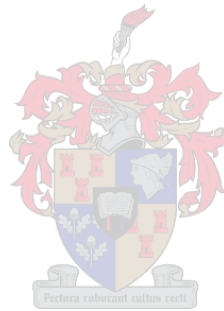# MIGRANT CHARACTERISTICS AND MIGRATION PATTERNS TO GAUTENG (2001-2011)

By Jonas Molate Ngobeni

Mini-thesis presented in partial fulfilment of the requirements for the degree of MPhil Urban and Regional Science in the Faculty of Arts at Stellenbosch University.

Supervisor: D Du Plessis

F gego dgt''2014

DECLARATION

By submitting this assignment electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

Date: 15 November 2014

ABSTRACT

Although Gauteng only covers 1.5% of the total land area of South Africa, it is viewed as the economic heartland of the country and a gateway to Africa. Gauteng experienced the highest rate of population growth between 2001 and 2011 with in-migration playing an important role. This movement of people from both outside South African borders and from other provinces within the country plays a significant role in the development of Gauteng. The rapid urban growth of the province and in-migration exert tremendous pressure on the provincial infrastructure and impact on both provincial and municipal functions, especially the planning and delivery of services. This research analyses migration patterns and trends to Gauteng over the period 2001 to 2011 and profiles the demographic, social and economic characteristics of migrants to Gauteng. The results indicate that as much as 32 percent of migrants to Gauteng between 2001 and 2011 are foreign migrants from outside SA, followed by 20.3 percent from Limpopo and 13.1 percent from KwaZulu-Natal. The City of Johannesburg is the main destination of migrants to Gauteng, attracting 38.4 percent of all migrants to the province, and is also the preferred destination in Gauteng for foreign migrants from outside South Africa (48.9 percent). The typical migrant to Gauteng is a male person who has never married, aged between 20 and 29 years. This migrant is most likely to be originating from outside South Africa, from Limpopo, or KwaZulu-Natal. The typical migrant is likely to have completed some secondary education and is earning a low income of less than R6400 per month. The findings also indicate the existence of subtle sub-stream migration movements to Gauteng underlying the dominant patterns. The results provide an understanding of contemporary migration dynamics to Gauteng and can inform planning and policy formulation.

Keywords and phrases: Migration; Gauteng; Foreign migrants; Main stream migration; Sub-stream migration; Socio-economic characteristics; City of Johannesburg.

OPSOMMING

Alhoewel Gauteng slegs 1.5 persent van die totale area van Suid Afrika beslaan, word dit beskou as die hartland van die land en die poort na Afrika. Gauteng het die hoogste bevolkingsgroei getoon tussen 2001 en 2011 met inkomende migrante van buite Suid Afrika se grense en van ander provinsies wat die hoofrol gespeel het. Die tempo van stedelike groei in die provinsie en inkomende migrasie plaas baie druk op die provinsiale infrastruktuur en het 'n invloed op beide provinsiale en munisipale funksies, veral die beplanning en voorsiening van dienste. Hierdie navorsing ontleed migrasie patrone na Gauteng oor die periode van 2001 tot 2011 en analiseer die demografiese, sosiale en ekonomiese eienskappe van migrante na Gauteng. Die resultate toon dat soveel as 32 persent van migrante na Gauteng tussen 2001 en 2011 vanaf die buiteland afkomstig was, gevolg deur 20.3 persent vanaf Limpopo en 13.1 persent van KwaZulu-Natal. Die stad Johannesburg is die hoof bestemming van migrante na Gauteng (38.4 persent van alle imigrante na die provinsie), en is ook die verkose bestemming vir die meerderheid buitelandse immigrante (48.9 persent). Die tipiese immigrant na Gauteng is 'n ongetroude manlike persoon tussen 20 en 29 jaar oud. Die immigrant is ook hoofsaaklik afkomstig van buite Suid Afrika, Limpopo of KwaZulu-Natal. Die tipiese immigrant het waarskynlik 'n vorm van sekondêre onderwys ontvang en verdien 'n inkomste van minder as R6400.00 per maand. Die bevindings bevestig ook die bestaan van subtiele sub-stroom immigrasie patrone na Gauteng onderliggend tot die dominante hoofstroom migrasie bewegings. Die resultate verskaf insig in die hedendaagse migrasie bewegings en kan bydrae tot ingeligte beplanning en beleidsformulering vir die provinsie.

Trefwoorde en frases: Migrasie; Gauteng; Buitelandse migrante; Hoofstroom migrasie; Sub-stroom migrasie; Sosio-ekonomiese eienskappe; Johannesburg.

ACKNOWLEDGEMENTS

I am grateful and wish to express my sincere thanks and acknowledgements to my supervisor, Mr. Danie Du Plessis for providing guidance and support throughout the study period. I am grateful to Statistics South Africa for providing Census 2001 and 2011 ten percent data. I am also grateful to Survey Coordination, Monitoring and Evaluation for affording me this wonderful opportunity which is much appreciated. My sincere thanks also go to my family for their support and endurance during the challenging times. I also wish to thank everyone who supported me in this assignment.

CONTENTS

TABLES

FIGURES

ACRONYMS AND ABBREVIATIONS

EA	Enumeration Area
GDP	Gross Domestic Product
LISA	Local Indicator of Spatial Autocorrelation
SA	South Africa
SADC	Southern African Development Community
Stats SA	Statistics South Africa

1. INTRODUCTION

1.1.   Background

Gauteng is the only landlocked province of SA and one of only two provinces that does not share international boundaries with other countries. Although Gauteng is the smallest province in SA, it is regarded as the economic heartland of the country and a gateway to Africa. The province covers only 1.5% of the country's total land area (Stats SA, 2006), but it is responsible for a third of SA's gross domestic product (GDP) and generates about 10% of the total GDP of Sub-Saharan Africa and about 7% of Africa's GDP (GEDA, 2013).
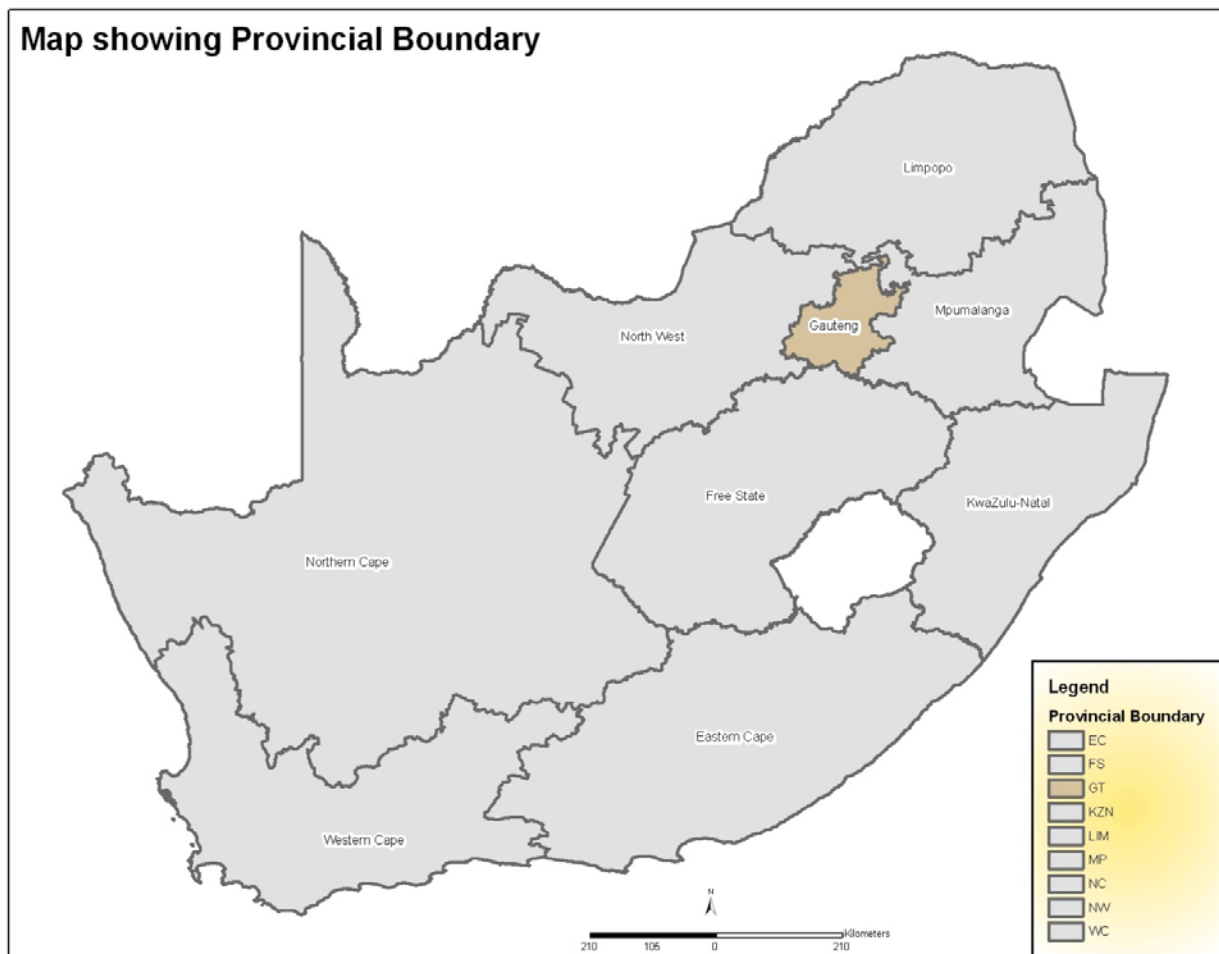
Figure 1: Locality map of Gauteng

