.

According to Kok (2003), the highest number of movements was between those provinces with larger former homelands populations and neighboring provinces containing the metropolitan economies. A metropolis area is a very large and busy city, this is where the whites stayed during apartheid. According to (Kok, 2003) from 1992 through 1996 metropolitan areas contributed to the larger portion of out-migration, where two rural areas in Gauteng province with a large former homeland's population, Eastern Cape and Limpopo experience a high number of people leaving these areas. At the same time, the Gauteng province was the popular migration destination along with Western Cape.

According to Boyle, Halfacree, and Robinsons (1998) the World Bank states in developing countries, the urban population will continue to rise as years goes by as well as the annual growth rate percentage as people will constantly leave their poor regions to regions which are economically active regions where they have an opportunity to make an income that they would have not made while at the place of origin. It is argued that the urban growth pace in developing countries is moving at a fast pace and the proportion of its growth stems from natural change but mostly rural to urban migration (Boyle, 1998). The process of urbanization in most developing countries is based on the so-called primate cities (Boyle, 1998). According to Galiani and Kim (2008) describes urban primacy as being the largest city in a country or a region when being compared to others, it is almost twice as big as the 2nd largest city and is often the country's financial and political center and also has a high concentration of government opportunities and industries. In-migration and growth here are concentrated in one location. For example, Johannesburg city in Gauteng can be termed as the primate city because it's the largest city in South Africa, it is the country's financial center and much of the country's economic development is focused on it (Galiani, 2008). It is argued by (Boyle, 1998) that the less urbanized countries are expected to always continue to tolerate a mass number of people to urban centers whereas the more urbanized countries are expected to constantly see a decline in-

migration from rural to urban areas. Thus, Johannesburg city is expected to continue receiving migrants from other regions since South Africa is a developing country. It is argued by (Bahns, 2005) that the growth in the urban centers due to migration is more rapid in less developed countries compared to developed ones. Therefore, numerous cities like Johannesburg and Cape Town have overtaken the growth rate of employment within these cities as well as infrastructure development, thus bringing into being squatter settlements, congestion, and concentrated poverty (Bahns, 2005).

According to Mlambo (2018), he argues like other scholars that the urban population in South Africa is growing at a startling rate, and the growth is expected that in the year 2050 approximately 80% of the country's population will be living in urban areas more especially in metropolitan cities, and that shall surely have negative impacts on the development and growth of rural areas. According to the United nation, in 2030, close to 71% of South Africa's population are expected to be living in metropolitan cities (Mlambo, 2018). Metropolitan cities like Johannesburg, eThekwini, Mangaung, Ekurhuleni, Buffalo City, and others across the country attract their local rural population within the cities. However, due to the difference in terms of the economic power of these metropolitan cities and resources available, some people choose to migrate away from their local cities to ones in other provinces like Johannesburg city, City of Cape Town, and the City of eThekwini as these are major cities in the country that have a large population of people from different parts of the country (Mlambo, 2018). Provinces like the Eastern Cape and Limpopo are examples of provinces having people who prefer moving to metropolitan cities outside their own because their local municipalities don't have many opportunities and infrastructures like municipalities in Gauteng and Cape Town (Mlambo, 2018). The evidence of this is in the statistics by census 2011 and Community survey 2016 which show that Eastern Cape and Limpopo are provinces losing more people each year to other provinces like Gauteng and Western Cape.

According to Kok (2003), the statistics released by Statistics South Africa on inter-provincial migration between the years 1992-1996 show that a total of 1 133 631 people migrated within this period from all provinces. The provinces that had higher out-migration rates were the Easter Cape followed by Gauteng and Limpopo. On the contrary, Gauteng has been the province that received the majority of the people. From each of the 8 provinces, they all send more migrants to Gauteng than to other provinces. Gauteng is the smallest province in the country but receives more internal and international migrants

than any other province. At the same time, it is the second province behind the Eastern Cape that has a higher number of people leaving the province than Limpopo.

According to BrandSouthAfrica (2014), the large South African towns and cities (Johannesburg, Cape Town, and eThekwini) produce over 80% of the Country's GDP and these cities are growing twice as fast as other cities in the country (Mlambo, 2018). According to Mlambo (2018) between the years 1996 and 2012, approximately 75% of jobs created were in metropolitan areas, more especially the larger ones Johannesburg, Cape Town, and eThekwini. Therefore, one might argue that the movement of people away from their provinces to those that create jobs is justified. Rees *et al* (2017) argue that the migration of people from less developed regions to more developed ones is not just a South African problem. Developed countries also face a movement of people to places alleged to have better living and working conditions (Rees *et al.*, 2017). In Europe, the Eastern European countries experience an increase in people migrating to Western Europe because Western Europe has better living conditions, in Nigeria, a large number of people are concentrated in Lagos and Abuja. After all, conditions are better and in Ghana, people are attracted to Accra because it has multiple opportunities (Carmel and Cerami, 2012). Therefore, internal migration can be viewed in the international migration context because people migrate from less developed regions to developed ones for better economic opportunities and living standards (Cerami, 2012).

According to Kok (2006), the Gold discovery in Johannesburg in 1886 steered a new path of internal migration. Rural provinces in South Africa such as Eastern Cape, Limpopo, and Mpumalanga are South Africa's biggest senders of people to Johannesburg to work in the mines. Kok (2006) further argues that even the apartheid legacy in South Africa has played a major role in rural-urban migration as certain races were previously not permitted to travel to certain places. However, since apartheid was abolished, it meant people could freely travel, thus an increase in internal migration has been evident ever since (Martine, 2012). According to Martine (2012), South Africa has a high rate of short-term migration, where people move to cities to hunt for occupation and remit money home. Therefore, the black population dominates the large population of temporary migrators (Martine, 2012).

According to Shezi (2013), not all rural to urban migration movers are unskilled people, over the years, professionals in less developed areas have started to seek and work in urban areas because of the living and working conditions they are attracted too and that has

raised concerns on the authorities of these less developed areas as they lose people who are skilled and who can effectively render services for the area. Shezi (2013) further argues that migration is a response to the inequality of an economic system of a country. Therefore, the increasing inequality and economic gap within a country, poverty, and financial adversities further act as the catalysts of rural to urban migration (Shezi, 2013). The urban population in South Africa has increased between the years 2001 and 2011, and the major cities such as eThekwini, Cape Town, and Johannesburg experienced a huge inflow of people around the country whereas rural areas have lost a great number of people because they lack the quality infrastructure needed for development just as urban areas have, thus people in these less developed regions are bound to leave and search for better opportunities.

According to Mlambo (2018) in the Gauteng province, there are about 12.9 million people and more than 20 000 people come to the province every month in search of better opportunities. Cross (2009) alludes that in South Africa, rural-urban migration takes place within four corridors, the provinces of Limpopo, Free State, Mpumalanga, and Northern KwaZulu-Natal are provinces that flow people to the Gauteng province and the Southern part of KwaZulu-Natal and Eastern Cape, these are sending people to the Western Cape Province. According to Mlambo (2018) in the year 2001, the Gauteng province had the largest inflow of people of more than 1 million whereas the Western Cape during the same year had above 300 000 people. While the Gauteng and the Western Cape provinces are receiving people, the struggling provinces such as Limpopo and Eastern Cape are losing people, thus the inflow of people from these struggling provinces to affluent ones contributes to the growing development of the better ones and negatively affect the growth of the sending ones (Mlambo, 2018). In the Gauteng province, the mean household income is above R156 000 per annum whereas the Western Cape Province's average income is R143 00 (Mlambo, 2018). The province of Limpopo receives the lowest household income per annum. Therefore, as provinces such as Gauteng and Western Cape are rapidly growing, people around South Africa are expected to further engage in migration to search for better economic opportunities (Mlambo, 2018). It is argued by (Mlambo, 2018) that if the South African government fails to prioritize rural development, the country will continue to witness a great number of people moving from underdeveloped to developed areas

2.4 Socio-demographic factors associated with migration

2.4.1 Education

According to Esipova (2013), better educational opportunities is one of the reasons associated with migration, and mostly those adults attaining high education are the ones who are more likely to be migrants internally or internationally. According to the stats by (Esipova, 2013), those individuals who at least have a college education are twice as likely to move internally as compared to those who only have primary education or less. And in Sub-Saharan Africa, educational differences heavily determine who migrates the most to better regions.

According to Morris (2018) jobs that are better paying and opportunities for better education emerge as the key fundamentals that drive migration in South Africa and there are approximately more than 1.4 million people who migrated from poor to better provinces in the country between the years of 2011 and 2016. According to Morris (2018) in South Africa, there is continuing urbanization among South Africans as they search for a better life, and education is among the top reasons people migrate. According to the research done by the South African institute of race relation (IRR), people who have university degrees and young have a 75% chance of finding a job compared to ones only having matric as they have a 50% chance and those qualifying less than matric have a 34% chance of finding a job (Morris, 2018).

In South Africa in the year 2016, the Free State province was the province with the highest matric pass rate, but their bachelor's pass was low. Gauteng and Western Cape provinces scored in critical measures as the two provinces produced many students who went to university and had the best chances of getting a job (Morris, 2018). Therefore, Gauteng and Western Cape provinces are the two provinces that have quality schools with quality education, and they can produce a student who has a better chance of finding a job in the future. Thus, it can be fairly justified to claim that education does have a major role it plays in internal migration. Morris (2018) argued that many middle-class households always seek to give their children what best for them including better education. Morris (2018) further argues that middle-class households are always willing to migrate as a whole to where there are better services or send a specific individual to that specific location to acquire those services that will make them prosper in life.

According to Smith and Jons (2015), middle-class people always perceive to gain entrance to competitive education, and this stimulates most of them to move with their children

across regions to access the right schools and private education sectors. Smith (2015) argues that these patterns of movements with the motivation of education may be evident worldwide. The education-oriented population movements according to (Smith, 2015) are greatest because of distance limitation. Therefore, people especially those in the middle class feel pressured to send their children to selective or independent schools from their primary level because schools from places of origin fail to prepare them for examination and the outside world like the private school does (Smith, 2015). Thus, (Smith, 2015) highlights that middle-class parents are more than prepared to send their children at their early ages to private schools to prepare them for the completion of entering tertiary education. In the study done by Butler, Hamnett, and Ramseden where they analyzed pupil level school census data in the UK, the data served as evidence that best performing schools do attract students from far distance and wide areas (Smith, 2015). These types of moves are undertaken by parents to educate their children and these are contemporary trends as in history during the periods of the 1980s and 1990s, parents use to send their children to local schools, but contemporary local schools are now deemed as inappropriate for their children because of high population density (Smith, 2015). However, some researchers have claimed that what matters to parents is moving to the right school whether it's from a rural or urban area.

According to Smith (2015), most of the previous research on school choice relating to internal migration has had more focus on urban areas. However, studies now have started to show that families are being pushed away from good exclusive schools in those attractive regions because the regions are saturated, and they are now being attracted by the high availability of good schools in rural areas (Walker and Clark, 2010). The reasons to move to rural areas are induced by a peaceful healthy environment and sense of community representation of rural places and that a rural area is seen as a good place for raising children (Walker, 2010). According to the study done by (Smith and Higley, 2012) in investigating moving families from London to Cranbrook in England in pursuit of quality rural schools, (Smith, 2012) reveal middle-class households are moving into a well reputable rural manifestation of circuit education and these schools become an important alternative if their first-choice school was not realized. Smith (2012) states that families are even willing to send one partner from the household to stay with the children in those idyllic rural areas so that the children will be comfortable in the region. However, (Smith, 2012) argues that this education and family steered migration from the global city

stimulates migration of grandparents to rural areas as they are the ones mostly tasked to be guardians of the children. Thus, this can turn on to be a knock-on effect on the growing rural community if more old people migrate as they are mostly not economically active to grow the region.

2.4.2 Age and Gender

The decision to migrate may be induced by various factors for example conflict or disaster, they may also be a degree of personal choice and a combination of motivations. Research has found that decisions to migrate are made in response to social, economic, political pressures, and incentives (Birchall, 2016). Traits like gender and age play a major role in influencing the decision of whether people migrate or remain where they are. For example, regarding gender, Men may be expected to migrate and go try to make money so that they may be able to support their families economically, young men and adolescent boys may be prioritized by their families to migrate in a situation where there are restricted resources in the local area (Birchall, 2016).

The number of people who are moving internally according to (Birchall, 2016) is estimated to be six times greater compared to international movers, and (Birchall, 2016) states that worldwide there are about 740 million internal migrants. Countries like India and China are sought to be countries that have the most internal moves. 30 percent of India's population are internal migrants whereas in China more than 220 million people practice internal migration (Birchall, 2016). Rural to urban migration is the most common form of internal migration. However, in areas like rural India, rural to rural migration tend to predominate as people move short distances but for temporal periods (Birchall, 2016). One of the difficult statistics to find according to (Birchall, 2016) is stats for internal migration. Nonetheless, some surveys on internal migration have suggested that between the ages of 16 and 40 years old are usually the years which migrants migrate the most and they have varying education and income as well as different skills acting as catalysts for their migration (Birchall, 2016). Other surveys suggest that internal migration globally is usually from younger age groups and should have a higher education level (Birchall, 2016).

According to Millington (2000) migration declines with age. And the reason for this is because of the psychic costs that happen inside an individual because of the duration he/she has stayed at origin residence. Therefore, (Millington, 2000) argues that the longer an individual has lived in an area, the more that person becomes reluctant to relocate from

their surrounding areas and social networks. Another reason why migration declines with age is that an individual first examines the costs and benefits of moving to the place of destination mostly concerning income. Therefore, as an individual ages, sensitivity to income disparities between regional income decreases as an individual will make gains for a few years. Thus, it becomes less likely that an individual can explain his move as retirement age approaches (Millington, 2000). Therefore, people that are expected to practice migration are young people who are far from reaching their retirement age. These young people have no attachment to their place of origin as compared to old people who have lived their whole lives and young people also have all the time to accumulate as many gains as they can in destination places to help their families.

According to Kim (1989), a study done in Korea on internal migration looks at Korea's two big provinces which experience high in-migration and those provinces are Seoul and Pusan. According to Kim (1989) ages, 10-39 are deemed as positive age groups because they are more mobile compared to other age groups. Most of all migrants come from the age groups of 10-19 and 20-29 and the age group 10-19 is the group that is more mobile to migrating to urban sectors and less mobile to rural sectors (Kim, 1989). On the other hand, age groups 20-29 and 30-39 are groups that take both streams as they migrate to rural and urban. Young individuals from age groups of 20-29 usually migrate the most because of various reasons like job seeking, education, and sometimes marriage (Kim, 1989). However, the sexual composition concerning age suggests that men are most mobile between the ages of 10-19 whereas women are between ages 20-29.

2.4.3 Marital Status

According to Jang, Casterline, and Snyder (2014) movement arrays differ by life stages we go through in life, and mostly any change in family size requires a certain residential adjustment. Jang (2014) argues that family building actions are known to be major migration causes, and migration is related to marriage. When interacting with marriage and migration, (Jang, 2014) alludes that the probability of migrating is increased as soon as people get married, as newlywed people often get a new place to live or one partner will move in with the other. This has been an on-going culture whether individuals are marrying for the first time or remarriages (Jang, 2014). According to Jang (2014), there are two contradictory ways in which migration influences people to unite, first, migration can inspire marriage in such a way that an individual socioeconomic status is improved. Previous research has confirmed that people from non-metropolitan regions attain higher

educational levels and earnings after migrating to a metropolitan region, thus their marriage market exposure is improved (Jang, 2014). Migration can improve an individual chance to be married if a move is to a location with a large marriageable mate supply (Jang, 2014). According to Jang (2014), an alternative strategy that individuals use to improve his/her marriage chances is moving to a new location. An observational finding on the likelihood of getting married after migration would agree with the proposition that migration somehow is a strategy for increasing marital opportunities. Second, migration on marriage impact may also be negative because an individual may need time to adjust to a new location as well as getting to know and be familiar with kinds of opportunities to meet other potential marriage partners (Jang, 2014). Studies on relationships between migration and fertility have revealed that migrants' fertility levels are low during the early periods of migration, however, levels catch up with those at a later stage (Kulu, 2005). Therefore, as fertility can be disrupted by migration, marital behaviors may also be disrupted temporarily by the migration process. One can argue that marriage probabilities can be decreased by short-term period migration, however as the migrant settles for a longer time, chances of marrying increase to surpass those of place of origin (Jang, 2014).

According to Hyman, Guruge, and Mason (2008), there is little research that is done in examining how migration impacts marital relationships, or how couples generally adapt to new circumstances. However, it's of vital importance to gather information on how migration impacts marital relationships as reports claim that there are high rates of divorce, domestic violence, and marital conflicts in newcomer communities (Hyman, 2008). It is said by (Hyman, 2008) that these post-migration variations on marital relationships and all have their negatives and positives on marital relationships.

In a study conducted in Canada, it was found that marital conflict was one of the main negatives of migration (Hyman, 2008). One of the major contributors to this conflict is the lack of support and monetary needs which comes with demanding work schedules, work overload as well as overtiredness (Hyman, 2008). Men usually complained that their women overwork themselves when they moved to a new location. When they come back from work, they do their housework and after they finish, the rest showing that they are tired and they ask for a peaceful sleep while on the other side man wants what is different (Hyman, 2008). Another source of conflict that arises when couples migrate is when they are unable to negotiate new gender roles and responsibilities that come with moving to a place of destination. For example, other men were not prepared to do certain tasks which

they felt they needed to be done by women, on the other hand, women usually saw themselves as putting a double burden of work on themselves and family which mostly led to resentment (Hyman, 2008). It is said that most of the participants in the study who were divorced agreed that the arguments over roles and responsibilities played a factor in their divorce. However, the measure of the conflicts which cause a divorce to the couples varied, (Hyman, 2008) states that another contributor to the separation is infidelity and addiction.

The study also found the positives of migrating as there was an indication of improving mutual dependency among couples at the place of destination (Hyman, 2008). Thus, couples started to rely more on one another for support and help as there were no family and friends to turn to as alternatives. Migration somehow improves the relationship of couples as some men claimed that things have changed compared to how they were in the place of origin (Hyman, 2008). Couples now must share more to take care of things in and out of their house (Hyman, 2008). Some couples claimed they share almost everything and because of their improved relation, men don't mind doing some of the duties usually done by women such as taking care of the children and helping them with their homework when women are not around and also performing some house duties. Another positive that was evident due to migration was an increase in shared decision making among the couples (Hyman, 2008). However, (Hyman, 2008) argues that even though decision-making was shared, males had a slight edge when it came to major financial issues decision and both male and female participants agreed that males do have a slight edge when it comes to finances. Therefore, the positive is that through migrating to a different location, the marriage bond became strong.

2.4.4 Socio-economic

According to Morrison and Clark (2011) generally, most migration flow analysts assume that migration flows between local markets are because of employment considerations and that's the strong reason for migration. However, it's not the case as the majority of moves between markets are because of social and consumption reasons (Morrison, 2011). According to Morrison (2011), the neoclassical theory argues that movers do not only individually select different markets in specific wages, but they also seek employment at different locations. If it does happen that employment is plentiful across a variety of locations and the probability of securing that position is possible, then other considerations

besides employment will overpower answers to why people move. Thus, migration to induce employment gives way to other goals rather than employment.

According to Morrison (2011), a rich literature on local services suggest that it is important to view internal migration as a consumption decision because most moves that occur internally are mostly purposed to develop the quality of life which is a micro decision. Schacter (2001) argues that migration can be in a form of two ways in terms of employment. Migration can be in terms of employment enabling (Macro) or employment enhancing (Micro). Whenever an individual decides to migrate, one of the important things to consider is having a source of on-going income, most of which will come from employment (Schachter, 2001). However, studies globally have recently shown that few migrants allude to employment as being their main reason for moving and that is not because employment is not important but because it's the main thing that needs to be addressed first before a move is initiated (Schachter, 2001). According to the study done in New Zealand which focused on the role of enabling and enhancing employment found that only a few working-age migrants moved across markets intending to enhance employment gains (Schachter, 2001). Instead, the majority of internal migrants cited their main purpose of moving as modifying their consumption and improving their social relationships. Thus, on-going employment was a means and not the main reason for moving (Schachter, 2001). The study was done in New Zealand and evidence found does relates to what is happening in South Africa as the study that was done by statistics South Africa also found that the leading reason why people migrate internally is enhancing their social relationships. However, even though there are fewer people who migrate for employment as their main reason, (Schachter, 2001) argues that the same people would not migrate and improve their social relationships if employment wasn't secured at the destination place. Therefore, it can be concluded that even though people cite employment as not their main reason for moving, but it is an important factor that decides whether they move or not.

According to Thet (2014), most research conducted on migration whether internal or international is often primarily inspired by economic factors. In developing countries, many different factors can be listed contributing to people being pushed away from their places of origin and some of those factors include low agricultural income returns, unemployment, and underemployment (Thet, 2014). As much as people claim that their main reasons for moving is because of social reasons but the main reasons which are

supported by research are that people move because of unemployment and underemployment reasons and these two reasons are considered as basic push factors for migrants to move to developed areas because there are better job opportunities (Thet, 2014). Thet (2014) mentions that other push factors falling under economic factors leading people to migrate and those factors include low productivity, poor economic conditions, scarce advancement opportunities and there are no available alternative income sources which people can consider. Thus, people will migrate where there are fewer push factors and more pull factors which are factors opposite to push factors. Taking reference to South Africa, one can argue that people migrate from their native provinces to Gauteng because Gauteng has the pull factors that they lack at the place of origin. Provinces like Limpopo, Eastern Cape, and Mpumalanga are some of the poorest provinces in the country and they experience a high out-migration rate. Therefore, by taking arguments made by (Thet, 2014) it can be concluded that people migrate from these provinces because of the economic push factors they experience, and they go to Gauteng and Western cape as these are the two affluent provinces in the country (Kok, 2005).

2.5 Theoretical Framework

2.5.1 The Neoclassical economics

The neoclassical economic theory is a theory that explains international migration. However, its practical format does not only apply to international migration only. Therefore, the theory can be applied as well to explain internal migration, and for this study overall and inter-provincial migration.

The neoclassical economic theory of migration according to (Massey *et al.*, 1993) is the type of migration that is triggered by geographic differences in the labor market (supply and demand for labor). Massey *et al.* (1993) argues that wage differentials between various geographies cause' workers to migrate from low wage country to a high wage country. Thus, the consequences of such movement result in the supply of labor and wages to rise in the capital-poor country while in the capital-rich country, labor supply increases while wages drop (Massey *et al.*, 1993). Massey *et al.* (1993) argues that the neoclassical economics theory has got its assumptions and propositions regarding migration.

One of the first assumptions by the neoclassical economics theory is that differences in wage rates that exist between the countries cause workers to migrate (Massey *et al.*, 1993). Thus, (Massey *et al.*, 1994) argues that migration employs downward pressure on the wages of the destination country and upward pressure on the wages of the country of

origin, this continues until an equilibrium level is reached. When the equilibrium level is reached, the existing wage gap between the two countries becomes equal, thus making net migration to discontinue (Massey *et al.*, 1994). According to Massey *et al.* (1994), labor migration between low wage countries to high wage should continue until equilibrium is reached and must not stop until the financial gap (minus migration costs) between origin and destination place has been closed. An individual according to the neoclassical theory must migrate to a destination country where high net gains are expected (Massey *et al.*, 1994).

According to Massey *et al.* (1994) despite scholars, policymakers, and the public accept the neoclassical theory, the argument made is that it has been not put to rigorous testing to explain migration. However, a scholar called Fleisher was the first to test the theory by doing a study looking at the movements between Puerto Rico and the US mainland (Massey *et al.*, 1994). Massey *et al.* (1994) argues that the movements between Puerto Rico and the US mainland provide a good test of the neoclassical economics theory. Therefore, since there were no legal barriers between Puerto Rico and the US mainland impeding movements, testing the theory was not going to be a difficult task (Massey, 1994). According to (Massey *et al.*, 1994) the analysis by Fleisher discovered a strong link between unemployment in Puerto Rico and migration volume to the United States. The discovery was that the higher the unemployment in Puerto Rico, the greater the numbers of people leaving to the mainland (Massey *et al.*, 1994). It is said that the ratio of outmigration from Puerto Rico would have been even higher if the transportation costs were not expensive, as to some others, higher costs became a barrier to them, thus couldn't migrate.

According to Massey *et al.* (1994), the study by Maldonado between the years of 1947 and 1973 further added to the findings of Fleisher. Maldonado looked at outmigration factors that measured outmigration in Puerto Rico relative to those US mainland, and those factors were unemployment, average monthly welfare payment, and hourly wages (Massey *et al.*, 1994). The study by Maldonado found that the differences between unemployment and wages were important influential factors in determining the volume of outmigration in Puerto Rico to the US mainland (Massey *et al.*, 1994). As the unemployment ration increased in Puerto Rico relative to the United States, the level of outmigration increased considerably, and as average wages increased in Puerto Rico relative to the US, outmigration levels also fell (Massey *et al.*, 1994).

During the years 1950 to 1970, Puerto Rico experienced one of their highest outmigration rates to the US mainland as the percentage proportion rose from 9 to 23 percent (Massey *et al.*, 1994). According to (Massey *et al.*, 1994) the neoclassical theory states that the outflow of people should put upward pressure on the wages of Puerto Rico, and during the year which they experienced the highest outflow, the country's hourly wages rose from $0.42 to $2.33. Massey *et al.* (1994) stated that as migration continued from Puerto Rico to the US mainland, the wage gap was also closing. Thus, it can be argued that the neoclassical theory is relevant and practical. However, a strange thing happened in Puerto Rico which saw the level of unemployment rising even though the wages in the country rose too (Castillo and Freeman, 1992). Unemployment levels rose because many industries were finding it not profitable to produce in the country. According to the theory, the wage increase should have been followed by a change in levels of migration outflow to the US mainland. Thus, one can also argue that the theory has some gaps that need to be filled as there is a contradiction now from what happened in Puerto Rico to what it postulates. Another test of the neoclassical theory is the migration between Mexico and the United States.