Gauteng comprises of three metropolitan municipalities (City of Tshwane, City of Johannesburg and Ekurhuleni) and two district municipalities of Sedibeng and West Rand. It is the province with the highest proportion of migrants, accounting for nearly 45% of its population (Stats SA, 2012; GCRO, 2013), and according to the 2011 census figures, only 6.7 million of the 12.3 million people counted in the province were born in Gauteng (GCRO, 2013). Gauteng

experienced the highest rate of population growth (30%) between 2001 and 2011 of which 52% can be attributed to in-migration (Stats SA, 2013; GCRO, 2013). Gauteng is thus strongly influenced by migrant flows and has been the focus of internal and cross border migration (Peberdy, 2009; GCRO, 2013).
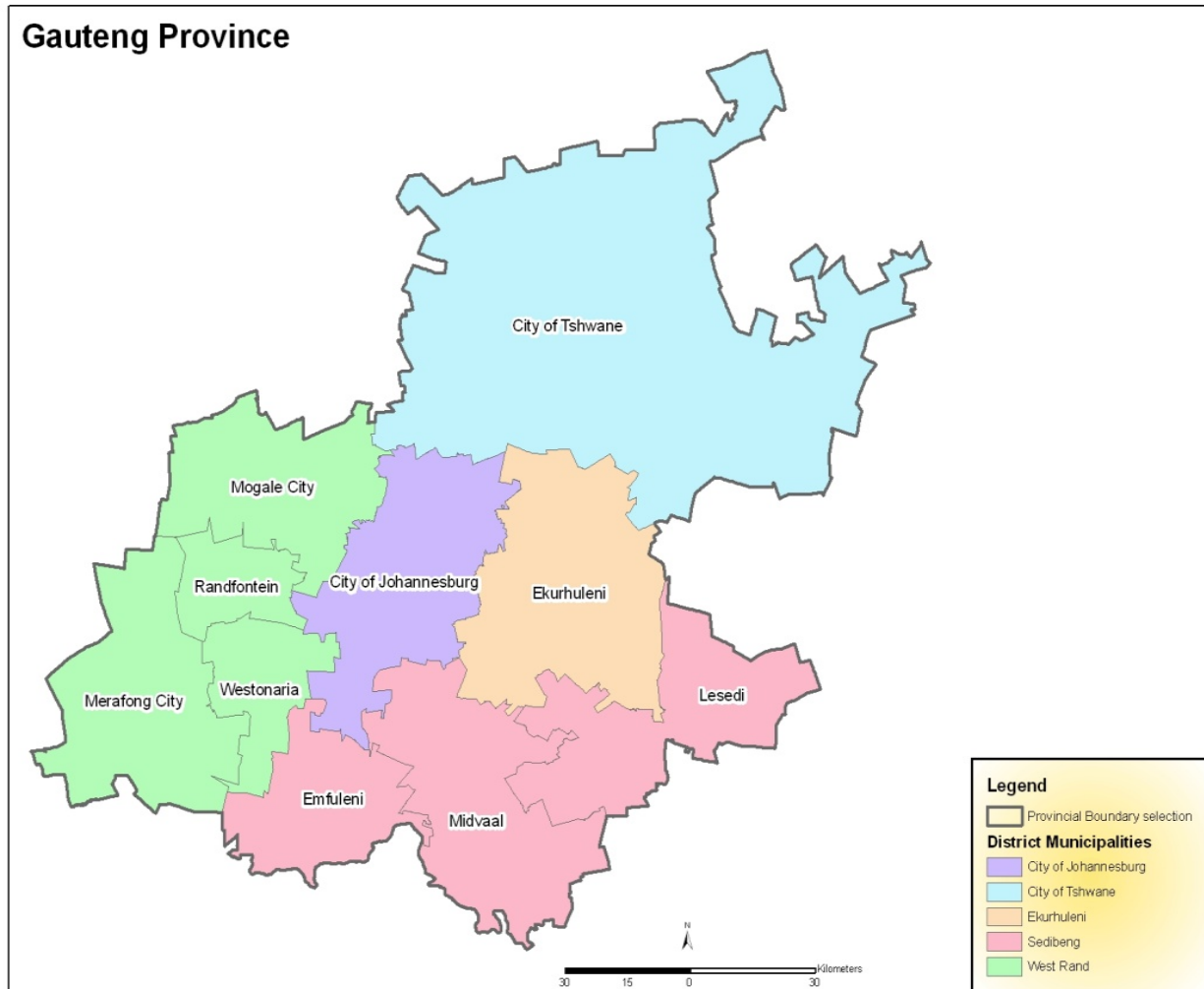
Figure 2: Composition of Gauteng Province

1.2.   Problem Statement and study objectives

The movement of people from outside South Africa's borders as well as migration patterns within the country itself played an important role in the development of Gauteng, particularly since the discovery of mineral wealth (Oosthuizen & Naidoo, 2004). The province is the economic hub of SA with strong financial, service, and manufacturing sectors and during its earlier stages of development was a prominent mining region, resulting in a long history of attracting migrants (Oosthuizen & Peberdy, 2004). Gauteng is South Africa's economic powerhouse and the majority of the people migrate from other provinces to Gauteng in search of

employment opportunities and other pull factors such as better income, quality education and improved services. Although in-migrants have contributed to the development of the province, it also poses significant challenges to the provincial government through the added burden on public sector resources (Oosthuizen & Naidoo, 2004). The rapid urbanisation and in migration also exert tremendous pressure on the infrastructure of Gauteng and has an impact on both provincial and municipal functioning, especially on the planning and delivery of services. It is thus critical to understand the origins and the demographic and socio economic characteristics of migrants to Gauteng in order to inform planning and policy formulation.

The overall aim of the study is to analyse migration patterns and trends to Gauteng over the period 2001 to 2011 and to profile the demographic, social and economic characteristics of migrants to Gauteng. The research has three specific objectives. The first is to analyse the migration streams to Gauteng and identify the main source areas of migrants (at both provincial and municipal level). The second objective is to identify the preferred destinations of migrants to Gauteng at a municipal level. Thirdly, it seeks to profile the demographic, social and economic characteristics of migrants to Gauteng. This will shed some light on both important push factors at the areas of origin of the migrants, as well as pull factors attracting them to Gauteng. The main contribution of the study is to provide an understanding of contemporary migration dynamics to Gauteng in order to inform planning and policy formulation.

The article is structured in four sections. Section 2 provides an overview of the relevant theories of migration, the consequences of migration, and the findings of previous research regarding the characteristics of migrants to Gauteng. The third section describes the data sources and methodology used in the study. Section 4 presents the findings of the research. It firstly describes the migration streams and patterns to Gauteng, and then profiles the socio-economic and demographic characteristics of the in-migrants. A summary conclusion and recommendations based on the results are outlined in Section 5.

2. LITERATURE REVIEW

2.1.   The Theory of Migration

Migration, at the broadest level, involves the movement of individuals or households across space and a change in the place of residence. Internal migration is the movements of people between and within provinces and municipalities within the same country and it may have significant effects on the size, structure and growth patterns of both the sending population and the receiving population (Polzer, 2010). At the heart of migration theory is the arguments of Lee (1966) that explain the decision to migrate as linked with the place of origin and also the

destination area (push and pull factors). Migration decision making is mediated by intervening factors that can act as either obstacles such as travelling distance and immigration laws that might discourage free movement of people (de Haas, 2008), or as facilitators such as labour recruitment that can stimulate migration flow (Kok et al, 2006). These elements represent the fundamentals of different theoretical approaches to migration. The extensive body of theory on migration can broadly be classified into four approaches or schools of thought. These include neo-classical migration theory, relative deprivation theory, structuration theory and neo-Marxist theories of migration.

Neo-classical theories of migration builds on Ravenstein's (1889) "laws of migration" that views migration as an inseparable part of development based on the argument that economic conditions are the main cause of migration (de Haas, 2008). These theories also view migration as influenced by spatial and physical features such as distance and population densities (Skeldon, 1997) and the concept of spatial imbalances where people are likely to migrate from areas with low income to areas with high income, and from areas that are densely populated to areas that are less densely populated (Castles & Miller, 2003).

In the relative deprivation theories of migration, deprivation is measured by the economic position of a household within its own community. The relatively deprived person is motivated to leave his or her area and move to areas with better opportunities (Stark & Taylor, 1991) with the aim of improving their standard of living (Bhandari, 2004). These theories thus postulate that the lower a household's position within the distribution of income of a community, the greater its likelihood to migrate (Geyer, 2002).

In structuration theory migrants are viewed as well informed people who have established networks such as friends and relatives in their preferred destinations before they take a decision to migrate (Goss & Lindquist, 1995). These established networks in the destination areas make information such as employment and better incomes to be available to potential migrants who intend migrating (Wolfel, 2002). The decision to migrate has impacts on both the society that is left and the host society and the longer the time span of institutional reproduction the more durable it becomes.

The neo-Marxist dependency theory argues that migration is affected by a mechanism of cumulative causation that reproduces inequality (Petras, 1981). It argues that labour migration results from colonial and neo-colonial political and economic relationships between the developed capitalist economies and their underdeveloped peripheries that stimulate uneven spatial development (Mahmud et al., 2009). It can also be viewed as the dual labour market theory (Piore, 1979) which argues that a permanent demand for immigrant labour inherent in the economic structure of developed nations causes international labour migration.

2.2.   Synthetic Model of Migration

The synthetic model of migration combines a variety of theoretical approaches to migration into a single model. It is an attempt at theoretical synthesis and categorising the causal factors involved in the different theories described above and specifies their mutual relationship (Kok et al., 2006). It consists of a number of related concepts that includes the spatial reward structure, individual rewards, structural variables, information sources, perceptions and motivations, and filters.

The first element in the synthetic model of migration is the spatial reward structure. When a person considers migrating, he or she will be responding to the differential structuring of rewards between area of origin and destination area, generally referred to as push and pull factors (Baruch et al., 2007). The continuous growth of population in rural areas exert pressure on agricultural and other resources and ultimately drives people from marginal rural areas (Skeldon, 1997). Pull factors are positive factors that attract a person to an alternative destination (Mattes & Richmond, 2000). Two of the main pull factors are employment and income (Harris and Todaro, 1976; Rasool et al, 2012). Households also often migrate in search of economic opportunities, local development as manifested by land and improved housing, water and sanitation, electricity, and better transport as well as better school and health facilities (Bekker, 2006; Cross, 2006). Migration is however often driven by expectations of employment, and not necessarily by actual employment (Kok & Aliber, 2005). In the case of Gauteng, economic sectors such as construction and mining will attract mainly unskilled and semi-skilled job seekers while highly skilled and professional persons will be attracted by opportunities in the tertiary sectors of the economy. The population concentration of Gauteng also offers greater opportunities for self-employment and business (DPRU 2004).

In contrast, individual rewards will vary depending on the characteristics of the person migrating. For instance, women can have added or less chances of benefiting in a place than men and the very same chance of benefiting also applies to young and old people, educated and uneducated (Gelderblom, 2006). Educated people might benefit most by migrating to urban areas that mostly require their knowledge and skills rather than opting to stay in their rural settings.

The third element of the synthetic model is the nature of the decision making units in the migration process. From a middle class Western perspective, the decision-making unit in migration is the individual (Gelderblom, 2006). However, this is often not an appropriate assumption for poor people in the developing world whose migration is typically not the result of a purely self-interested decision taken by an individual, but a household decision directed at improving the welfare of the household as a whole (Simmons, 1986). Many poor households do not rely on a single source of income but depend on a combination of multiple sources of income.

The availability of information is an important factor in the decision making process, and illiteracy, poverty and lack of education are major obstacles to the diffusion of knowledge about migration opportunities (Hammar, 1995). The fact that people in poor communities may simply not be aware of opportunities elsewhere might be a reason why development is often a precondition for migration to take place and by increasing information flows into poor communities, development then makes further contribution to stimulating migration flows (Gelderblom, 2006). Information regarding opportunities in the destination area can also be provided by friends and family members living at the destination area.