According to Massey *et al.* (1994), movements between Mexico and the United States in the contemporary world are the largest and have a consistent flow of migrants between them. Between the years 1940 to 1992, Mexico admitted 1.2 million legal migrants to the United States, in addition to that, 4.6 million contract workers were also sent to the United States temporarily and another 4 million entered the United States as illegal migrants (Passel, 1986). Therefore, in neoclassical theory terms, many incentives contributed to a large number of Mexicans migrating to the United States. According to Rumberger (1980), the difference between the average wages was by a factor of five between the countries, and even after the Mexicans had costs of transportation, entry costs, and costs of living in the foreign country, they still expected to earn three times more than what they would have earned in their home country. Most of the time, wages determine the movements between regions, however, the environment also can be a reason for movements as good and productive environments can produce a conducive way of living for people.

Therefore, besides the wage difference, environmental conditions were also not the same between Mexico and the United States (Rumberger, 1980). The United States had productive land than Mexico. However, as agricultural productivity and wages rose in

Mexico, illegal migration to the US fell. Farm wages in the United States were much better than those in Mexico, thus more migrants were attracted to the US and as the agricultural productivity of the US increased, Mexican migrants to the US would also increase. Therefore, (Massey *et al.*, 1994) argues that these factors are the ones that cause a high migration to the US. According to Massey *et al.* (1994) wage difference between Mexico and the US had a positive effect on migration and just as the neoclassical theory suggested, the migration rate to the US rose as its wage differential to Mexico widened. Thus, again the movements of people are centred on the economic difference which is what the neoclassical theory claims. Massey *et al.* (1994) argues that if the neoclassical theory is correct, it is expected that the expected income factor would play a huge role in deciding to migrate. However, (Massey *et al.*, 1994) further argues that though the expected income does have a positive and significant role in the probability to migrate, however, it does not illuminate the bulk of migration difference as there might be other crucial factors besides expected income that can influence a decision to migrate.

The second assumption is that once the wage differentials are removed, no movement of labour will occur between the countries. The studies above indicate in some parts that when the wage gap between the sending and receiving location decreases, so does the migration rate between the two. Therefore, a directly proportional relationship between the wage gap and moving is observed. The third assumption is that supply and demand for labour are the main drivers of migration. Massey *et al.* (1993) argues that these propositions and assumptions are macro, meaning they aggregate or generalize human decisions concerning migration. There is also a micro perspective that explains migration according to the neoclassical economics theory.

In the micro perspective, (Massey *et al.*, 1993) argues that an individual is the one who decides to migrate, and a migrating individual will only migrate if the cost-benefit calculation propels them to expect positive net returns and those returns are usually monetary. According to Massey *et al.* (1993), people prefer to move where they see they can be more productive, given the skills they pose. However, (Massey *et al.*, 1993) argues that before individuals get hold of their higher wages allied to their labour productivity, individuals first invest in human capital because good human capital leads to greater labour productivity which will lead to higher wages. By human capital (Massey *et al.*, 1993) refers to material costs of traveling, maintenance costs while still looking for work, effects of learning a new culture, adapting to a new market, and the psychological costs

of leaving old relationships to creating new ones. A potential migrant as stated before migrates where there are greater expected net returns, thus (Massey *et al.*, 1993) points out that several conclusions can be said.

Gurieva and Dzhioev (2015) further emphasize points by Massey by stating that from the micro perspective the rationale behind migrating is based on the expenses and profit analysis associated with moving. Gurieva (2015) argues that people choose the destination where they could be most productive with the aid of their qualification. What is important is that migrants have to consider many things for them to settle properly in the place of destination, they need to first suffer certain costs associated with transport, searching for employment, study new culture and language, face psychological expenses and break down from old communications and building new ones and lastly go through the process of adaptation on the new residence (Gurieva, 2015).

It can be concluded that migrations stem from differentials in wages and employment rates (Massey *et al.*, 1993). It can also be argued that individuals whom their human capital traits (education, experience, and language skills) improve their likelihood to get paid well or be employed in the place of destination will increase the probability of them to migrate (Massey, 1993). And lastly, it can also be concluded that the magnitude of differentials in expected returns regulates the size of the migration flow of migrants (Massey *et al.*, 1993).

2.6 Conclusion

This chapter provided an extensive understanding of the neoclassical theory which is the theoretical framework used for this study. The neoclassical economics theory of migration is an international migration theory; however, it can also be applied to internal migration as most of the reasons considered by international migrants are the same as those used by internal migrants when considering a move to a place of destination. The one clear thing evident is that the concept of migration is complex as many theories explain migration differently. An overview of internal migration trends at a global, African, and South African level was presented here in this chapter. The chapter also focuses on socio-demographic factors associated with migration. Under the socio-demographic factors, variables such as education, sex, age and gender, marital status, and socio-economic were presented and unpacked.

Chapter Three: Research Methodology

3.1 Introduction

This chapter discusses the methodological approach and the design which is used to answer the research questions of the study. The main aim of the study was to explore the factors and differentials driving contemporary internal migration in South Africa. This chapter outlines the study research design, explains the data sources and sampling strategy where the sampled distribution of the general study population is presented. The study's dependent and independent variables are also presented as well as the factor analysis. Factor analysis is explained with all its household variables and the logistic regression which is used for this study. Lastly, the methods, data limitations, and conclusion are also present in this chapter.

3.2 Research design

The research design that will be used for this study will be quantitative. According to Williams (2011), quantitative research involves numeric or statistical approaches to a research design. Belli (2009) further expands towards the explanation of quantitative research by stating that, it is empirical and uses numeric and quantifiable data. According to Creswell (2003), quantitative research involves data collected which at the end will yield statistical data. One of the advantages of using the quantitative design is the ability to generalize scientific data collection and analysis (Eyisi, 2016). The measurement process in quantitative research is important because it links or acts as a mediator between mathematical expressions and pragmatic observation of quantitative relationships. According to Gunter (2002), the cause-and-effect relationship is the main concern of quantitative research. The quantitative methodology emphasizes statistical and numerical analysis of gathered data through various methods involving questionnaires and surveys. The data collected through questionnaires and surveys can be manipulated by computational techniques. During quantitative research, numerical data is gathered, and it is then generalized across a group of people or can also be used to explain a certain phenomenon. Researchers that do a quantitative study isolate and recognize certain variables that are confined to the research framework and they also seek correlation and relationships among the variables.

This research will use an exploratory method of inquiry as well as the non-experimental research approach. The exploratory quantitative design that will be used utilizes the community survey 2016 information to explore the factors and differentials driving

internal migration in South Africa with a focus on the provincial sector. According to Van Wyk (2012), exploratory research is the most appropriate research design for addressing a subject with high uncertainty and very little-known information, and when the subject is not well understood. The exploratory method of inquiry best suits this study because internal migration has very little information and not just in South Africa alone but globally. Migration is always a problem more especially internal migration. Van Wyk (2012) further argues that exploratory research implies a high degree of flexibility and does not have a formal structure, thus living room for generalization. Exploratory research aims to recognize the barriers where the problems and opportunities are likely to reside, at the same time identify factors and variables that are relevant to the study being conducted (Van Wyk, 2012). According to Singh (2007), exploratory research in a quantitative format relies on secondary data such as looking at previous literature and data. Thus, for this study, the community survey 2016 data will be the one used. The intensions of exploratory research are to explore research questions; however, it doesn't intend to give a conclusive solution to the investigated problems. Therefore, not providing conclusive solutions means a room for further research is left open (Singh (2007).

There are two types of quantitative approaches for collecting data, namely the experimental approach and the non-experimental approach (Muijs, 2010). For this research, a non-experimental approach will be the one used. Non-experimental research according to (Belli, 2009) is the one where variables are not manipulated by the researcher, rather they are observed as they occur. According to Thompson and Panacek, (2007) majority of non-experimental research designs are retrospective and are often referred to as ex post facto (meaning after the facts) research. The retrospective study involves assessing events that have previously occurred. (Thompson, 2007) thus argues that manipulation of variables of interest is not possible. Thompson (2007) argues that non-experimental design is vulnerable to invalid results. Therefore, data being used should be scrutinized whether it is reliable to be used or not. The use of a non-experimental design perfectly suits this study because it is be based on data previously collected. Therefore, it is possible to explore and compare factors and differentials that drive internal migration and be able to make future predictions based on data from previous studies collected to the one recently collected.

The main reason for using non-experimental research is because most of the variables of interest are characteristic variables such as gender, age, socio-economic status, and other

personal traits. Therefore, the researcher cannot manipulate gender and age, for example placing females where males belong or vice versa. If the observed data shows that males aged 24 are the ones who migrate the most, the researcher cannot manipulate that data because these characteristics are naturally existing. According to Jonson (2001), a non-experimental research approach is important for educators because many various important non-manipulatable independent variables still need further research. A research educational methodologist Kerlinger stated that he views a non-experimental research approach as being more important than an experimental research approach (Jonson, 2001). According to Jonson (2001) Kerlinger further states that if studies were made in behavioural science and education, it's possible that non-experimental studies would outrank experimental studies. Jonson (2001) argues that the non-experimental approach may be important even when experiments are done. The non-experimental approach can come as a means of an extended experimental study, to provide support of the experimental study and to offer precise evidence of the validity of previous experimental research findings (Jonson, 2001). Therefore, a non-experimental research approach is an appropriate and important mode of research.

3.3 Data source (Community survey 2016)

The community survey 2016 is the second official population estimate between censuses known dates, of which the first community survey was conducted in 2007 (Statistical South Africa, 2016b). This survey is regarded as among a few available data sources which provide data at a municipal level. Data provision at a municipal level has supported decision making and this form of data collection has increasingly become the best practice in numerous countries of which South Africa is included (Statistical South Africa, 2016b). To reduce poverty and susceptibility to the most marginalized South African's, the community survey 2016 results are critical in endorsing ideal resource allocation and utilization in all government spheres. It is of vital importance to have reliable statistics in a social, demographic, and economic format in a country because that means the development and policy implementation, as well as legislation implementation, shall be applied genuinely (Statistical South Africa, 2016b).

The community survey 2016 is the second large survey statistics after the community survey 2007 in South Africa. However, in 2016 data was collected using a different format than the one that was used in 2007. In 2016 data was electronically collected using a computer-assisted personal interviewing system (CAPI) whereas in 2007 a paper

collection method was the one used. The community survey is one of the main data sources providing national, provincial, and municipal indicators for planning and monitoring development programs such as education, water supply, health, housing, and transport and sanitation. Furthermore, the community survey offers demographic data which is important in understanding the relationship between population and development.

Eligible people for enumeration are largely people present in the household(s) of the sampled housing units on the reference nights (midnight 6 March 2016 to 7 March 2016) including guests. Individuals from the family who were missing overnight, for precedent, working, journeying, at incentive or religious social affairs yet returned the following day should likewise be checked. For reasons of Statistics South Africa, a household is a congregation of people who live together and contribute to themselves reciprocally with food and different fundamentals for living or an individual who lives alone. Individuals from the household who died after the reference night were considered in as they were alive amid the midnight of the reference period. However, contrastingly those who were born afterwards the reference night were not included.

The World Bank survey solution application was used to design the community survey in 2016, this application is an online questionnaire design application (Statistical South Africa, 2016b). The community survey 2016 questionnaire has new questions and other questions were taken from the already existing household surveys and Census 2011 (Statistical South Africa, 2016b). The community survey 2016 broadly show trends that were expected for some variables when being compared with other censuses over time. However, there were unexpected reports which saw fewer people reporting internal migration from the two well receiving provinces that is Gauteng and Western Cape compared to previous censuses. The community survey 2016 report uses census 2011 data to compare the findings to show migration changes.

The data quality for the community survey 2016 is assumed to be of good quality according to statistics in South Africa. The quality assurance of the survey according to (Statistical South Africa, 2016b) was automated and dealt with in two phases. According to (Statistical South Africa, 2016b) the first phase involved electronic questionnaires which were subjected to conditions and validation of the rules. The automated process abolished needless inconsistencies in the data during the collection of statistics.

Additionally, another automated process was used for quality assurance during data collection which saw completed questionnaires being flagged as either rejected or accepted based on the minimum workability rule. Submitted questionnaires to the database that did not meet the standard minimum rules were patent as rejected and thus sent back for further verification and correction to the fieldworker. Fieldwork supervisors contributed to taking note of the questionnaires that were flagged and help the fieldworker to correct the mistakes accordingly. To be precise, the records that were marked as rejected once, the running of those rejected were repeated at least four various times at altered dates. This process was important for the fieldworker to correct mistakes before the questionnaire could be recognized as "complete". This process was important and remarkably contributed to minimizing the missing values on several questions.

3.3.1 Sampling strategy

According to the community survey 2016 technical report, the survey's target population was the non-institutional population who reside in private residences in the country. Institutional people were out of scope for the survey. Therefore, people residing in military barracks, who are homeless, in prisons, and residing in hospitals were disqualified from being part of the survey (Statistical South Africa, 2016b). The table below lists the institutions which were not part of the community survey 2016 sampling frame.

Table 3.1 Excluded institutions from the community Survey 2016

Non-residential hotel
Hospital/ frail care centre
Old Age homes
Child care institution/ orphanage
Boarding school hostel
Initiation school
Convent/ monastery/ religious retreat
Defence force barracks/ camp/ ship in harbour
Prison/ correctional institution/ police cells
Community/ church hall (in cases of refuge for disaster)
Refugee camp/ shelter for the homeless

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Also, a small number of enumeration areas that were part of the target population to be sampled were excluded from the sampling frame to improve working efficacy during the survey (Statistical South Africa, 2016b). The small areas that were excluded were based on cost and the possibility of conducting operations in these areas as they were remote and had low population density (Statistical South Africa, 2016b). The exclusion of these areas contributed to the undercover on the frame, thus an adjustment factor had to be included during the weighting phase to justify the under coverage (Statistical South Africa, 2016b).

3.3.2 Community survey 2016 sample weights

3.3.2.1 The Design Weights

According to (Statistics South Africa, 2016b) the EAs that were included in the sampling frame were segmented or non-segmented. Therefore, the design weights for these EAs were different since they were treated differently during the sample design. The design weight for non-segmented EAs is equal to the inverse of the probability of selection. The probability of DUs selection within non-segmented EAs was derived as:

$\pi ij = ni / Ni$, where πij is the probability of the jth DU in non-segmented EA i being selected, ni is the number of sampled DUs in non-segmented EA i and Ni is the total number of DUs in non-segmented EA i.

For segmented EAs, one or more sampled segments in the EA were selected with probability proportion to the number of DUs in the segment, then within the selected segments, a sample of DUs was selected. The probability of selection for DUs within segmented EAs was derived as:

$\pi_{ikj} = s_i \times n_{ik} / N_i$ where is the probability of the j_{th} DU in-segment k of segmented EA i being selected, s_i is the number of segments sampled from segmented EA i, n_{ik} is the number of sampled DUs selected in segment k of segmented EA i and N_i is the total number of DUs in segmented EA i.

Additional dwelling units were identified and enumerated during enumeration, these DUs did not appear on the sampling frame of the CS 2016. These additional DUs in scope, they were part of the target population. However, they couldn't be selected into the sample since they didn't appear in the sampling frame. Therefore, to account for the additional DUs in the estimates, they were given a weight in relation to the conditional probability that one or more of the DUs on the frame at the same point were selected into the sample. The weighted additional DUs were only accepted to be eligible if they satisfied these standards':

i) The additional DU was within one of the points that were part of the CS 2016 sample

ii) The additional DU had a DU greater than the DU count on the frame for the given point.

During the sample design, some small EAs were excluded from the sampling frame to improve operational efficiency during the survey. The exclusion of the small EAs was on the basis of cost and feasibility to conduct field operation within those areas as they were remote and sparsely populated. However, the excluded EAs were part of the target population and therefore had to be reported during the weighting process to reduce any bias in the estimation due to their exclusion. A synthetic adjustment factor was applied to report the contribution from the excluded DUs in the design weights. The adjustment factor was calculated using the DU counts at the geographic area level within the local municipality to minimise the risks of potential synthetic bias. The synthetic weight adjustment factor that was used was derived as:

$Synth\_Wgtmg = Nmg / Nmg$ where is the number of DU within the target population from the geographic area within the local municipality. Is the corresponding number of DUs on the sampling frame.

Community survey 2016 data also accounted for non-responses during the survey and an adjustment was made to the design weight. The non-response adjustments were made for EAs and household. The final process taken in making the sample weights at person and household level was calibrating the adjusted design weights to match the distribution of the population across major demographic variables (age, gender, and population group) at a municipal level, nationally and provincially.

The final sample weights for the person level analysis (W_{pS}), was defined as the product of the adjusted design weight (W_a) and the person level calibration factor calculated during the calibration process.

$W_{pS} = W_a \times \text{Cal\_Factor}_{\text{p}}$

The final household sample weights (W_{kS}) for household level analysis is the product of the adjusted design weight (W_a) and the household level calibration factor calculated during the calibration process.

$W_{kS} = W_a \times \text{Cal\_Factor}_{\text{k}}$

3.3.3 Sample distribution of the community survey 2016

According to Statistical South Africa (2016b), the community survey 2016 final sample size was 1 370 809 dwelling units which were sampled from 93 427enumeration areas in the country. The table below shows the sampled dwelling units by province according to their distribution.

Table 3.2 Sampled dwelling units by province according to their distribution

Province	**Number of In-Scope EAs**	**Number of Sampled DUs**
Western Cape	9 851	149 100
Eastern Cape	15 742	195 301
Northern Cape	2 742	36 125
Free State	5 595	83 645
KwaZulu-Natal	15 719	219 182
North West	6 726	102 120

Gauteng	19 022	331 125
Mpumalanga	7 197	105 058
Limpopo	10 833	149 153
South Africa	**93 427**	**1 370 809**

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3.4 Dependent variable

The migration section is found on section B in the community survey metadata document. The main reason for collecting information on migration (displacement) was to explore the factors driving contemporary migration within the country as the community survey 2016 is the last census to be conducted so far. When investigating the factors driving internal migration within a country, one of the important things to do is finding information about the respondent's migration history up to his or her current location. Not all the questions asked in section B of the survey relate to the study. The question that was sampled within section B was the one that was derived to be our dependent variable because it measures the movement of individuals, and only those who moved were the ones sampled to be part of the study. Below is the question sampled to make the dependent variable:

Has (name) been staying in this place since October 2011?

This question is the main question of making our dependent variable. This question helps us know between individuals who migrated and those who didn't migrate since the year 2011 in October. It is important to note that this question was not asked people who were not born in South Africa. A place refers to an area, suburb, or location. In this study, the dependent variable is categorized as migration, and the information that was used was for people who migrated only.

3.5 Independent variables

All the variables in this section are found in the demographics section A and E except household variables which are found in the annexure 3 data file of the CS 2016 metadata. All the questions asked concerning each variable were asked to every person in the dwelling unit and if one member of the household was absent, a proxy person was used for the missing member (Statistical South Africa, 2016a). For this study, the main independent variable is the previous province and there are also some explanatory

variables which include age, sex, educational attainment, population group, and marital status. There are nine provinces in South Africa and the level of development is not the same among all provinces as well as the level of progression. Therefore, according to Massey *et al* (1993) people are more likely to migrate to a destination that is more affluent and where there is a great opportunity to advance in a standard of living. Additionally, since the province is the main independent variable, the questions that were sampled seek to provide the demographic composition of internal migration inter-provincially as well as the factors that are associated with internal migration in South Africa.

3.5.1 Sex

Respondents were asked this question:

Is (name) male or female?

It should be noted that this question referred to the sex of the respondent. Sex denoted a respondent's biological status and not gender (CS metadata, 2016). Biological status refers to the person's sexual chromosome and anatomy. Sex is a binary variable where code one represents the males and code 2 represents females. The sex variable in this study was used to investigate the migration level of each gender and the odds of migration of each gender. The study sample constituted of 52.96 percent females and 49.04 percent males.

3.5.2 Age

What is (name)'s age in completed years?

Completed years refers to the respondent's age at their last birthday before the night of enumeration which was midnight 06 to 07 March 2016. Enumerators that captured incorrect information go a flagged error message to notify them about their error and they had to verify the age in completed years of the respondents. Responses from interviewed individuals enabled for the analysis of the country population structure by age.

3.5.3 Marital Status

What is (name)'s PRESENT marital status?

All persons at the age of 12 and older were asked this question and they had to refer their marital status on the night of reference. A respondent's marital history was not included as part of the data. In this study marital status was categorized as married, previously married, and never married.

3.5.4 Population group

What population group does (name) belong to?

The population group in South Africa is divided into four groupings namely Black African, Coloured, Indian/Asian, and White. The question aided to determine the population group of all respondents in the household. No assumptions were made by the enumerators even when the group seemed obvious. Respondents who did not want to disclose their population group for any reason was put under the category "refused".

3.5.5 Educational attainment

What is the highest level of education that (name) has successfully completed?

This question deals with the highest level of education that a person has completed, either completed at school or highest post-school qualification. The level of education that the person was currently doing was not required. In South Africa, educational levels are categorized in various forms. Specifically, for this study, the focus will be on no schooling, preschool (Grade1-7), Secondary school (Grade 8-12), and higher educational institutions (After matric). Regression was done between migration and educational attainment to check the role that education level plays in the process of internal migration.

3.5.6 Previous Province

There are nine provinces in South Africa namely Gauteng, Western Cape, Eastern Cape, North West, Northern Cape, Free State, KwaZulu-Natal, Mpumalanga, and Limpopo. The affluence levels for these provinces are different, for example, Gauteng and Western Cape provinces are more affluent than Eastern Cape and Limpopo. Thus, migration movements are not going to be the same. This variable was selected because it the one which better measures inter-provincial movement. When a respondent states his/her previous province, it means the individual changed provinces between the year 2011 to 2016 and the last province visited was the one recorded on the data. This study will investigate the factors driving migration from and to other provinces across the country. According to Kok (2006), the Gauteng province is the province that receives more migrants because of their pull factors that attract people. Therefore, this study will investigate the current factors and be able to predict the future based on the growth rate observed on the provinces.

3.5.7 Socioeconomic status (SES)

According to Kabudula *et al* (2017:1048) socioeconomic status (SES) can be defined as "an individual's or group's position within a hierarchical social structure that influences

one's access to and control over desired resources including knowledge, money, power, prestige, and beneficial social connections which shape one's the well-being and life chances". This study used SES as a complex of household variables that are believed to define whether a household is either rich or poor. SES was categorized into four in this study to classify whether an individual is rich or poor. The four categories are low, medium-low, medium-high, and high. SES was measured using a factor analysis method.

Table 3.3 Distribution of variables of the study sample

Explanatory variable	**Frequency**	**Percentage of the total sample**
Household variables		
Socio-economic status (SES)		
Low	48 982	5.60
Medium low	84 118	9.62
Medium high	225 347	29.20
High	486 119	55.58
Total	**874 566**	**100.00**
Biographic variables		
Sex		
Male	1 565 807	47.04
Female	1 763 060	52.96
Total	**3 328 867**	**100.00**
Population group		
African	2 865 203	86.07
Coloured	248 252	7.46
Indian/Asian	55 570	1.67
White	159 842	4.80
Total	**3 328 867**	**100.00**
Age		
0-4 to 85+	**3 325 814**	**100**
Educational attainment		
No Schooling	505 349	15.40
Pre-school	126 079	3.84
Primary education	839 962	25.59
Secondary education	1 609 849	49.05
Higher educational institution	200 822	6.12
Total	**3 282 061**	**100**
Geographic variables		
Province		
Western Cape	276 661	8.36
Eastern Cape		
Northern Cape		**2.46**

Free State	195 342	5.90
KwaZulu Natal	660 069	19.94
North West	245 574	7.42
Gauteng	712 976	21.54
Mpumalanga	269 613	8.54
Limpopo	404 022	12.20
Total	**3 310 441**	**100.00**
Marital Status		
Married	868070	34.39
Previously married	289 459	11.46
Never Married	1 367 653	54.16
Total	**2 525 182**	**100**

CS 2016

Table 3.3 shows the frequency distribution of the explanatory variables used in the study. For each variable, its total number and percentage are given which shows the participation rate of each characteristic of each variable. The total participation number of community survey 2016 was 55 653 654. Therefore, from the total number, the table shows how many percentages does each variable characteristic contributed. In terms of educational attainment community survey 2016 profiles ages from 25 years and older. The primary educational level includes those that reported having completed grade 7 and higher education. Secondary educational level is those who completed matric and higher educational levels and for bachelor's degree, it includes those that completed their bachelor's degree and higher educational levels including Masters and Ph.D.

3.5.7.1 Factor analysis

According to Muca *et al* (2013), a factor analysis type of multivariate statistical method specializes in reducing and summarizing data. Factor analysis goes about fixing the problem many researchers face of analyzing the interrelationship of a large volume of variables and explaining the variables in terms of their common factors (Muca *et al*, 2013). Factor analysis main role is to reducing primary variables numbers by calculating smaller new variables numbers, which are called factors. The reduction is achieved through grouping variables into factors. Thus, every variable within each factor is correlated and variables belonging to different factors are less correlated (Muca *et al*, 2013). According to Yoga and Pearce (2013), there are two main types of factor analysis techniques namely exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The EFA attempts to uncover complex patterns simply by exploring dataset and testing predictions. Whereas CFA tries to confirm a hypothesis and uses a path analysis diagram to display

variables and factors (Yoga, 2013). For this research, a suitable type of factor analysis is an EFA. The first reason to use EFA is that this research is exploratory. Secondly, EFA is more suitable when wanting to discover many factors that influence variables and it also helps at analyzing which variables go together (Yoga, 2013).