De Jong (2000) emphasizes the migrant's evaluation of the probability of attaining an increase in present values such as income and comfort in the destination area. However, these values are main determinants of intentions to migrate that predict migration behaviour. Another important determinant of intentions is family migration norms, which are an indication of the potential migrant's evaluation of how family members view the proposed action of migration (Gelderblom, 2006). De Jong (2000) also maintains that, people might migrate because they feel attached to a place, culture, class, country and the nation, as well as friends and family.

Filters to decision making can take the form of both obstacles and facilitators. Obstacles are those factors that make it very complex for certain categories of people to migrate. There are three main types of obstacles to migration, namely the cost of migration, legal restrictions on migration, and immobilizing social structures in the area of origin. The cost of migration can include factors such as transport costs, the cost of lodging in a city while looking for work, the cost of acquiring information about work and housing opportunities (Lipton, 1980), and earnings lost whilst the migrant is in the process of relocating (Chiswick, 2000). The connection between distance and costs helps to explain why the poorest people are more likely to migrate over short distances (Bauer & Zimmermann, 1995).

Recruitment agencies often play a role in stimulating migration flow between an area of origin and a destination (Georges, 1990). Recruitment agencies will assist by providing transport and job placement to potential migrants. However, other functions will act as conduits of information linking the origin and destination areas and ease the entry of new migrants by providing accommodation, jobs, advice on how to cope in a foreign environment and friendship (Gelderblom, 2000).

2.3.   Determinants of migration to Gauteng

The individual and household characteristics of migrants can influence the success at their destinations and have an effect on their families at home through the distribution of potential benefits through remittances. Therefore, knowing the nature of migrants' characteristics and migration selectivity patterns can provide guidance for policy interventions to influence migration and its impacts (Lall et al., 2006).

Age differentials are a critical element in understanding migration rates and patterns (Graves et al., 1984; Mischaikow, 1984). Young adults are more likely to have a positive net expected return on migration due to their longer remaining life expectancy, or social norms requiring them to migrate in search of a better life (De Haan et al., 2000). Both Lee (1966) and Shaw (1975) maintained that migration differentials by age are bimodal with the first peak occurring at an early age and the second peak appearing at retirement age (65 years). Migration rates are generally low for children and then increases from the age of 10 and peaks at the age category between 25 and 29 years of age (Roux, 2009). In Gauteng, migration rates are generally high for migrants aged 20 to 29 followed by the category 30 to 39 (Peberdy et al., 2004). Internal migration for both males and females in SA peaks at the age category between 25 and 29 years of age, while men are more migratory than women across all age groups (Roux, 2009). Oosthuizen and Naidoo (2004) ascribe this to the past and continued demand for labour in specific economic sectors.

Education is another factor that influences the propensity to move. It has been argued that education is not a good predictor of short term migration but rather of long term migration (White and Woods, 1980; Mueller, 1982). Oosthuizen and Naidoo (2004) found that non-Gauteng born residents in general seem to be slightly better educated than their Gauteng born counterparts.

Employment is an important pull factor with high levels of employment having a propensity to attract more migrants. People in areas characterised by high unemployment rates are amongst groups often unable to escape their situation by moving away (Roux, 2009). Previous research found that migrants from other provinces are more likely to be employed than their Gauteng born counterparts, while a larger percentage of foreign migrants are employed than internal migrants from other provinces and Gauteng born counterparts respectively (Peberdy et al., 2004). In addition, cross border migrants are more likely to be employed in the formal sector (GCRO, 2013).

People also often migrate from one place to the other as a result of being attracted by better incomes offered by the destination area. Previous research indicated that Gauteng and the Western Cape were the only two provinces that had a higher income share than population share in both 1996 and 2001 (Roux, 2009) and may be one of the reasons that explain why these two provinces are the most preferred destinations for migrants. The effects of these movements are likely to be negative for the economies of the sending provinces (Roux, 2009). In Gauteng, the income of cross border migrants was most likely to come from savings and investments while 30% of internal migrants relied on government grants (GCRO, 2013).

Married people tend to have a higher rate of migration than the single, widowed and divorced (Bogue, 1969; Black, 1983). Ladinsky (1967) found that young married professionals are more migratory than persons with a different marital status. According to Long (1974) families with a working wife are however less likely to migrate to a different city than families without a working wife. In Gauteng the population with the status "never married" are more likely to migrate than the other marital statuses, while males who are never married are more likely to migrate than their female counterparts (Peberdy et al., 2004).

2.4.   Consequences of migration

Migration can have significant consequences for the demographic structure of both the sending and receiving populations in terms of aspects such as size, structure and growth patterns. The absence of large numbers of either men or women in a particular place may have a limited impact on the sending society in the short term. However, if they are absent for a considerable period of time, their absence in the long term will have a significant impact on population growth rates (Macpherson, 2000). The economic impacts of migration vary depending on the type of migration, the skills of the migrants, and the length of time spent by migrants. Migrants from other provinces are often perceived as threats to Gauteng residents because they are seen to be enjoying benefits what is believed to have been meant for Gauteng dwellers (Cross et al., 2005). For sending countries or regions, migration and remittances reduce poverty and improve the education, health and the economy of the sending area (Ratha et al., 2011).

Migration can have both positive and negative health consequences for migrants. Aspects such as improved physical and mental health facilities in migrant receiving areas can result in an increased life expectancy for migrants. In other cases, migration can however result in unintended consequences as a result of poor health services (Macpherson, 2000). As people become more mobile, there is also an increased likelihood that they may spread communicable diseases such as HIV (Decosas et al., 1995; Lurie, 2000) and sexually transmitted diseases amongst migrants and their partners left at home (Kahn et al. 2003).

Migration can be viewed as a process of cultural evolution and social change and migrants bring new ideas, skills and a host of cultural practices related to food, dance, music and other life styles. Migration can also have negative cultural consequences in that the separation between the migrant and the family might result in family breakdown and an increase in "psychological stress" (Kahn et al. 2003).

3. METHODOLOGY AND DATA SOURCES

3.1.   Data sources

The study uses secondary data to analyse migration to Gauteng province. It uses both the Census 2001 (covering the 2001 migration period) and Census 2011 (for the 2011 migration period) ten percent sample data collected by Statistics South Africa (Stats SA). The migration related variables in the two datasets are the same except that Census 2011 also includes information on the municipality of usual residence and municipality of previous residence variables.

The 2001 ten percent sample data is a 10% unit level sample collected by Stats SA on the night of 9-10 October 2001. The ten percent sample had been drawn from Census 2001 data (Stats SA, 2001). It is a sample of person records which had been weighted to adjust the undercount and had been multiplied by ten so that it can be representative (Stats SA, 2001). Household records were then stratified by municipality, geographic type and Enumeration Area (EA) number and the urban formal, urban informal, tribal and rural formal geography type was used (Stats SA, 2001).

The Census 2011ten percent sample was drawn from Census 2011 data consisting of a 10% sample of all persons in the sample households and an independent 10% sample of persons who reside in other living quarters excluding housing units or converted hostels (Stats SA, 2011). The person sample had been weighted and the variable had been multiplied by the inverse of the sampling rate to the relevant population and then calibrated to the census total population counts at provincial level by population group, sex and age group (Stats SA, 2011). The data was stratified into primary and secondary stratifications. The primary stratification was based on local municipality and the secondary stratification on demographic characteristics of persons within the households.

3.2.   Methodology

The data analysis methodology consists of a combination of descriptive and spatial statistical analysis techniques. Descriptive statistics are used to provide an overall analysis of migration trends and characteristics of migrants to Gauteng. The variables used in the analysis include province of previous residence, province of usual residence, municipality of usual residence, municipality of previous residence, age, gender, population group, marital status, level of education, employment status, and income. The units of analysis are both provinces and municipalities. Cross tabulations were conducted between province and municipality of previous residence and the socio-economic variables of age, gender, population group, marital status, level of education, employment status, and income.

The use of descriptive statistics alone can however not reveal all important intrinsic changes and trends that can be hidden by aggregated migration data. An important component of the analysis thus also involves the use of Geographic Information Systems to analyse and map the spatial characteristics and trends of the migration data. ArcGIS was used to undertake the thematic mapping of the spatial patterns and characteristics of the migrants. In addition, exploratory data analysis techniques that focus on the spatial aspects of the data such as dispersion, concentration and spatial autocorrelation were also applied. For this purpose, a local indicator of spatial autocorrelation (LISA) that shows the level of spatial autocorrelation at various individual locations within a study area (Anselin, 1995) must be applied. The Anselin Local Moran I technique was applied through the so-called "cluster-outlier analysis" in ArcGIS. In the results of this analysis positive values imply positive spatial autocorrelation (clusters) and negative values indicates negative spatial autocorrelation (outliers) (Zhang et al., 2008). This technique was applied at municipal level to the total migration figures to identify the spatial clustering (or hotspots) of areas with high migration rates to Gauteng surrounded by similar high values (or low values surrounded by low values).

4. RESULTS OF EMPIRICAL ANALYSIS

4.1.   Introduction

The findings of the empirical analysis are presented in three sections. Section 4.2 provides an analysis of the spatial patterns of migration to and within Gauteng. It provides a broad overview of the areas of origin of in-migrants at a provincial level, as well as a more detailed spatial analysis at a municipal level. It then proceeds to describe the spatial patterns of the receiving areas of these in-migrants in Gauteng at a municipal level. It also includes a cluster-outlier analysis of the areas of origin of migrants to Gauteng to enable the identification of specific hotspots and cold spots.

Section 4.3 provides a detailed analysis of the socio-economic characteristics of in- migrants to Gauteng and includes characteristics such as age, gender, marital status, employment status, income, economic sector, and level of education. The results for each variable are presented at three levels of spatial aggregation: a total overall summary, disaggregated according to province of origin, and a spatial analysis of these characteristics according to municipality of origin.

4.2.   Main Senders to and Recipients of Migrants in Gauteng

4.2.1. Main Senders of Migrants to Gauteng

Table 1 presents a breakdown of the origin of migrants to Gauteng Province. The Census 2001 results indicate that the majority of migrants entering Gauteng over the period 1996 to 2001 originated from Limpopo, accounting for 23.2% of the migrant population, followed by KwaZulu-Natal at 15.0% and 12.6% from the Eastern Cape. This pattern however changed substantially over the next decade with the Census 2011 results indicating that 32% of migrants to Gauteng between 2001 and 2011 are foreign migrants from outside SA, followed by 20.3% from Limpopo and 13.1% from KwaZulu-Natal.