Yoga (2013) argues that the basic assumption of an EFA is that there is X number of common latent factors that are going to be discovered in a dataset. However, the main goal of EFA is finding the smallest number of common factors that will relate to the correlations. Yoga (2013) further argues that it's much easier to focus on key factors rather than considering too many variables. Therefore, factor analysis is a useful tool for putting variables into meaningful categories. According to Tabachnick and Fidell (2007), to label something as a factor, it should at least consist of 3 variables, although that depends on the study design. Tabachnick (2007) further argues that rotated consisting of 2 or fewer variables should be interpreted with caution. Additionally, a factor consisting of two variables is only considered as being reliable when there is a high correlation amongst each other ($r > .70$) but they must also be uncorrelated with other variables (Yoga, 2013). Guandagnoli and Velicer (1988) argued that larger sample sizes limit errors in your data and EFA works better with larger sample sizes. However, if a dataset has a few several high factor loadings ($> .80$), then a smaller sample size should be considered. A factor loading for a variable measure the contribution of a variable to a factor. Thus, a high factor loading score indicates that the elements of the factors are better explained by the variables (Yoga, 2013).

Factor analysis also has its limitations. One of the limitations is the problem of naming factors. The names of factors may not accurately reflect variables in a factor. Additionally, some variables are hard to interpret because of split loadings. Split loading is when a variable load onto more than one factor. Variables falling under split loadings may correlate with each one another to produce a factor even though there's little underlying meaning for that factor (Tabachnick, 2007).

Table 3.4: Factor analysis/correlation to retain common variables

Factor	Eigenvalues	Difference	Proportion	Cumulative
Factor 1	2.30953	1.20161	0.2887	0.2887
Factor 2	1.10792	0.15043	0.1385	0.4272
Factor3	0.95749	0.03596	0.1197	0.5469
Factor 4	0.92153	0.08968	0.1152	0.6621
Factor 5	0.83185	0.08015	0.1040	0.7660
Factor 6	0.75170	0.09513	0.0940	0.8600
Factor 7	0.65657	0.19317	0.0821	0.9421
Factor 8	0.46340	.	0.0579	1.0000

LR test: independent vs. saturated: chi2(15) = 7.8e+05 Prob>chi2 = 0.0000

Table 3.5 : Rotated Factor loadings

Variable	Factor 1	Factor 2	Uniqueness
Radio	-0.7160	-0.1105	0.4752
Fridge	-0.7503	-0.0834	0.4301
school_rat~g	0.0574	0.7599	0.4192
Eduimport	0.0347	0.6120	0.6243
Toilet	0.5186	-0.3405	0.6151
Cooking	0.6637	-0.0317	0.5585
H2Osource	0.5049	-0.1403	0.7254
Main_dwell~g	0.5136	0.0390	0.7347

Own calculations

To get the above tables, factor analysis was done. The type of method which was performed was the principal component factor method. A principal component factor method is used to analyze the correlation matrix where the communalities are assumed to

be 1. Communalities, in the principal factor, is defined as 1- uniqueness. However, in the principal component factor, communalities are all made to be 1 which means that no factor is unique to the other, all factors are the same. In terms of uniqueness, (Stata manual 13) states that uniqueness could either measure error or represent something that is reliably measured in a specific variable while excluding other factors. The higher the uniqueness value, the more likely that there is more than just an error in that specific variable (Stata manual 13). Uniqueness with a value greater than 0.6 is high. A high uniqueness in a variable means that the variable is not well explained by factors (STATA 14). According to our data, there are only two variables (H2Osource and Main_dwelling) that have a uniqueness greater than 0.6, meaning that these variables are not well explained by the factors. However, the other 6 variables are 0.6 and below meaning, they fit the acceptable scale, and they are well explained by the factors.

According to Muca *et al.* (2013), one of the criteria used to retain factors is the Kaiser criterion. Muca *et al* (2013) state that in this approach, a factor is important when its eigenvalue is greater than 1 (>1). Thus, a factor with an eigenvalue >1 will be retained because that factor would be giving a high proportion of variance that is important for the interpretation of variables that highly explain the latent factor. All factors below the eigenvalue of 1 are discarded. The retained factors are then transferred to factor loading to determine variance according to each factor. According to Yong (2013), it's important to look at the loadings to determine the relationship strength when interpreting factors. The largest loadings usually are the ones that determine factors. However, considering zero and low loadings is also important to confirm factor identification (Yong, 2013). Factor 1 in our data has many statistically meaningful factors. Factors are considered statistically more meaningful when they have a loading of 0.5 and above, but 0.4 is also considered meaningful. However, the higher the loading, the more statistically meaningful and the stronger the association with the latent variable. Toilet, cooking, H2Osource, and main dwelling all have high factor loadings of 0.5 and above. Based on the loading that load high on factor 1, we can relate the high loading factors to household socioeconomic status. On factor 2, only two variables have got high loadings and these variables can be related to local community socioeconomic status. Therefore, this data explains more household socioeconomic status because factor 1 has more strong correlating variables compared to factor 2. It is also important to note that loadings with negative values were

cut off because they have a very low impact on latent variables, and they are also not statistically reliable to be considered for interpretation.

Table 3.6 Factor scoring from factor analysis for household variables, CS2016 South Africa

Variable	**Factor loadings (FL)**	**Factor scores (FS)**	**Mean**	**Standard deviation (SD)**	**SES Index (FS/SD)**
Radio1	-0.716	-0.312	.154	.361	-0.863
Fridge	-0.750	-0.326	.153	.360	-0.907
RateSchool	0.057	0.037	.838	.368	0.101
EducImportance	0.034	0.025	.990	.096	0.258
Toilet location	0.518	0.219	.424	.494	0.443
Cooking	0.663	0.287	.839	.366	0.783
Main Dwelling	0.513	0.223	.902	.413	0.540
Water source	0.504	0.216	.781	.296	0.729

Own calculations

(i) Household goods: Radio1 and fridge

Many household goods data were collected during CS2016. However, this study only selected two variables to be part of the research namely radio and fridge. The main question that was asked during the survey was "**Does this household own any of the following in working order?"** the retention of these two variables was because they scored high during the initial run of the factor analysis and they were the only two variables who high variance than other variables.

(ii) RateSchool

CS2016 collected information on the rating of the neighborhood local public-school quality. The options were either good, average, poor, no access, and do not use. In this study, they were coded as 'good' and not 'good'. Good included good and average whereas 'not good' included poor, no access and do not use. The main question asked to

acquire data was '**How would you rate the overall quality of the local public school that this household has access to or utilizes?'**

(iii) EducImportance

The question of the importance of education was asked as part of the questions falling under 'improving the standard of living of the household' in CS2016. The main question asked during the collection of this was '**In your opinion, how important is education for maintaining or improving the standard of living for this household?'.** For this study responses were grouped as 'important' and not 'important'. Under important there 'very important and important' and under 'not important' there is not important at all. Education is an important predictor of socioeconomic status even the study by (Callahan, 2010) looking at relations between parenting behavior and SES.

(iv) Toilet location

Toilet location variable was included in the factor analysis whether the household had a toilet inside or outside the dwelling. It was either a household had a toilet in the dwelling/house, in the yard, or outside the yard. The coding in the study coded 1 as 'inside house' which included "in the dwelling/house". Coding 2 named 'other' included 'in the yard and outside the yard'. The main question asked by CS2016 for data collection was "**Is the MAIN toilet facility to which the household has access in the dwelling, in the yard, or outside the yard?** The location of a toilet is an important predictor of socioeconomic status, according to (Pradhan et al, 2018) in a study he conducted. Toilets located inside a house are usually associated with high or middle socioeconomic status households while toilets outside the dwelling are usually associated with lower socioeconomic status.

(v) Cooking

CS2016 collected data on the source of energy. Under the source of energy, the variable energycook was chosen to be part of the factor analysis. Energycook was classified as electricity and other where the former included electricity from the mains and 'other' contains the rest of the factors under energyCook. The question used to obtain data about energyCook was '**What is this household's MAIN source of energy for cooking**?' a study by (Narula, 2016) on the SES index for developing countries found that the source of energy households use for cooking does importantly predict socioeconomic status.

(vi) Main Dwelling

Data collected on the type of the main dwelling for households were classified as a formal dwelling which included formal dwelling, house made of brick, flat and the other classification was 'other' which included the likes of traditional dwelling, hut, caravan, a tent just to name a few. The question asked by CS2016 to collect the data on the type of dwelling was '**Which of the following describes the MAIN dwelling that this household currently lives in**? main dwelling type was included in factor analysis and (Gaur, 2013) in his study found that the main dwelling is an important predictor of socioeconomic status.

(vii) Water Source

Data on access to water wanted to ask households their main source of drinking water. The classification was piped water and other. Under piped water, it included 'piped water inside the house, piped water inside the yard, piped water on community stand, neighbor's tap and communal tap'. Under 'other' it included borehole in the yard, rainwater in tank yard, well, spring river/stream/flowing water. The question asked to acquire data was **What is the household's MAIN source of water for drinking**? According to the study done by (Prouty, 2013) focusing on socioeconomic factors and water source features' effect on household water supply, the study found that water source is an important factor that impacts socioeconomic status.

3.6 Methods

3.6.1 Univariate analysis

According to Fielding, Gilbert, and Gilbert (2006) when looking to understand a data set, the first step is to look at each variable one at a time by using univariate statistics. Univariate data analysis is described by (Arppe, 2008) as a method that allows a researcher to analyze in isolation each variable studied. The first step in the univariate analysis is to construct for each studied variable a contingency table from the information gathered of a specific studied variable to measure its distribution (Arppe, 2008). It is emphasized by (Fielding, 2006) that it is important to carefully look at the distribution of each variable solely. Therefore frequencies, proportions, percentages, and ratios are one of the parameters of univariate analysis. The frequency distribution of each variable allows the researcher to compare information between a group of individuals (Fielding, 2006). For example, a frequency table allows one to respond to question like how many

African/Indian/white people are in the data and can also calculate the percentage of migration of each race. The frequency table further allows a researcher to see the highest and lowest values and values about which most scores cluster. Additionally, to compare the figures of the characteristics of a variable, a calculation of proportion provides a suitable base (Fielding, 2006).

"Proportions are the number of cases belonging to a particular category divided by the total number of cases" (Fielding, 2006: 51). Summing all the proportions of all categories should always equal to one (Fielding, 2006). Proportions can be used to calculate percentages. According to Fielding (2006) percentages can be described as proportions multiplied by 100. The total of all percentages should be equal to 100%.

3.6.2 Bivariate analysis

Bivariate statistical analysis is used to simultaneously analyze two variables (Bertani, Di Paola, Russo, and Tuzzolino, 2018). According to Bertani *et al.* (2018) usually when two variables are analyzed (Bivariate analysis) one variable is known as the outcome variable (dependent variable) and its values are compared with the different values displayed by other variables defined as an exploratory variable (independent variable). Many studies have been performed before that have analyzed the value of how the outcome variable value may change based on the alterations of an outcome variable (Bertani et al, 2018). Additionally, the exploratory variable values describe a subset of groups that will be compared, and the variation between different groups is assessed by the values of the outcome variable. Bivariate analysis can test how the outcome variable value depends on or is explained by the exploratory variable values (Bertani et al, 2018). In a quantitative study, two methodologies can be used for bivariate analysis namely the correlation analysis and simple linear regression (Bertani et al, 2018).

However, the use of the latter methodology, makes it possible to comprehend how the independent variable influences the dependent variable and it is also possible to evaluate the level of intensity that the independent variable has on the dependent variable. It is important to note that regression allows for predictions to be made based on the line of best fit whereas correlation only indicates the strength of the relationship between binary variables (Black, 1999). The main difference between the two even though they are linked to one another is that correlation analysis looks to measure the strength of a relationship between variables and regression seeks to find the difference in the effects of levels of a single variable on another (Black, 1999). A further difference between the two methods is

that in correlation analysis, the researcher acquires no control of either of the variables and therefore measures both the dependent and independent variables. Regression analysis, on the one hand, the researcher has the ability to change one variable (independent variable) to see its impact on the other variable (dependent variable) and then form a pattern that will allow for the addition of data and conclusions by using a mathematical relationship (Black, 1999). Therefore, regression analysis best fits this study because it seeks to predict at the end the internal migration patterns of South Africa.

3.6.3 Multivariate analysis

Multivariate data analysis focuses on discovering recurrences in the behaviour of two or more variables and can be regarded as exploratory research (Douglas Carrol and Green, 1997). Furthermore, multivariate data analysis is concerned with discovering and testing patterns associated with available data (Douglas Carrol, 1997). Multivariate data analysis further tests various models associated with the studied two or more variables which include determining whether or how the tested groups vary in their multivariate profile (Douglas Carrol, 1997). The core of any multivariate data analysis is made of a data matrix, or some cases matrices (Douglas Carrol, 1997). Data matrix is a horizontal array of numbers whose information must be summarized and represented in some way (Douglas Carrol, 1997). To understand the meaning of a column with values, multivariate data analysis often uses different summary measures such as means, variances, and covariance of the raw data. In so doing full information about the data is provided to understand its basic characteristics (Douglas Carrol, 1997). Multivariate data analysis is often interested in reporting variation in one or a group of variables in covariation terms with other variables. When analysing associative data, a researcher seeks to explain variation in determining the degree of association between dependent and independent variables (Douglas Carrol, 1997). Thereafter, the researcher will seek to find a formula or function that will be used to estimate the value of the dependent variable from the values of the independent. Finally, the researcher will seek statistical confidence by doing tests of statistical significance and placing confidence intervals on parameter estimates (Douglas Carrol, 1997).