Table 1: Percentage Distribution of Main Senders of Migrants to Gauteng

	Census 2001	Census 2011
Province	**Percentage of in-migrants**	**Percentage of in-migrants**
Western cape	5.7	3.7
Eastern cape	12.6	9.7
Northern cape	1.9	1.1
Free state	9.2	5.4
KwaZulu-Natal	15.0	13.1
North west	9.5	7.0
Mpumalanga	9.9	7.7
Limpopo	23.2	20.3
Outside South Africa	12.9	32.0
Total	**100.0**	**100.0**

A more detailed spatial analysis of these patterns at municipal level is depicted in Figure 3. These results confirm significant numbers of migrants originating from the municipalities in all four provinces adjacent to Gauteng, especially from Limpopo and Mpumalanga. A significant number of in-migrants also originated from municipalities in KwaZulu-Natal and the northern parts of the Eastern Cape. A notable feature is that, although the migrants from KwaZulu-Natal and the Eastern Cape originate from a widespread area, it is dominated by the eThekwini Metropolitan municipality in KwaZulu Natal and Nelson Mandela Bay in the Eastern Cape.
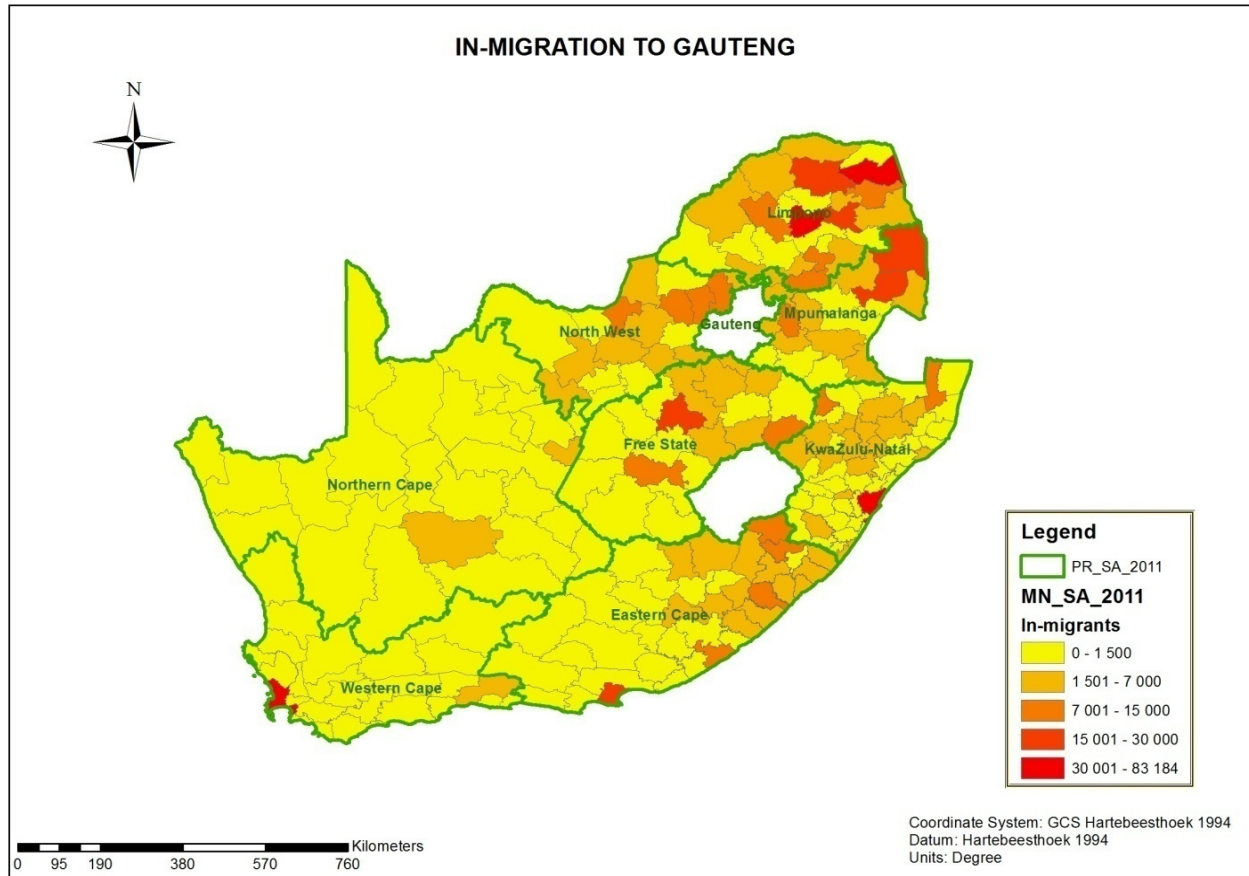
Figure 3: Extent of in-migrants to Gauteng (2001 to 2011)

Although the number of migrants from municipalities in the Western Cape is relatively small, a significant number (33911) originate from the City of Cape Town. The municipalities from which most people migrated to Gauteng between 2001 and 2011 are Polokwane (83184), eThekwini (67332), City of Cape Town (33911), Thulamela (33023) and Nelson Mandela Bay (24421).

The results of the cluster-outlier analysis depicted in Figure 4 confirm two important statistically significant patterns. Firstly a clear clustering of municipalities with high levels of migration to Gauteng surrounded by similar high values located in Limpopo and the northern parts of Mpumalanga (high-high clusters). The second is the three coastal metropolitan areas of eThekwini, Nelson Mandela Bay and the City of Cape Town that can be described as outliers having high levels of migration to Gauteng but surrounded by municipalities with low values (high-low outliers). These spatial clustering patterns are indicative of statistically significant specific underlying causal factors and confirm that the identified migration patterns are not the result of merely random processes.
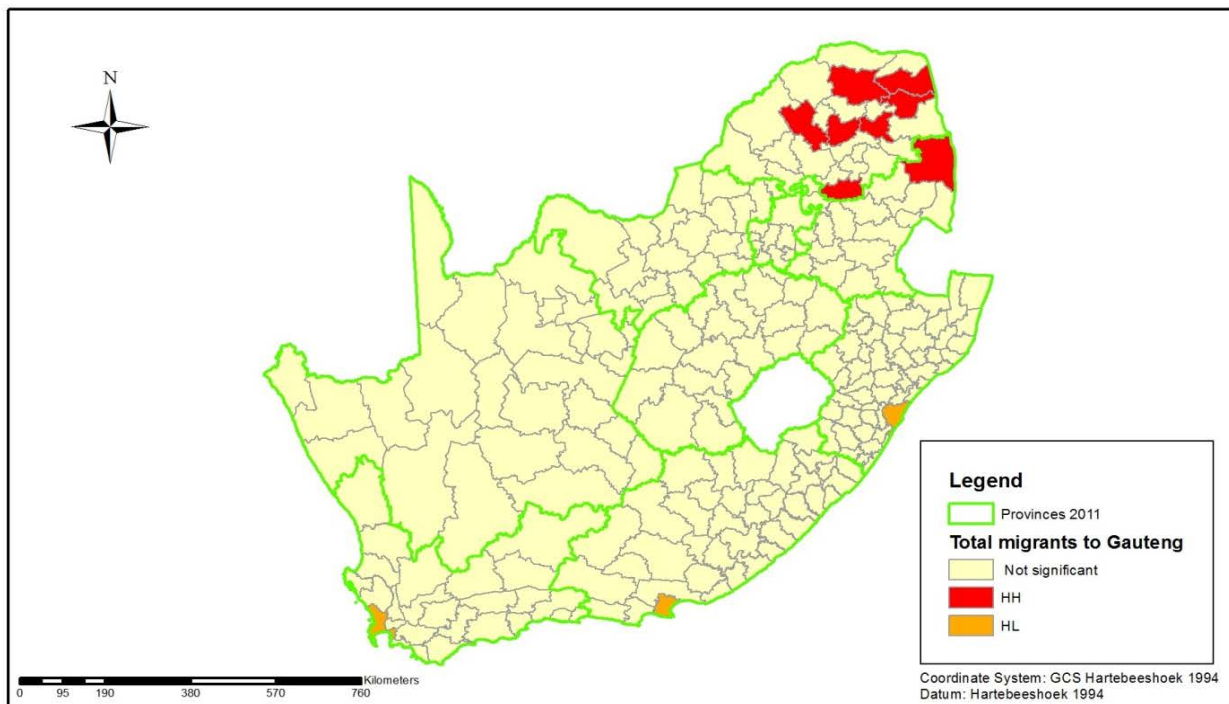
Figure 4: Cluster Outlier analysis of migration to Gauteng

These patterns can be explained by two factors. Firstly, it implies a large and broad based migration pattern of people migrating directly from Limpopo to Gauteng. These high levels of migration to Gauteng of municipalities in Limpopo and the northern part of Mpumalanga that are surrounded by rural municipalities with similar high values can be attributed to the fact that migrants with limited education and with lower incomes are migrating to Gauteng in their numbers. On the other hand, the high levels of migration to Gauteng from the three coastal metropolitan municipalities that are surrounded by municipalities with low levels of migration can be ascribed to the fact that, educated and high income earners who might have previously migrated from smaller municipalities to the three coastal metros, are now moving to Gauteng in search of better opportunities and higher incomes since Gauteng hosts the majority of big companies' headquarters and other global economic activities.

4.2.2. Main Recipients of Migrants in Gauteng

Table 2 presents a breakdown of in-migrants (only migrants from outside Gauteng) to Gauteng between 2001 and 2011 aggregated according to the new settlement areas within the province. The results indicate that, the City of Johannesburg is the main recipient attracting 38.4% of the migrants to Gauteng, followed by City of Tshwane (26.4% of migrants), and Ekurhuleni (23.6%). The City of Johannesburg is also the preferred destination for foreign migrants from outside South Africa (48.9%), from KwaZulu-Natal (47.9%), and the Western Cape (43.5%).

This trend can be ascribed to the high concentration of economic activities and employment opportunities (especially highly skilled employment) attracting migrants from the metropolitan areas of KwaZulu Natal and the Western Cape.

Table 2: Percentage Distribution of Main Recipients of Migrants in Gauteng

Province	District											Total	
	Sedibeng		West Rand		Ekurhuleni		City of Johannesburg		City of Tshwane			Total	
Western cape	1690	3.7	2200	4.9	9100	20.2	19610	43.5	12500	27.7		**45100**	**100.0**
Eastern cape	5200	4.3	15870	13.3	33960	28.4	40310	33.7	24340	20.3		**119680**	**100.0**
Northern cape	730	5.2	1220	8.7	2710	19.4	5390	38.6	3930	28.1		**13980**	**100.0**
Free state	13600	20.5	5930	8.9	13980	21.1	16860	25.4	15940	24.0		**66310**	**100.0**
Kwazulu-Natal	5210	3.2	8160	5.0	48910	30.2	77420	47.9	22010	13.6		**161710**	**100.0**
North west	3170	3.7	15310	17.8	8840	10.3	22710	26.4	36140	41.9		**86170**	**100.0**
Mpumalanga	5390	5.7	3370	3.6	28100	29.6	19520	20.6	38410	40.5		**94790**	**100.0**
Limpopo	5460	2.2	6830	2.7	61620	24.5	79570	31.6	98150	39.0		**251630**	**100.0**
Outside South Africa	15260	3.9	27620	7.0	84210	21.3	193360	48.9	75170	19.0		**395620**	**100.0**
Total	**55710**	**4.5**	**86510**	**7.0**	**291430**	**23.6**	**474750**	**38.4**	**326590**	**26.4**		**1234990**	**100.0**

The city of Tshwane clearly has strong functional relationships with the three adjacent provinces and received the majority of migrants from the North West (41.9%), Mpumalanga (40.5%) and Limpopo (39%). A considerable proportion of migrants from the North West (17.8%) and Eastern Cape (13.3%) settled in the West Rand where the mining sector still plays a significant role in the economy.

4.2.3. Internal and foreign migrants

Figure 5 presents the distribution of internal and foreign migrants to Gauteng according to district. Overall, 68% of migrants to Gauteng originate from other provinces in SA whilst 32% are foreign migrants. The City of Tshwane attracted the highest proportion of internal migrants (77%) followed by Sedibeng (72.6%), and Ekurhuleni (71.1%). The high proportion of internal migrants to the City of Tshwane can possibly be ascribed to internal migrants seeking employment in the City of Tshwane hosting most national government departments or studying at the various universities located in the city. On the other hand, as much as 40.7% of migrants to the City of Johannesburg are foreign migrants. This may be attributed to a highly cosmopolitan population composition of this metropolitan area that provides a fertile ground for business, employment opportunities and joining friends or family members. These findings confirm the

results of Roux (2009) who found that metropolitan areas such as City of Tshwane, city of Johannesburg and Ekurhuleni are experiencing the highest influx of migrants.
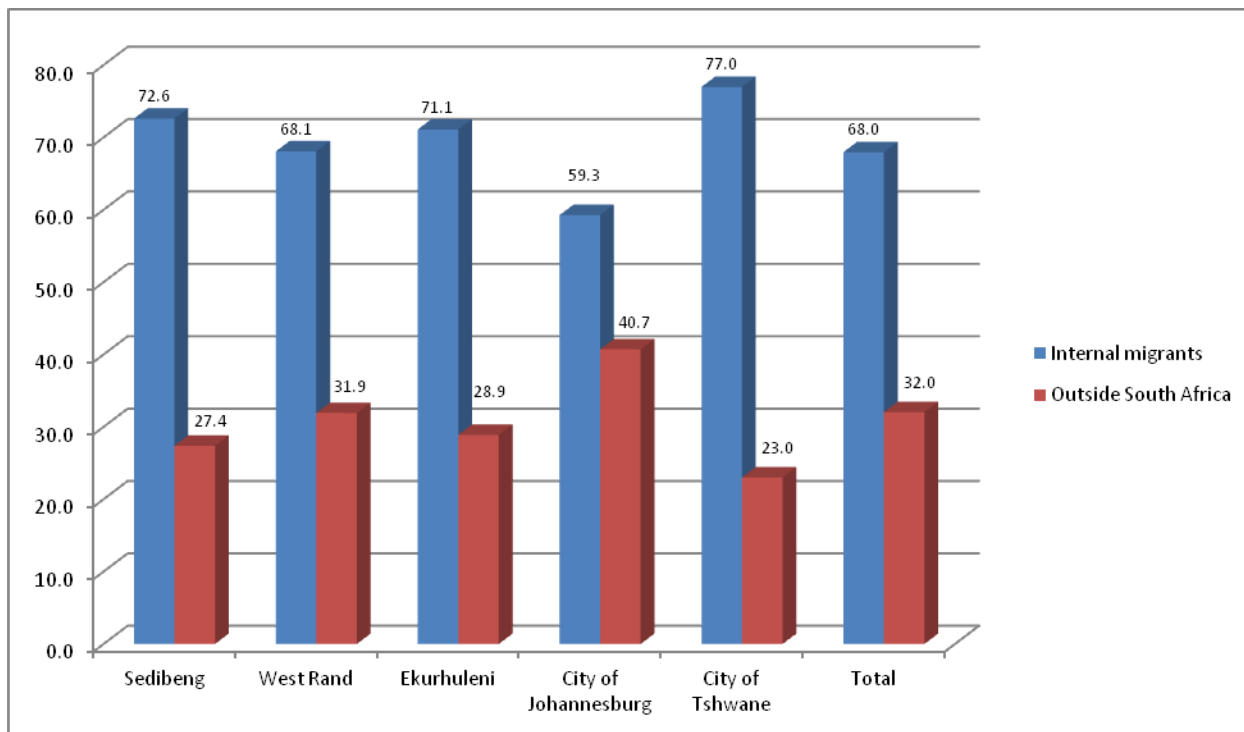
Figure 5: Internal and foreign migrants to Gauteng

Table 3 presents results of country of birth of foreign migrants to Gauteng. The Census 2001 results indicate that 64.5% of the foreign migrants were from Southern African Development Community (SADC), followed by 23.9% from Europe, 4.6% from Asia and 4.5% from the rest of Africa. However, over the period 2001 to 2011 the proportion of foreign migrants originating from SADC countries increased to 87.4%, and from other African countries to 6.4%, while the proportion from Europe diminished to only 2.0%.

Table 3: Distribution of country of birth of foreign Migrants

Country of birth	Census 2001		Census 2011	
SADC countries	245730	64.5	345620	87.4
Rest of Africa	16980	4.5	25230	6.4
Europe	91050	23.9	8050	2.0
Asia	17530	4.6	14270	3.6
North America	3440	0.9	1250	0.3
Central and South America	4720	1.2	730	0.2
Australia and New Zealand	1580	0.4	470	0.1
Total	**381030**	**100.0**	**395620**	**100.0**

This increase of migrants from SADC countries may be attributed to the fact that, South African laws and policies encourage relatively free movement in the region. South Africa also has the strongest economy in the region, acting as a strong pull factor for migrants from the SADC region.

4.3.   Socio-economic and demographic characteristics of migrants to Gauteng

Age and gender of migrants

Figure 6 indicates that migration starts at an early age where children migrate with their parents and increases with age, peaks at age group 25 – 29 (accounting for 14.4% in Census 2001 and 22.7% in Census 2011) and then decreases as age increases. These figures confirm that the age groups between 20 and 35 are most migratory accounting for 38.7% of migrants in the period 1996 to 2001, and increasing significantly to 57% between 2001 and 2011. The most migratory single age cohort for both periods is 25 to 29 years. These findings are consistent with literature that suggests that migration rates increases with age and peaks at the age category 25 and 29 (Roux, 2009). There may be two possible explanations for this pattern. Firstly, young migrants aged 20 to 29 are normally people who have finished studying and are searching for employment or taking on their first jobs. Secondly, lower income families often send young adults to the cities and invest in a potentially remitting child (Lucas, 1997).

For both time periods the figures decrease in the older age cohorts, but do show a slight increase again in the category older than 65 years of age. It is also consistent with the findings of Lee (1966) and Shaw (1975) who found that migration differentials by age are bimodal with the first peak occurring at an early age (25 to 29) and the second peak appearing at retirement age (65 years). The significant increase in the proportion of younger migrants in the age categories 20 to 24 and 25 to 29 may be attributed to the fact that, some of the migrants in this age category are furthering their studies in Gauteng due to the concentration of institutions of higher learning in the province, while others are searching for employment opportunities in the economic heartland of SA.
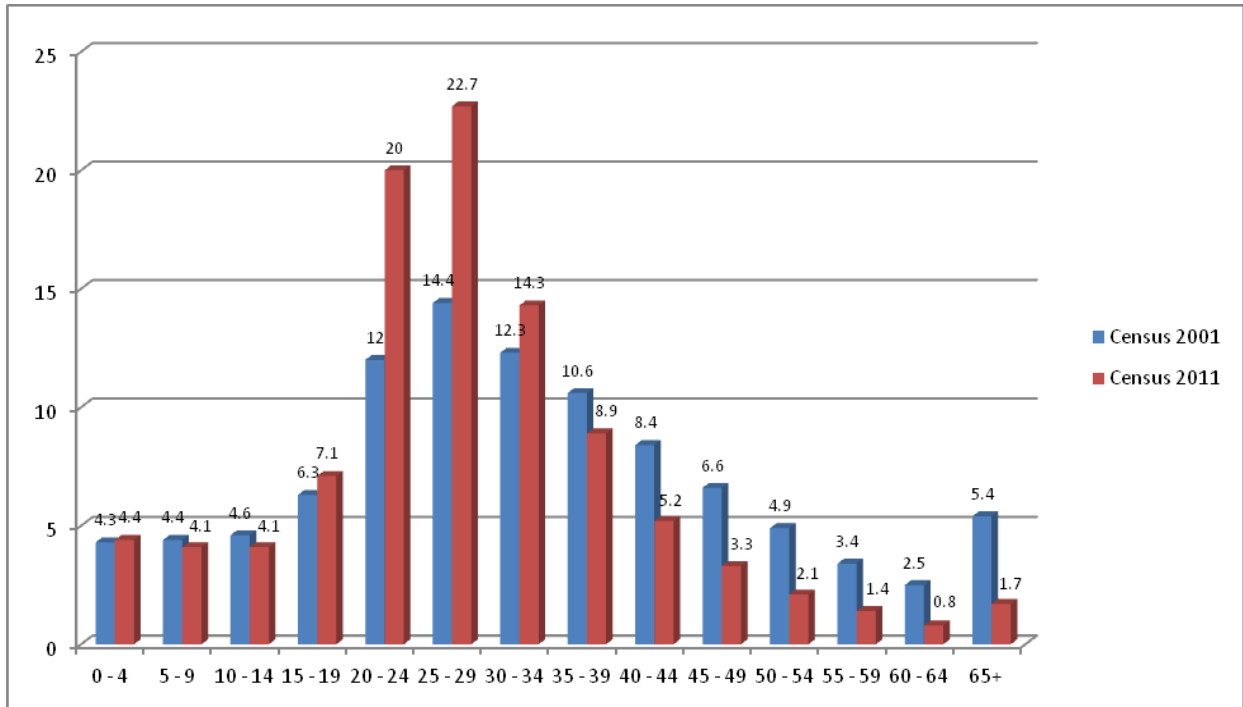
Figure 6: Age Distribution of Migrants (Census 2001 and Census 2011)

The figures in Table 4 indicate that migrants to Gauteng are slightly male dominated increasing from 52.1% in 2001 to 53.2% in 2011. There are no significant differences at provincial level, although the migrants from Kwazulu-Natal (54.7%) and from outside South Africa (56.2%) have slightly higher levels of male migrants. The results are consistent with literature that suggests males are more migratory than females from age 25 to 59 (Roux, 2009).