3.7 Model

3.7.1 Logistic regression

Exploring the levels and differentials of internal migration in South Africa is what this study is about. The main study focus is whether an individual migrated or not, therefore

conclusions about the levels and differentials can be made. The interest is in a single dichotomous variable which for this study is the dependent variable "migration". To evaluate the dependent variable whether an individual internally migrated or not, additional variables such as age, sex, population group, marital status, educational attainment, and socioeconomic status should be accounted for because they are the influencing factors towards an individual migrating or not. The influencing factors are called independent variables and in a logistic regression model, they can be designated as X_1, X_2, X_3, and so on up to X_n where n represents the number of independent variables considered (Kleinbaum, 1998). A dependent variable can be denoted by any sign depending on a researcher (Kleinbaum, 1998). Whenever a set of independent variable X's is related to a dependent variable D, a multivariate problem is being considered (Kleinbaum, 1998). In an analysis of such a problem, a kind of a mathematical model is usually used to deal with the interrelationships of complex variables, and that model can be a logistic regression model (Kleinbaum, 1998).

According to Kleinbaum (1998) "logistic regression is a mathematical method that can be used to describe the relationship of several X's to a dichotomous dependent variable, such as D". Kleinbaum (1998) further explains that there are other modeling approaches, but the most popular modeling procedure is by far the logistic regression and it can be used to analyze migration data when migration measure is dichotomous. The logistic model was designed to measure the probability, and the measure is always some number between 0 and 1 (Kleinbaum, 1998).

According to Tranmer and Elliot (2008), proportions and probabilities are bounded between 0 and 1. Thus one cannot normally assume for a proportion and it is important to know that proportions have binomial distribution (Tranmer, 2008). For a binomial distribution, the mean and variance are not independent as is the case for normal distribution. The mean is therefore represented as *P* and the variance is represented by P*(1-P)/n, where n represents the number of observations and P denotes the probability of an event occurring in any trail (Tranmer, 2008). According to Tranmer (2008) when having a proportion (certainty) as a response, a logistic conversion can be used to link a dependent variable to a various explanatory variable.

$$\text{Logit}(P) = \text{Log}\left[P / (1-P)\right] \quad \text{[Eq 1]}$$

Within the square brackets represents the odds of an event occurring. In the study, this would be the odds of whether an individual migrated.

However, the use of a logit scale alters the proportion scale to plus and minus infinity (Tranmer, 2008). Therefore, when changing from a logit (log odds) scale to a probability scale, predicted values will constantly be at least 0 and at most 1. Thus, the probability formula can be written

$$Log\left(\frac{P_i}{1-P_i}\right) = \log it(P_i) = \beta_0 + \beta_1 x_i \quad \text{[Eq 2]}$$

Where P_i is the probability of being perceived as having migrated, and X_i is variable tested. The parameter β_o indicates the log odds of an individual perceived to have migrated (when X_i =0) and β_1 displays how such odds differ to an individual perceived not to have migrated (when X_i =1).

3.8 Data Limitations

One of the limitations of this study is the lack of reliable past research studies on internal migration. South Africa has only had two community surveys, in 2007 and 2016. The 2007 community survey was deemed as not largely accurate and it used physical paperwork to collect data which made it easier for data collectors to make mistakes. The 2016 community survey improved its data collection method which made it better than 2007. Internal migration data is limited not just here in South Africa but almost globally because it is hard to measure. According to Eigelaarmeets (2018), even though data collection has improved in South Africa, it is also still poor. 2007 community survey had unreliable data and the 2011 census was also slightly unreliable since it had a high percentage undercount 14,6% even though it slightly improved from the previous one which was 17,6% in 2001. Therefore, it has become hard to trust data from StatsSA (Nesstar dataset) because it has had many critiques in the calculation of migration trends to do a provincial comparison (Eigelaarmeets, 2018). Since this study is reliable on pre-existing data, community survey 2016 will be despite its critiques because it has improved in quality compared to the previous census and community survey dataset.

3.9 Conclusion

The main purpose of this chapter was to describe the methodology for this study as well as variables used and to explain all the procedures used to analyze data. Research design,

sampling strategy, dependent and independent variables, and factor analysis was presented in this chapter. With the use of community survey 2016 data with other statistical tools (logistic regression), this study will be able to explore the levels and differentials of internal migration in South Africa.

Chapter Four: Research Analysis

4.1 Introduction

The objective of this research was to explore the factors and differentials driving internal migration in South Africa looking at the general population. Community survey 2016 data was used for this study. Obtaining the research objective required using factors that focused straight on drivers and differentials of internal migration which include sex, age, population group, marital status, level of education, previous province, and socioeconomic status as presented in chapter three. Statistical significances for all variables used in this study are presented as part of the findings. Statistical significance tells us how that specific variable affects or contributes towards determining internal migration in South Africa. The dependent variable used against the explanatory variables is a dummy variable created from the question "Has (name) been staying at this place since October 2011?". Those who answered "Yes" and "Born after 2011 and moved" were the only ones selected because they prove that an individual moved between 2011 and 2016. The excluded ones were individuals who didn't move. Thus, were not part of the study because the study only wanted to look those who moved within the country.

The odds ratio for every variable including SES is also presented in this chapter. Firstly, this chapter will present findings on the distribution of all South Africans across the country that were sampled during CS2016 concerning every variable as used in this study. Secondly, the interprovincial movements are also presented showing migration levels across provinces. Thirdly, the nested models are also presented in this chapter for the whole population, followed by nested showing females only and ending with a nested model showing for the male population only. Lastly, it is the chapter summary that is presented.

4.2 Distribution of internal migrants across the country

This section will only explore the background of individuals who internally migrated within the country. The covariates include biological variables that look at the distribution of migrant males and females, population group, previous province, marital status, educational attainment, and socioeconomic status. The table below presents data of migrants only in South Africa. More females migrate compared to males as males have 49.95% and females 52.05%. However, females are more in numbers compared to males, thus justifies the higher percentage of females. The black African population group dominates migration within population groups as 80.92% of migration comes from black

Africans, followed surprisingly by the colored population with a 7.27% migration rate. The Indians acquire a low migration rate of 1.60% and that could be that during the apartheid, Indians were not distributed all over the country, they were placed in Kwazulu-Natal, therefore most of their movements are within a single province. The Gauteng province is generally known as the province receiving most people both internally and internationally. However, the same province is also leading in people leaving and migrating to other provinces. Out of 183645 people observed, 54318 (21.54%) people migrate out of Gauteng, they are then followed by KwaZulu-Natal with 24.32% and Eastern Cape (13.19%). These three provinces are the leading three in terms of people leaving them to other provinces.

Table 4.1: Table showing distribution of migrants and odds ratio of all variables.

Explanatory variables	**Migrants #N**	**Percentage %**	**Odds (Migrants)**
Biological variables			
Male	95420	47,95	Omitted
Female	103598	52,05	.9619537**
Total	199018	100%	
Population group			
Black African	161 052	80,92	Omitted
Colored	14 465	7,27	1.041414**
Indian	3 175	1,60	1.018166
White	20 326	10,21	2.446336**
Total	199 018	100%	
Age			
0-4 to 85+	**3 325 814**	100%	.9983176**
Previous Province			
Western Cape	18 683	10,17	Omitted
Eastern Cape	24 215	13,19	.7590229**
Northern Cape	5 111	2,78	.9244878**
Free State	11 754	6,40	.8840513**
KwaZulu-Natal	24 327	13,25	.5283768**
North West	14 566	7,93	.8706615**
Gauteng	54 318	29,58	1.138728**
Mpumalanga	12 007	6,54	.6435979**
Limpopo	18 664	10,16	.6687694**
Total	**183 645**	100%	
Educational attainment			
No Schooling	7 561	3,87	Omitted
Pre-school	6 482	3,32	3.566295**
Primary education	37 582	19,22	3.083419**
Secondary education	116 782	59,74	5.149698**
Higher education	27 084	13,85	10.26403**
Total	**195 491**	100%	

Marital status			
Married	71 485	41,45	Omitted
Previously Married	15 998	9,28	.6517935**
Never married	84 984	49,28	.7381308**
Total	**172 467**	100%	
Socio-economic status			
Lowest	26 502	14,50	Omitted
Middle low	2 124	1,16	1.154358**
Middle high	67 922	37,17	2.074843**
High	67 040	36,69	1.635987**
Total	**182 710**	100%	

******Significant at $p<0.05$; OR = Odds Ratio

According to von Fintel and Moses (2017), South Africa's internal migration has a robust gender dimension. During the apartheid-era the system that operated predominantly restricted the back African population from migrating. Only black African men could migrate within the country without their families (Von Fintel, 2017). The restriction of a woman from migrating during the apartheid-era positively skewed the migration statistics towards the males. Though women's migration levels are increasing at a rapid rate contemporary when compared to men, literature still shows that men still pose a greater probability to migrate compared to females even though females seem to be closing the migration gap. It is important to note that for odds ratios, the word 'omitted' refers to the reference category. The odds ratio results from this study seem to be agreeing with the literature that males still pose a greater chance of internally migrating in South Africa. The odds of 0.961 as presented in the table above mean that when comparing male and female migration, the odds of a female individual migrating internally are decreased by 4.9 percent. The results for sex were significant ($p\ 0.00 > \alpha\ 0.05$).

The odds ratio for colored (1.041) and Indian/Asian (1.018) population groups mean that both these groups have a greater chance of migrating across South Africa when being compared with the black Africans. However, the results for the Indian/Asian population group are deemed to be insignificant. The white population group with the odds of (2.446) has an even greater chance of internally migrating when compared to black Africans. The white population's results can be justified by the fact that they have never had migration restrictions and they also have a financial backing that gives them the liberty to migrate across the country (Posel, 2004). The black Africans on the other side as explained above were historically restricted to move around South Africa. Though the situation has changed contemporary as they can move like everyone else, it seems like the apartheid had a huge effect, but they are gradually closing the gap.

The odds of internally migrating for age represents the odds of an individual to migrate within the country as age increases. Thus, the odds of 0.998 reported above mean that as an individual grow older, they become less likely to migrate. Therefore, as age increases, the odds of internally migrating decreases by 1 percent.

The Gauteng province is one of the provinces that receive more people in South Africa due to its many economic opportunities available for people to better their standard of living. However, the same province is also the leading province with high out-migration rates. The results above compliment the literature as seen that the odds ratio of the Gauteng dwellers (1.138) show that the province has a greater chance of migrating internally than Western Cape dwellers. Gauteng province dwellers are 1.138 times (13%) more likely to migrate out of their province when compared to Western Cape province dwellers. The Northern Cape Province is surprisingly the province that has a lower rate of out-migration in South Africa. The Northern Cape province chances of migrating out of their province when compared to Western Cape province are 8.6% less. It can then be concluded with the aid of the odds ratios that the Gauteng province is the leading province with high out-migration rates followed by Western Cape Province. The other provinces have lower out-migration rates when being compared to Western Cape.

The odds ratio results for educational attainment (Pre-school (3.566), Primary education (3.083), secondary education (5.149), higher education (10.264)) show what is expected in general terms as individuals who have a certain qualification have a huge chance of migrating across South Africa when being compared with individuals who have no schooling at all. Literature suggests that a person who has attained a higher education level has a greater probability to migrate compared to those with a below level of education. According to (Kollamparambil, 2017) educational attainment is one of the important predictors of migration and unemployment in South Africa. Kollamparambil (2017) further states that individuals with no schooling tend to migrate less compared to those with a higher educational level. In recent years, the number of people with secondary qualifications and above qualifications has increased, however, those with higher qualifications are the ones who dominate migration (Kollamparambil, 2017). The results of this data complement the study done by (Kollamparambil, 2017) that the higher educated an individual is, the more likely he is to migrate.

The odds ratio of people whose marital status is previously married (0.651), their chances of internally migrating are less when being compared to married people. The previously married pupil has a 35.9% less chance of internally migrating when compared to the married pupil. Never married individuals also migrate less when compared to married individuals. Individuals with a never-married marital status have a 27.2% less chance of internally migrating when compared to individuals who have a married marital status. Therefore, a conclusion can be made that getting married increases the odds of an individual in South Africa to Migrate.