Table 4: Gender profile of migrants to Gauteng

	Census 2001			Census 2011		
Province	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Western cape	48.2	51.8	**100.0**	49.8	50.2	**100.0**
Eastern cape	47.7	52.3	**100.0**	51.6	48.4	**100.0**
Northern cape	45.7	54.3	**100.0**	50.6	49.4	**100.0**
Free state	45.5	54.5	**100.0**	49.3	50.7	**100.0**
Kwazulu-Natal	53.5	46.5	**100.0**	54.7	45.3	**100.0**
North west	45.3	54.7	**100.0**	48.2	51.8	**100.0**
Mpumalanga	50.1	49.9	**100.0**	50.6	49.4	**100.0**
Limpopo	56.5	43.5	**100.0**	52.7	47.3	**100.0**
Outside South Africa	60.7	39.3	**100.0**	56.2	43.8	**100.0**
Total	**52.1**	**47.9**	**100.0**	**53.2**	**46.8**	**100.0**

Marital Status

The first three categories of marital status as recorded in Census 2001 had been combined (Married civil/religious, Married traditional/customary and Polygamous marriage) to be comparable with Census 2011categories. Table 5 indicates that by 2001 46.2% migrants were never married and further increased to 54.5% in 2011. These results imply an increasing likelihood of people who are single as migrants to Gauteng. These might be young migrants who are possibly studying in Gauteng or looking for employment opportunities. This is in accordance with the findings of Connell et al (1976) who suggested that younger and unmarried males tend to be more migratory than other marital statuses.

Table 5: Marital Status of migrants to Gauteng

Marital Status	Census 2001										Census 2011									
	WC	EC	NC	FS	KZN	NW	MP	LP	Outside SA	Total	WC	EC	NC	FS	KZN	NW	MP	LP	Outside SA	Total
Married civil/religious	25.2	34.9	44.4	39.7	31.6	29.9	33.3	35.4	48.0	**35.7**	36.4	25.3	30.1	29.7	26.5	26.1	23.3	21.3	32.0	**27.4**
Living Together as married partners	3.8	11.3	9.3	9.7	14.8	10.5	12.1	11.5	12.3	**11.4**	9.6	13.2	10.6	14.0	11.7	11.7	13.9	17.2	17.3	**14.9**
Never Married	64.4	47.1	35.4	37.9	48.1	53.0	47.5	49.0	31.4	**46.2**	46.4	58.0	53.9	51.1	57.9	57.8	59.5	59.4	48.7	**54.5**
Widower/Widow	3.5	3.7	5.9	8.1	3.1	3.8	4.1	2.2	4.7	**3.9**	2.7	1.6	2.4	2.6	1.7	2.1	1.5	0.8	0.9	**1.4**
Separated	0.5	0.9	0.7	1.7	0.7	0.9	0.8	0.5	0.7	**0.8**	0.6	0.5	0.6	0.6	0.5	0.7	0.6	0.5	0.5	**0.5**
Divorced	2.6	2.0	4.3	2.9	1.8	2.0	2.0	1.3	2.9	**2.1**	4.3	1.4	2.4	2.0	1.7	1.7	1.2	0.8	0.6	**1.2**
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Employment status

The employment status of migrants to Gauteng indicates that 47.9% of the migrants are employed compared to 17.2% unemployed. A further 3.2% is classified as discouraged work seekers. A notable feature is that the percentages unemployed migrants from the Western Cape (9.6%) are significantly lower than the comparative figures for the other provinces (ranging between 15.9% and 25.1%). The results imply that employed persons are more likely to migrate than those who are unemployed. On the other hand, areas with low levels of employment tend to lose more people to areas with high levels of employment or economically developed and urbanised areas (Roux, 2009).

Table 6: Employment status of migrants to Gauteng

Province	Census 2011				Total
	Employed	**Unemployed**	**Discouraged work-seeker**	**Not applicable, aged less than 15 or older than 65 years**	**Total**
Western Cape	70.9	9.6	1.4	18.1	**100.0**
Eastern Cape	57.5	22.9	4.0	15.6	**100.0**
Northern Cape	65.6	15.9	1.4	17.0	**100.0**
Free State	63.2	16.4	2.7	17.8	**100.0**
KwaZulu-Natal	63.0	19.2	3.5	14.3	**100.0**
North West	59.8	17.3	3.1	19.8	**100.0**
Mpumalanga	58.9	19.9	3.3	17.9	**100.0**
Limpopo	57.3	25.1	3.7	13.9	**100.0**
Outside South Africa	60.9	20.3	3.7	15.1	**100.0**
Total	**47.9**	**17.2**	**3.2**	**31.8**	**100.0**

A number of more subtle mainstream and sub-stream migration movements can be identified from Figures 7 and 8. It indicates that the employed migrants mostly originate from the metropolitan and other larger intermediate cities such as eThekwini, Polokwane, City of Cape Town, and Mbombela with much smaller numbers from other more rural municipalities. The majority of employed migrants to Gauteng originate from eThekwini (34770), Polokwane (33980), City of Cape Town (18590), Thulamela (13410) and Mbombela (10950). Although a substantial proportion of the unemployed migrants to Gauteng also originate from these urban areas, significant numbers are from municipalities in rural parts of KwaZulu-Natal, the Eastern Cape, Limpopo and Mpumalanga.
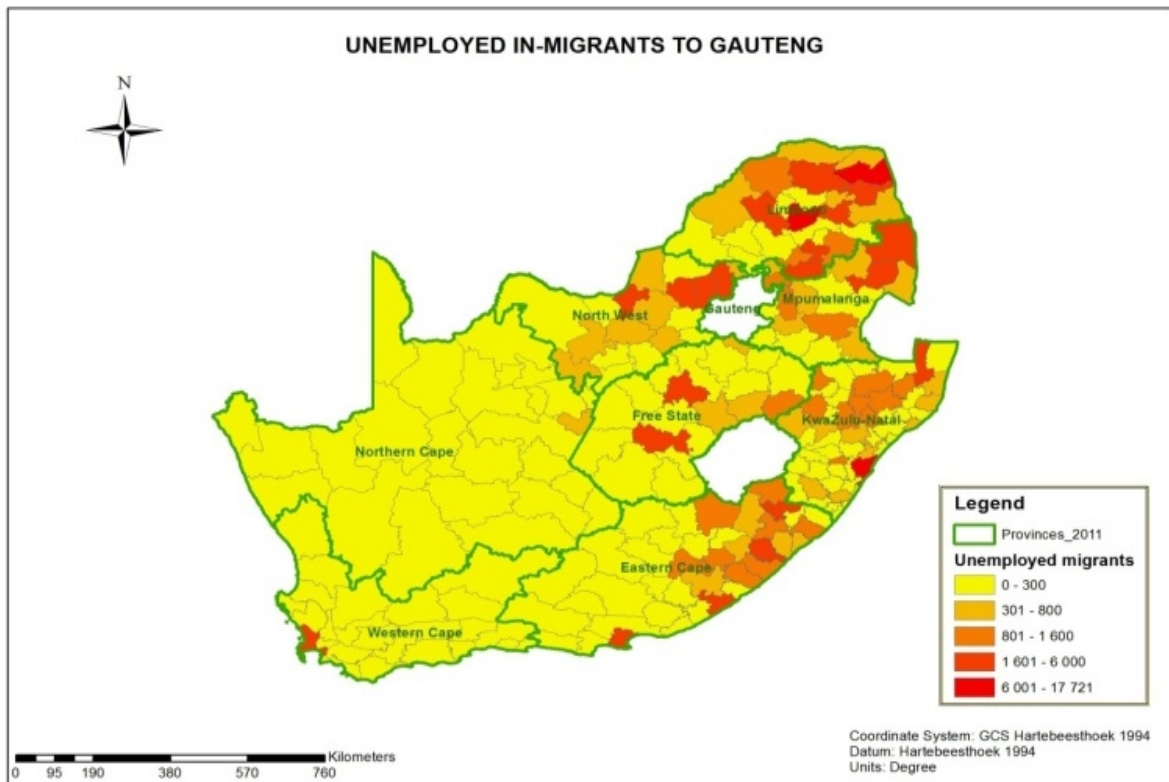
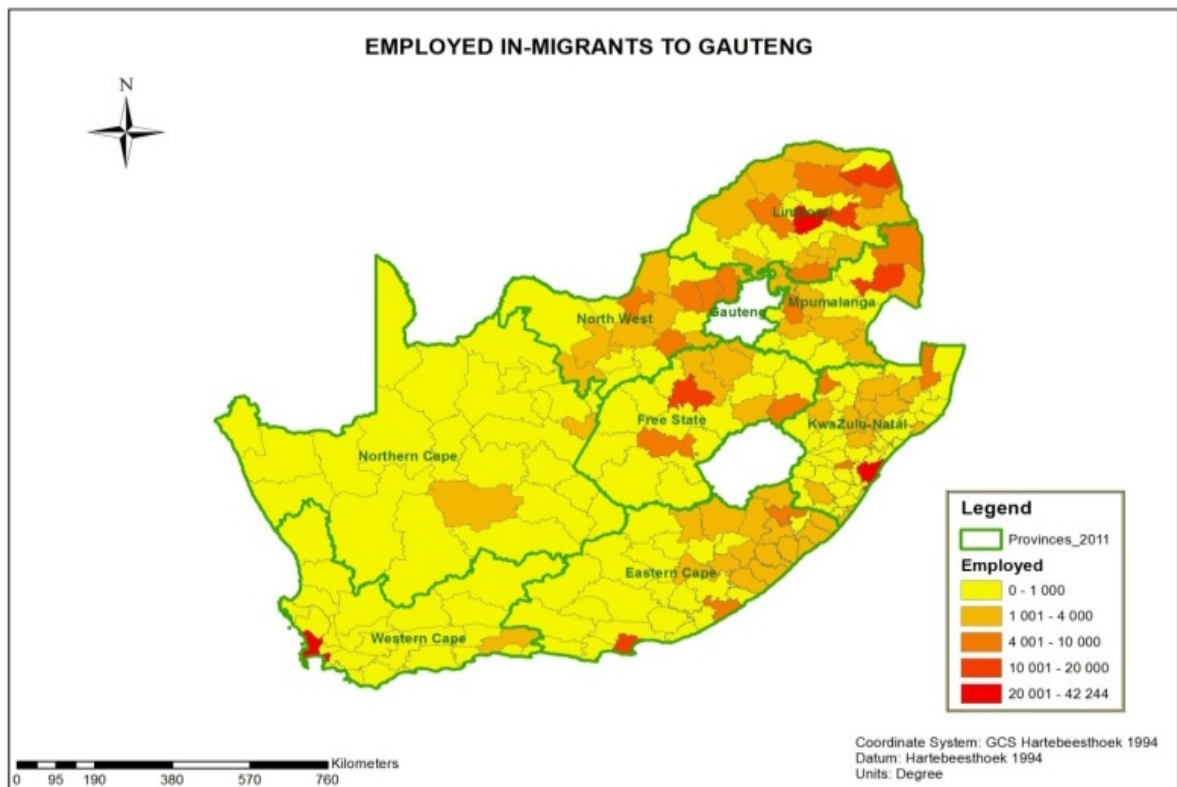Figure 7: Unemployed in-migrants to Gauteng

Figure 8: Employed in-migrants to Gauteng

Income profile

During the Census 2001 50.2% of in-migrants to Gauteng had no income, with a further 42.5% with low incomes. Only 7.3% of migrants were classified as medium to high income. By 2011, the proportion of migrants to Gauteng with no income declined to 43% and those with low income to 33.9%, while those with middle and high incomes increased somewhat to 23.2%. The regional differentiation indicates that migrants from outside South Africa and those from Limpopo have the highest proportion with no income or low incomes (85.4% and 80.3% respectively). These figures confirm the notion that people often migrate as a result of being attracted by better incomes offered by the destination area (Roux, 2009). A further distinguishing characteristic is the much higher proportion of migrants from the Western Cape classified as medium or high income earners (51%) compared to the other provinces.

Table 7: Income profile of migrants to Gauteng

Province	Census 2001					Census 2011				
	No Income	Low Income	Medium Income	High Income	Total	No Income	Low Income	Medium Income	High Income	Total
Western Cape	63.0	25.8	10.4	0.8	**100.0**	33.0	16.1	33.0	18.0	**100.0**
Eastern Cape	55.2	39.1	5.3	0.4	**100.0**	43.6	31.4	20.2	4.9	**100.0**
Northern Cape	38.2	47.5	13.5	0.8	**100.0**	36.3	26.5	29.7	7.6	**100.0**
Free State	45.6	46.3	7.5	0.5	**100.0**	38.4	32.7	23.8	5.1	**100.0**
KwaZulu-Natal	51.0	41.0	7.6	0.4	**100.0**	39.9	27.0	25.2	7.8	**100.0**
North West	50.8	43.8	5.1	0.4	**100.0**	40.6	31.1	23.6	4.6	**100.0**
Mpumalanga	50.8	44.4	4.3	0.4	**100.0**	42.6	32.6	20.6	4.1	**100.0**
Limpopo	54.2	43.3	2.3	0.2	**100.0**	44.8	35.5	17.3	2.3	**100.0**
Outside SA	36.0	47.5	15.2	1.3	**100.0**	45.5	39.9	11.9	2.7	**100.0**
Total	**50.2**	**42.5**	**6.8**	**0.5**	**100.0**	**43.0**	**33.9**	**18.7**	**4.5**	**100.0**

No income (Migrants with no income at all), low income (Migrants earning between R1.00 and R6400.00), medium income (migrants earning between R6401.00 and R51200.00) and high income (migrants earning between R51201.00 and R204801.00

Level of Education

The majority of in-migrants to Gauteng (34%) had completed only some secondary education, a further 30.3% completed Grade 12, and 15.9% have some form of higher education. Only 3.3% had received no schooling, with migrants from outside South Africa having the highest proportion with no education (5.4%). Migrants from the Western Cape had the lowest percentage of people without education and by some margin the highest proportion (36.6%) with tertiary education. The results imply that people with higher levels of education are more likely to migrate than those with no education and that education is a factor that encourages people to migrate. According to White and Woods (1980) and Mueller (1982), education is however not a good predictor of short term migration but of long term migration. Oosthuizen and Naidoo (2004) also found that non-Gauteng born residents in general seem to be slightly better educated than their Gauteng born counterparts.
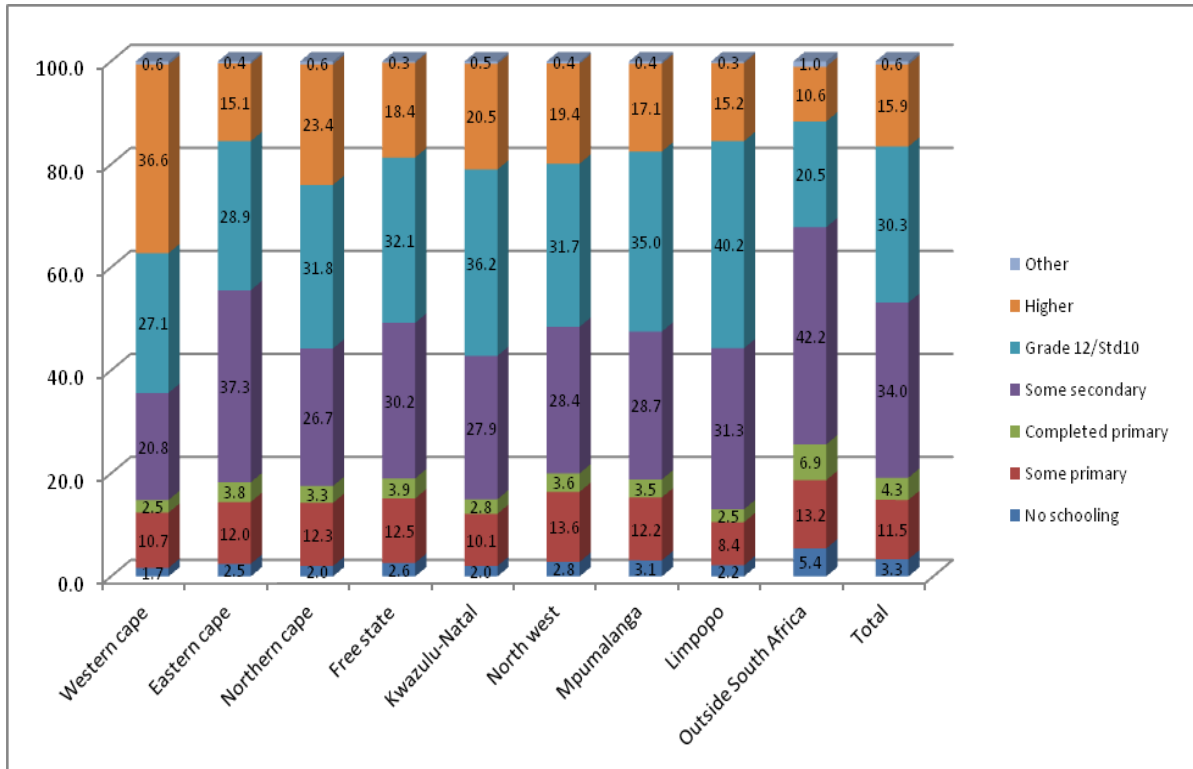
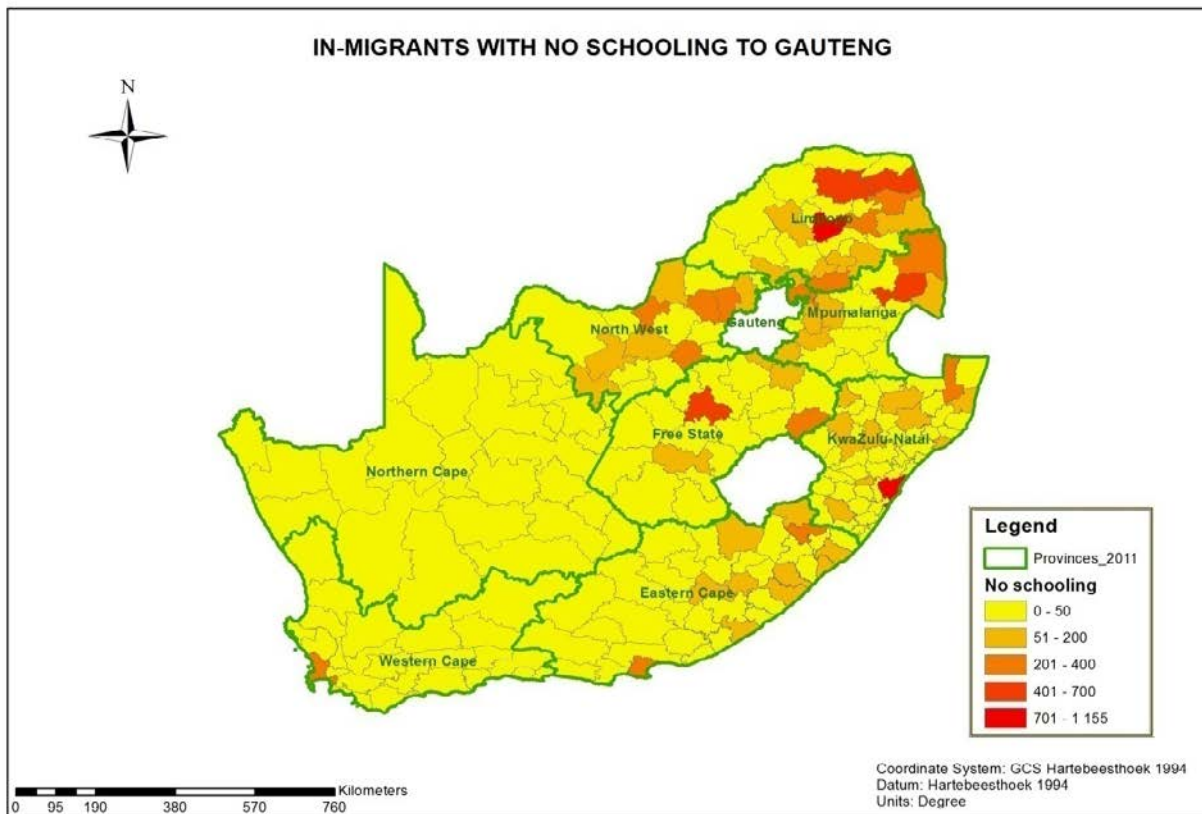Figure 9: Level of Education of migrants to Gauteng
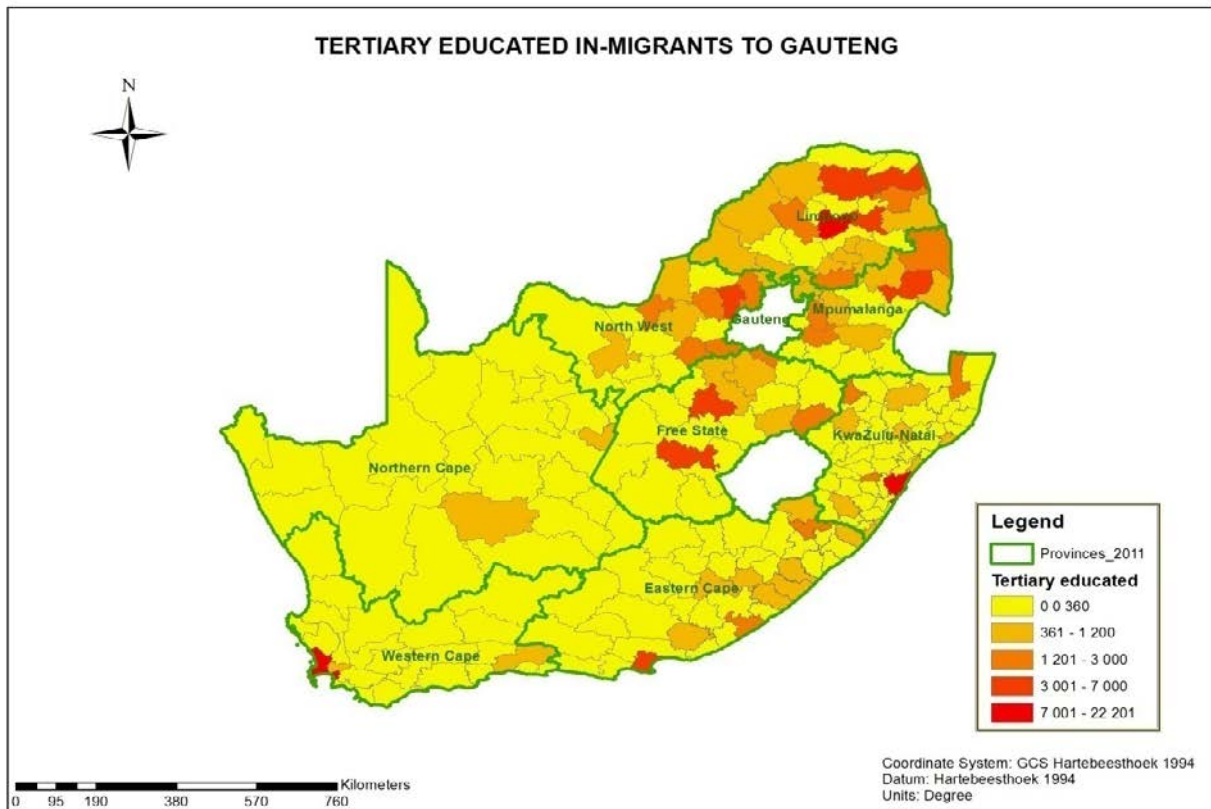