Thet (2014) argued that internal migration is often primarily inspired by economic factors. In South Africa, research from statistics South Africa in the community survey found that people migrate the most across South Africa due to social reasons for example to be close to a loved one or a family member. However, it is still argued by (Thet, 2014) that though people migrate for social reasons the most, the main indirect reason is moving because of unemployment and underemployment reasons. According to the odds ratio, a middle-low household member is 1.154 (15%) more likely to migrate across South Africa than an individual from a household in the lowest economic status. A pupil from middle high SES has an even higher chance of internally migrating when being compared to a pupil from the lowest SES. A high SES household is 1.635 (63%) more likely to migrate across South Africa when compared to the lowest SES. It should be noted that all the results are significant as the P values are below 0.05. With (Thet, 2014) arguments, it can be said that migration in all the SES levels migrates across South Africa for various reasons which include migrating because of social reasons and because of unemployment or underemployment reasons

4.3. Nested Logistic Models

The tables below display findings from the three nested models done which explored the factors driving internal migration. The nested models on the factors driving internal migration yielded results which were most statistically significant. Nested models aimed at showing the odd ratios of the factors that drive internal migration.

Table 4.2 Nested logistic model displaying the odds ratios of the drivers of internal migration for the general population.

Explanatory variable	**Model I**	**Model II**	**Model III**	**Model IV**	**Model V**
	N=225538	**N=225 538**	**N=225 538**	**N=225 538**	**N=225 538**
	OR	**OR**	**OR**	**OR**	**OR**
Age	.9962322**	.9621704**	.9632377**	.9631798**	.9660666**
Sex (Male)					
Female	.9795556**	.9556888**	.9534619**	.9682002**	.9820187**
Population group (Black African)					
Coloured	1.05308**	.9294052**	.9275163**	.7393901**	.9113556**
Indian/Asian	1.054002**	.866037**	.7544042**	.9266401**	.868327**
Whites	2.585218**	.2.338192**	1.821254**	1.60121**	1.789043**
Marital status (Married)					
Prev Married		.7308959**	.768834**	.787098**	.8397782**
Never Married		.3735281**	.3983863**	.4211412**	.4552131**
Edu (No schooling)					
Pre school			1.296179**	1.226335**	1.4011402**
Primary_s~l			1.154576**	1.067289**	1.176511**
secondary			1.777159**	1.59929**	1.953741**
Higher_Ed~n			3.400806**	3.02944**	3.818739**
Previous province (Western Cape)					
Eastern Cape				1.005424	1.037103**
Northern Cape				1.097161**	1.107492**
Free State				.9617379**	.8634033**
KwaZulu Natal				.622927**	.7492642**
North West				1.034933**	1.043622**
Gauteng				1.074858**	.953333**
Mpumalanga				.7331682**	1.637165**
Limpopo				.8168913**	1.155928**
SES (Low)					
Medium low					.7952007**
Medium high					1.462694**
High					1.265869**
Log likelihood	**-747528.21**	**-605223.34**	**-586938.59**	**-549349.78**	**-501888.89**

**Significant at p<0.05; OR = Odds Ratio

The one thing that we can observe with age is that from the time variables started to be added in model two, the odds ratios of age decreased and have never gone to the same level as model 1 or increased in the models that followed. This supports the claims that as age increases, the chances of migrating decrease despite any variable influence. The addition of SES in model 5 has witnessed an improvement in how females move across the provinces. Females migration odds ratio increased when compared to the previous models (model 1-4). In model 4, females had a 4% less likely chance of migrating internally in South Africa compared to a 2% less likely chance they have in model 5 when comparing with male results. The results we just found shows the impact of an SES has on reducing the gap between male and females that was there even in the apartheid era. Migration in terms of population group. There are not many effects even when SES has been added when comparing all models. Black Africans still migrate at almost the same higher chance compared to coloreds and Indian/Asian. The whites still have the same higher migration rate as black Africans than in all the 5 models. Married people still are more likely to migrate than previously married and never-married people in all 5 models. It is also still maintained that people with a pre-school to higher educational level are more likely to migrate across South Africa compared to those with no schooling in all 5 models.

When looking at migration in terms of provinces, we see a change in terms of how people migrate between provinces when SES is added. In the Free state province, in model 4 people living in the Free state had a 4% less chance of migrating out of their province when being compared with people living in the Western Cape. However, the inclusion of SES has seen the Free State people's chance of leaving their province become 0.863 times (14%) less likely when being compared with Western Cape people. Other provinces such as KwaZulu-Natal, Gauteng, Mpumalanga, and Limpopo do not get much impacted in how they migrate when SES is added. The chances of people migrating out of KZN became less likely when compared to the Western Cape in model 5 when comparing with model 4. In model 5, KZN people are 0.749 times (26%) less likely of leaving their province compared to western cape, while in model 4 they had a 38% less chance of leaving KZN compared to the Western Cape. The Mpumalanga and Limpopo provinces saw their people's chances of leaving their province increase through the inclusion of SES in model 5 compared to model 4. The Mpumalanga province and Limpopo both have higher chances of migrating when compared to western cape province, the former is 1.637 times (63%) and the latter 1.155 times

(15%) more likely for their people to move to other provinces when compared to the Western Cape. Inclusion of SES saw the people living in the Gauteng province having a less likely chance of migrating out of the province compared to the Western Cape. SES inclusion saw Gauteng residents having 0.953 times (5%) less likely chance of leaving their province compared to western cape residents. People in a low socioeconomic status are more likely to migrate across South Africa compared with people in the middle-low economic status when all variables in the model are considered. Middle low population group has a 21% (0.795) less chance of migrating across South Africa when compared to the population in the low SES. Both populations from middle-high and high SES are more likely to migrate across the country when compared to the low SES population. The inclusion of each variable in the regression for each model made the following model fit better than the previous one, as the log-likelihood shows an increase from -747525.21 to -501888.89. The change in the log-likelihood from model one to model five shows the great importance of each variable as an explanatory factor in driving migration internally in South Africa. It is important to note that all the results from the table above except the Eastern Cape province result in model 4 are significant as their P-values are below 0.05.

4.4 Nested model for female population only

Table 4.3: Table displaying the odds ratios of factors driving migration for female population.

Explanatory variable	Model I	Model II	Model III	Model IV	Model V
	N=225538	N=225 538	N=225 538	N=225 538	N=225 538
	OR	OR	OR	OR	OR
Age	1.000716**	.9684042**	.9690783**	.9714693**	.9714533**
Sex					
Male	omitted				
Population group (Black African)					
Coloured	1.021853	.9001465**	.9026205**	.8761408**	.876594**
Indian/Asian	1.087466**	.9371182**	.8080118**	.8722385**	.8853878**
Whites	2.342804**	2.192559**	1.682613**	1.641828**	1.645101**
Marital status (Married)					
Prev_Married		.7807496**	.8234281**	.8917012	.9010895**
Never Married		.4202311**	.4547407**	.5021355**	.5022479**
Edu (No schooling)					
Preschool			.9339951	1.133893**	1.201887
Primary_s~l			1.11439**	1.194134**	1.197841**
secondary			1.66833**	1.896399**	1.904065**
Higher_Ed~n			3.306788**	3.830111**	3.829226**
Previous province (Western Cape)					
Eastern Cape				.9213688**	.9532429**
Northern Cape				1.12326**	1.136051**
Free State				.9207808**	.8668559**
KwaZulu Natal				.5861393**	.7251531**
North West				1.029654	1.045036**
Gauteng				1.05322**	.9805122
Mpumalanga				.7302907**	1.717531**
Limpopo				.81113982**	1.192005**
SES (Low)					
Medium low					.7944281**
Medium high					1.434072**
High					1.321832**
Log likelihood	**-356878.85**	**-289456.06**	**-279666.83**	**-259889.58**	**-236930.44**

**Significant at p<0.05; OR = Odds Ratio

In model 5, the SES is included in the regression. The inclusion of SES doesn't have that much effect on many variables as there is either a slight change or no change at all in the odds ratio when comparing variables of model 5 with 4 previous models. However, it cannot be ignored that for educational level in this model, the results of preschool level when being compared to no schooling are insignificant. The P-value

for preschool is well above the significance level of 0.05. In terms of migrating across provinces with the influence of SES, some noticeable results cannot be ignored. The KZN province in this model shows a great improvement in their chances of migrating out of the province when compared to individuals migrating out of Western Cape province. In model 4, the KZN odds ratio was 0.586 meaning they had a 42% less likely chance of migrating to other provinces when compared to Western Cape province. In model 5, an individual from KZN has 0.725 times (28%) less likely chance of migrating out of the province when compared to Western Cape individuals. Thus, due to SES, the chances of migrating out of KZN improved by 14% when being compared to the chances of moving out of the Western Cape in model 4. Population from the Gauteng province in model 4 had a 5% more likely chance of migrating out or leaving the province. The introduction of the SES in the model witnesses the chances of leaving the Gauteng province becoming less as they show 0.980 times (2%) less likely chance of migrating out of the province when compared to Western Cape province. However, though there is a change in the odds ratio, the results are insignificant as the reported P-value is 0.303 which is not in the significant scale of 0.05. The results for the Mpumalanga province in model 5 show that individuals are more likely to migrate out of the province when compared to individuals living in Western Cape. SES introduction improved the chances of Mpumalanga residents leaving the province as they have a 1.717 (71%) more likely chance of migrating out when compared to Western Cape residents. In model 4, the Mpumalanga province population had a 27% less chance of moving out when compared to the Western Cape province. The Limpopo province also improved in terms of their chances of leaving the province due to the introduction of the SES. In model 5, Individuals from the Limpopo province have a 1.192 (19%) more likely chance of migrating out of the province when compared to individuals from the Western Cape. In model 4 the Limpopo population had a 19% less chance of migrating out of the province when compared to Western Cape province. Middle low SES women have 0.794 (21%) less likely chance of migrating when compared to women in low SES. Middle high and high SES females have a more likely chance to migrate compared to women in low SES. These results make sense as there is a difference in the standard of living. Therefore, it can be said that the SES does have some effect on the migration process in South Africa. An increase in the log-likelihood from the previous models to model 5 is an indicator that variable added to others do play a role in the internal migration process of South Africa.

4.5 Nested model for the male population only

Table 4.4: Table displaying the odds ratio of the factors driving migration in South Africa

Explanatory variable	Model I	Model II	Model III	Model IV	Model V
	N=225538	N=225 538	N=225 538	N=225 538	N=225 538
	OR	OR	OR	OR	OR
Age	.9925957**	.9574846**	.9589844**	.961942**	.9621205**
Sex					
Female	omitted				
Population group (Black African)					
Coloured	1.077763**	.9587126**	.9531598**	.9438731**	.9467602**
Indian/Asian	.9958586	.7876821**	.6951004**	.8543457**	.8516667**
Whites	2.794684**	2.47913**	1.957377**	1.928878**	1.932365**
Marital status (Married)					
Prev_Married		.7296704**	.7611302**	.8198225**	.8318903**
Never Married		.3495932**	.3679928**	.4278738**	.4327149**
Edu (No schooling)					
Pre school			.664349**	1.692273**	1.58245**
Primary_s~l			1.179912**	1.146599**	1.146207**
secondary			1.843971**	1.948674**	1.964047**
Higher_Ed~n			3.436979*	3.737367**	3.753579**
Previous province (Western Cape)					
Eastern Cape				1.083552**	1.114664**
Northern Cape				1.070446**	1.078262**
Free State				1.002304	.8609744**
KwaZulu Natal				.6572662**	.77049**
North West				1.036211	1.038745**
Gauteng				1.092955**	.9269891**
Mpumalanga				.7349501**	1.5631**
Limpopo				.8241263**	1.126798**
SES (Low)					
Medium low					.796963**
Medium high					1.490965**
High					1.217667**
Log likelihood	**-390027.03**	**-315391.55**	**-306943.34**	**-289155.53**	**-264654.71**

******Significant at p<0.05; OR = Odds Ratio

The previous province of residence variable of model 4 against model 5, changes in the Free State province are visible. In model 4, the Free State province odds ratio reported

1.002 meaning the other variables didn't have any effects on it. However, in model 5 the Free State province odds ratio report 0.860 meaning that the inclusion of SES in the regression does affect males leaving the Free State province. A male individual in the Free State province is 0.860 times (14%) less likely of migrating out of the Free State when being compared to a male individual in the Western Cape province. The KZN province odds ratio reports 0.770 meaning a male individual from KZN is 0.770 times (23%) less likely of leaving KZN compared to a Western Cape male individual when SES is included in the regression. In model 4, a male from KZN had a 35% less chance of leaving the province when compared to a male individual from the Western Cape. SES inclusion into the regression improved the chances of KZN males leaving the province by 12%. The chances of a male leaving the Gauteng province in model 4 were 1.092 times (9%) more likely. In model 5, males in the Gauteng province are 0.926 times (8%) less likely of migrating out of Gauteng when compared to males from the Western Cape. Therefore, the effects of socioeconomic status are visible as there is a massive change in migration patterns between models 4 and 5 of the Gauteng province against the Western Cape province. The males from Mpumalanga and Limpopo both in model 4 had fewer chances of leaving their provinces. However, the inclusion of SES in model 5 has seen a change in the migration pattern of the two provinces. Both the males from Mpumalanga and Limpopo in model 5 have a more likely chance of leaving their provinces due to SES inclusion when compared to males from the Western Cape. The medium-low group is 0.796 times (21%) less likely of migrating compared to males from low SES. An increase in the loglikelihood from model 1 to model 5 is still an important indicator that the variables added to each model best fit the results presented.

4.6 Chapter summary

The chapter has accessed findings from the logistic regression which has five models for three subsections. The general population sample was covered in the first table of the nested model. The second table covered the nested model of females only and the last table was males only. Results showed that age doesn't have that much influence in determining migration across South Africa, that was evident because the age variable ranged around the same level despite the inclusion of various factors in each model for all three tables. Sex was observed to play a big role in migration across the country as males still dominated migration. However, female migration is closing the gap in

males. Other independent variables including population group, previous province, educational level, marital status, and SES were found to be important factors that contribute to driving internal migration in South Africa. What was also evident was that the inclusion of SES in each table, improved the chances of a South African to internally migrate in almost all variable. The white population group dominated migration in all models when compared to black Africans. However, it was found that the white and black African population group are the two groups that are most likely to migrate across South Africa. In terms of moving across provinces, the poorer provinces such as Limpopo, Mpumalanga, eastern cape, and Northern Cape were provinces that South Africans were likely to migrate out of and the Gauteng province consistently had people who were less likely migrate out because it is the economic power of South Africa where most South Africans migrate to.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter will seek to explore and expand the knowledge as well contribute towards a growing body of literature on the factors driving internal migration and differentials associated with internal migration in South Africa. The main objective of this research is to determine the factors and differentials that drive internal migration with much focus on interprovincial migration using estimates from the South African community survey 2016 data. This chapter will explore and reveal how the main research objective of the study was met. The logistic regression model and nested logistic models were both used to analyse data for this study. A logistic regression model was used to find the odds of migration for each variable with its sub-variables inside while a nested logistic model was used to determine the odds ratio of migrating while specifying the importance of each variable in affecting the others. Both the models used to analyse data were presented in chapter 4 of this study. This chapter will discuss the results of the study in answering the study research questions, suggest recommendations, and provide a conclusion. The first part will be the discussion of the results, followed by recommendations. The limitations of the study are discussed just before the conclusion of the study.

5.2 Results discussion

The aim of this study was going to be achieved by answering the study research questions which focus on internal migration. The questions that needed to be answered are:

I. What are the demographic differentials in South Africa due to internal migration?

II. What are the factors associated with internal migration in South Africa?

Over the past years, more attention was given to international migration. Studies focused on migration in and out of South Africa. However, the pendulum has swung back in recent years to focus on internal migration (Lucas, 2015). South Africa has seen a huge increase in people moving within the country, especially after the apartheid regime (Kok, 2007). The increase in internal migration in South Africa has made this study to add to research by looking at internal migration drivers and differentials across the country with much focus on interprovincial migration. This study has been able to

capture information about the country's internal migration and results are displayed in chapter 4. However, it doesn't cover everything about internal migration, implying that there are still gaps that need to be filled within the field.

5.2.1 The sources and quality of data

This study primarily utilized community survey 2016 data. Data from the community survey 2016 was deemed and rated to be of a good standard and more reliable when compared to the previous community survey which was in 2007. Data that is of a good standard is very important since capturing migration data is a complicated thing to do even for far more developed countries than South Africa. Community survey 2016 had more advanced technology than it had for community survey 2007 data collection which justifies its improved quality and reliability. The survey solution CAPI system was the one used to collect data during the survey. This system had all the right mix for features necessary for good data collection as it was also used by the World bank. The CAPI system was more accurate and made things easier such that the community survey 2016 results were released just two months following data collection of which was deemed a record-breaking timeline for the organization (Statistics South Africa, 2016b). Therefore, the quality of community survey 2016 data makes results from this study to be more trusted and reliable in providing accurate estimates about the factors driving South African internal migration. The data used had to be cross-examined first and edited before being used in internal migration estimation to fit the objectives of the study.

5.2.2 Factors and demographic differentials driving internal migration

The demographic factors that were used for this study were age, sex, population group, educational attainment, marital status, and socioeconomic status. These factors were making us understand more about migration in its different aspects. This study was able to find through a nested regression model of the general population that as age increases the chances of migrating decreases, and the more factors were added to the nested model, it became even more less likely for South Africans to migrate as their age increases. The results found in this study verifies the argument made by (Millington, 2000) when he argued that migration declines with age. As an individual age increases, the person examines the costs and benefit of migrating to a place of destination. Concerning income, when a person realizes will make income gains for a short time because of the age barrier, that reason becomes enough to remain in the place

of origin. Older people become attached to their place of origin and that one of the reasons they choose not to migrate. Whereas on the one side the younger generation doesn't have that attachment to the place of origin, that's why it's also easier for them to migrate (Millington, 2000). However, what was interesting about the general nested model was that the log-likelihood from the first model to the last one kept on increasing. A change in the log-likelihood was of great importance because it acts as an indication that as factors are added in the nested model, they influence other factors in determining migration. An increase in the change of the log-likelihood therefore informs us that each factor chosen to be part of this study does have a role it plays in people deciding to migrate. When all factors are incorporated into the model, results weren't as surprising as males were more likely to migrate than females.

Black africans and married people were more likely to migrate compared to other sub-factors in their categories. The results found in this study supports the study by (Jang, 2014) that as soon as people get married, their probability of migrating increases as spouses who didn't live together before now moving together after marriage and that means one must migrate or both migrate to a new place to live together. According to Reed (2013), although the black African population group is still disadvantaged today, freedom of movement after the apartheid has benefitted them a lot more especially socially and economically. Amongst all other races in South Africa, the black African population commonly migrates the most than any other race in the country (Reed, 2013).

Most movements across South Africa move from urban to rural areas, and those moves are constituted mostly by black African population group because during apartheid they were forced to live in homelands. However, now they have the freedom to move out of those homelands for a better livelihood in urban areas (Reed, 2013). The high migration of blacks found in this study is not new and surprising as Reed's previous study also found that black Africans move a lot compared to other races both inter-provincially and intra-provincially, and these high moves may be the products of two things. First, it's the crumble of the apartheid laws that allowed blacks to inter-provincially migrate from their poor homelands to more affluent areas that previously were off-limits. Second, it's the increase in urbanization and economic developments which drew migrants to be attracted to major urban areas from poor rural areas (Reed, 2013).

This study was able to validate the argument by (Etzo, 2008) that education does heavily affect the propensity of a population to migrate. People with a low level of educational attainment are less expected to migrate compared to those with high educational attainment. Findings retrieved from the nested models of the general population. Females, and males all proved that a higher level of educational attainment gives an individual a more likely chance of migrating than an individual with no schooling at all or a lower educational level. People with a high level of educational attainment have got an advantage to use information efficiently than those with low or no educational attainment, Therefore, the decision to move becomes less complicated compared with an individual with low education (Etzo, 2008)

In terms of people leaving their provinces. Free state, KwaZulu Natal, and Gauteng were the only provinces in which people were less likely to leave when compared to the Western Cape province. The main reason here is the large exchange of migrants between the Western Cape and Eastern Cape. The Eastern Cape province is one of the poorest provinces in South Africa, therefore, the high numbers that migrate to the Western Cape are still the high numbers that leave the Western Cape province. The migration patterns between the Western Cape and Eastern Cape somehow skew the data because most of the movers in and out of the province are people from one province of which is Eastern cape province (Cox *et al.*, 2004). The Gauteng province was expected to have people less likely to leave the province when compared to the Western Cape as the Gauteng province is regarded as the economic powerhouse to the country (Cox *et al.*, 2004).

The nested model which features females only tends to produce almost similar results as the general nested model in most factors. However, in terms of inter-provincial migration, Eastern cape females are less likely to leave their province compared to the Western Cape. Thus, meaning that the high exchange of migrants between these two provinces is dominated by males. Previous studies and this study have shown that the Eastern Cape population migrates highly to western cape province, and according to our findings, the large numbers of people leaving Eastern cape are males.

The results for males and females correspond as when looking at the nested model for males only, the male population from Eastern Cape is more likely to leave Eastern cape when compared to males in Western cape. therefore, these results further verify that in

general, more males leave the eastern cape province than females. The gendered migration likelihood that favors male rather than the female is a validation of previous studies found not just in South Africa alone but globally that male dominate migration than females and both the nested models representing females and males in this study supports suggests that man are more likely to migrate than women.

The socioeconomic status for the three nested models done, tells the same story that an individual that is in the medium-high and high socio-economic status is more like to internally migrate than individuals in the low socioeconomic status. Amongst the three nested models done socioeconomic status plays a significant role in terms of influencing migration in South Africa. However, it is more influential on inter-provincial migration. As (Reed, 2013) stated, many people are living in urban areas migrate the most than those in rural areas and people from urban areas are more likely to migrate between provinces than people from rural areas. Therefore, if an individual falls under the low SES, their chances of migrating are very limited.

5.3 Study limitations

The type of data used for this research is the primary study limitation. According to the statistics South Africa technical report, the main objective of community survey 2016 was to estimate for local municipalities in South Africa. Therefore, a lot of information provided focuses on migration at a municipal level and less data is talking about inter-provincial migration as this study aimed to focus more on it. Thus, this study covers more information about local internal migration movements rather than inter-provincial migration. Another limitation linked to this study is that no variable had wage differences or levels in various parts of South Africa. This study's theoretical framework is a neoclassical theory of migration and focuses on wage differentials in various geographical places. Therefore, the lack of a variable that compares wage differences in various places made it not to be able to fully prove the application of the theory.

5.4 Space for future research

South Africa's data on internal migration research focuses more on rural to urban migration and it is in most cases intra-provincial migration. There is less data that solely focuses on inter-provincial migration where all the aspects of migration are covered. This study covers less about inter-provincial migration, but it could be one of the bases

that could influence future researchers to further unpack migration patterns and levels inter-provincially in South Africa.

Much information about inter-provincial migration focuses more on affluent provinces such as Gauteng and Western Cape. There more information collected about migration to and out of Gauteng and Western Cape. Community survey 2016 acknowledged that the Northern cape province had the highest dwelling units' exclusion from the data. More focus should also be put on other provinces to further understand them just as we better understand Gauteng as there is a lot of literature about it.

5.5 Recommendations

According to (Statistics South Africa, 2016) migration is an ever-present thing and people migrate every day internationally or internally within a country. Mobility of humanity is set to continue with migrants moving to various destinations for various reasons. Therefore, migration has significant development potential and addresses many South African issues such as unemployment issues, getting closer to better basic activities, and bringing people closer to their loved ones, just to mention a few (eigelaarmeets, 2018). This study includes both intra-provincial and inter-provincial migration even though details are given to inter-provincial migration. However, it doesn't paint a clear picture of migration levels inter-provincially. Therefore, it is needed and would be good to focus on studies that go in-depth of migration levels and patterns in South Africa inter-provincially. A lot of studies have focused on municipal migration, and there is enough data as we know the estimates of the major municipalities in terms of in and out-migration, but we tend to have little data on the overall migration patterns of a province.

Measuring migration is a tough task for the whole world as no country has perfect accurate migration statistics. However, narrowing research and focus only on migration from one province to the other can improve our data on inter-provincial migration. In most studies on internal migration, interprovincial migration covers less information and more on intra-provincial or municipal migration across the country. Thus, research should focus strictly on inter-provincial so that there will be a balance in migration data in the country.

5.6 Conclusion

Much interest has grown on internal migration into discovering their levels, the rate at which it's growing, and the factors that encourage internal migration. This study has been able to add some value towards the growing interest and is focused on levels and differentials of internal migration. Data presented in this dissertation is in the post-apartheid era, with a focus much on the general migration estimates of the country and went to be specific on inter-provincial migration. In presenting the case on internal migration, this dissertation was able to present the migration estimates between the years 2011 and 2016 and showed how movements were in between these years. Much of the estimates made in this study were general internal migration estimates, however, there is a specification in terms of how movements were inter-provincially between the year 2011 October and 2016 October even there aren't many details. However, in terms of general migration, through a nested model this study was able to show how different factors when taken into consideration together are expected to affect migration and most of the findings validated findings from previous studies that focused on an almost similar study.

This study is a quantitative study that investigated the levels and differentials of contemporary internal migration in South Africa using data from the community survey 2016. Migration outcomes were measured mainly by the odds ratio of migration through a nested regression model. The first chapter introduced what the study is about by providing the background, research problem, and motivation for conducting the specific study. The literature review was done in chapter 2 where existing literature was reviewed which broke down migration in general from a global, continental, and national point of view. The theoretical framework which guided this study was the neoclassical theory of migration. Chapter 3 discussed the methodology of the study, where it unpacked more about the variables used to measure internal migration in South Africa. Chapter 4 analyzed the odds ratio of migrating which were computed by the STATA 16 software and the main analysis model where conclusions were made was the nested regression model. The current chapter has discussed the findings of the study concerning the research questions and identified the limitations of the study. Scope for future research and recommendations were also presented in the current chapter.

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