Figure 10: In-migrants to Gauteng with no schooling

Figure 11: In-migrants to Gauteng with tertiary education

A more detailed spatial analysis of the illiterate migrants and those with tertiary education respectively is depicted in Figure 12 and Figure 11. Illiterate migrants mainly originate from the metropolitan municipalities outside Gauteng and from rural dominated municipalities in Limpopo, North West, Mpumalanga, KwaZulu-Natal, and Eastern Cape. The highest number of illiterate migrants is from Polokwane, eThekwini, Mbombela and Thulamela. The majority of migrants to Gauteng with tertiary education are eThekwini (22201), City of Cape Town (14590) and Polokwane (13713).

5. CONCLUSION AND RECOMMENDATIONS

5.1.   Summary and revisiting the research objectives

The first objective was to analyse the migration streams to Gauteng and identify the main source areas of migrants. The study established that 68% of migrants to Gauteng between 2001 and 2011 originated from other provinces in South Africa, whilst 32% were foreign migrants. The provinces that are the main sources of migrants to Gauteng are Limpopo accounting for 20.3% of the total migrants, followed by KwaZulu-Natal at 13.1% and 9.7% from the Eastern Cape. The proportion of foreign migrants increased dramatically from 12.6% in 2001 to 32% in 2011. The proportion of foreign migrants from SADC Countries in

particular increased from 64.5% in 2001 to as much as 87.5% in 2011 while the proportion from Europe dwindled from 23.9% to only 2.0% over the same period.

The second objective was to identify the preferred destinations of migrants to Gauteng at a municipal level. The preferred destinations of migrants to Gauteng are the City of Johannesburg attracting 38.4% of the migrants, followed by City of Tshwane (26.4%), and Ekurhuleni at 23.6%. Foreign migrants are mostly attracted by the City of Johannesburg accounting for 48.9% of the foreign migrants and Ekurhuleni at 21.3%.

Thirdly, the research sought to profile the demographic, social and economic characteristics of migrants to Gauteng. A typical migrant to Gauteng is a male person who has never married, aged between 20 to 29 years. This migrant is more likely to be originating from Limpopo, KwaZulu-Natal or the Eastern Cape with a greater likelihood of originating from eThekwini, Polokwane, City of Cape Town, Thulamela and Nelson Mandela Bay municipalities. The potential migrants are most likely to have received at least some secondary education, are employed and earning a low income of less than R6400 per month.

5.2.   Consequences and implications

The extent of migration to Gauteng from provinces such as Limpopo will have a definite impact on the demographic structure of the sending populations for a considerable length of time. The results have indicated that most of these migrants have at least completed some secondary education or completed Grade 12, while 15.9% have tertiary qualification. The loss of these skills from the source areas will further diminish the already limited skills base in these provinces. There is however also some potential benefits for the sending provinces in the form of remittances that can reduce poverty and have a positive impact on the economy of the sending areas. The extent of migrants to Gauteng will continue to place a significant additional strain on the infrastructure (services and social facilities) and resources of the province. This will require pro-active planning and the patterns and characteristics outlined in this research can inform these processes. Migrants from other provinces, and especially foreign migrants, are often seen as threats to Gauteng residents because they are seen to be taking employment and businesses opportunities that should have benefitted Gauteng residents. This can result in psychological stress and antagonistic responses to migrants. Gauteng however also benefits from the economic contribution brought by the highly skilled and higher income migrants, mostly originating from the other metropolitan cities in South Africa.

5.3.   Value of research, limitations and recommendations for further research

This research provides migration trends and differentials, demographic and socio economic characteristics of migrants to Gauteng over the period 2001 to 2011. It also provided a spatial differentiation of the origin (municipalities) of migrants with various socio-economic characteristics. The results provide an important contribution to understanding migration dynamics to Gauteng in order to inform planning and policy formulation.

Stellenbosch University http://scholar.sun.ac.za

35

One of the limitations of the study is the unavailability of variables in the 2001 census regarding the municipality or place of origin of migrants. It was thus not possible to compare the spatial temporal migration patterns for the two different census periods as in the case of the socio-economic variables. A further complicating factor has been the differences between categories and definitions used in some variables (such as employment status and income) between the two census periods. For example, the application of different income categories in Census 2001 and Census 2011 necessitated the use of aggregated categories such as lower income, middle income and higher income. The value and relevance of the findings presented in this research can be further enhanced by additional research in the following areas:

- Investigating the influence of policy interventions that influence migration patterns and the impact thereof on service planning and provision.

- More detailed research on the push factors at play in the provinces that are main senders of migrants to Gauteng and the implication thereof for policy and strategy development.

- Household surveys to establish some of the more qualitative aspects influencing migration decision making to Gauteng (eg. influence of structural decision making units and information sources).

- Development of a Geographically Weighted Regression model to further analyse the causal relationship between the extent of migration to Gauteng and underlying contributing factors to provide a tool for exploring the extent and spatial characteristics of future migration to Gauteng

6. REFERENCES

Anselin L 1995. Local indicators of spatial association–LISA. *Geographical Analysis* 27: 93–115.

Baruch Y, Budhwar PS & Khatri N 2007. Brain drain: Inclination to stay abroad after studies. *Journal of World Business* 42: 99-112.

Bauer T & Zimmermann K 1995. Modelling international migration: *Economic and econometric issues*. In R van der Erf & L Heering (Eds) *Causes of international migration*. Proceedings of a workshop, Luxembourg, 14-16 December 1994. Brussels: Eurostat.

Bekker S 2006. 'Migration from South Africa's rural sending areas: *Changing policies and changing destinations' in Gallo-Mosala S (ed.) Migration to South Africa within*

International Migration Trends. Immigrazione in Sudafrica e trend migratori internazionali. Cape Town: The Scalabrini Centre.

Bhandari P 2004. *Relative deprivation and migration in an agricultural setting of Nepal* [online]. Available from: http://perl.psc.isr.umich.edu/papers/RelativeDep.pdf [Accessed 25 July 2014].

Black M 1983. "Migration of young labor force entrants," *Socio-Economic Planning Sciences* 17: 267-280.

Bogue SJ 1969. *Principles of demography*. New York: John Wiley.

Castles S & Miller MJ 2003. *The age of migration*. Houndmills, Basingstoke, Hampshire and London: MacMillan Pres ltd.

Chiswick B 2000. Are immigrants favorably self-selected? An economic analysis. In C Brettell & J Hollifield (Eds) migration theory. *Talking across disciplines.* New York: Routledge.

Connell J, Dasgupta B, Laishley R & Lipton M 1976. *Migration from rural areas. The evidence from village studies*. Delhi: Oxford University Press.

Cross C 2006. *Migrant motivations and capacities in relation to key migration streams*.

Cross C, Kok P, Wentzel M, Tlabela K, Weir-Smith G & Mafukidze J 2005. Poverty pockets in Gauteng: *How migration impacts poverty.* Report to the Gauteng Intersectoral Development Unit.

De Haan A, Brock K, Carswell G, Coulibaly N, Seba H & Toufique KA 2000. *Migration and Livelihoods: Case Studies in Bangladesh, Ethiopia and Mali*, Institute of Development Studies, Brighton, Sussex.

De Haas H 2008. Migration and development. *A theoretical perspective* [online]. Available from: http://www.imi.ox.ac.uk/pdfs/wp/WP9%20Migration%20and%20development%20theory%20HdH.pdf   [Accessed 27 June 2014].

De Jong G 2000. Expectation, gender and norms in migration decision-making, *Population Studies* 54: 307-319.

Decosas J, Kane F, Anarfi J, Sodji KD & Wagner HU 1995. Migration and AIDS. *Lancet,* Vol. 346, No. 8978, pp. 826-828.

DPRU 2004. *Internal migration to the Gauteng Province: DPRU Policy Brief Series.* Development Policy Research, University of Cape Town, February 2005.

Gauteng City-Region Observatory (GCRO) 2013. *Gauteng: A province of migrants* [online]. GCRO Data Brief: NO. 5: Available from:

http://www.gcro.ac.za/sites/default/files/editor_uploads/gcro_data_brief_migration.pdf [Accessed 12 May 2014].

GEDA 2013. *Gauteng Economic Development Agency annual report* [online]. Available from: http://www.ggda.co.za/Pages/AnnualReports.aspx [Accessed 03 April 2014].

Gelderblom D 2000. The role of rural – urban migration in reinforcing inequality: *A theoretical model and case study of Nkosini, South Africa*. Unpublished D Phil thesis. Durban: University of Durban Westville.

Gelderblom D 2006. *Social Institutions*. Cape Town: Oxford University press.

Georges E 1990. The making of a transnational community: *Migration, development and cultural change in the Dominican Republic*. New York: Columbia University Press.

Geyer H S. 2002. An exploration in migration theory. In Geyer H S (Eds) *International handbook of urban systems. Studies of urbanization and migration in advanced and developing countries,* 19-37. Cheltenham: Edward Elgar.

Goss J & Lindquist B 1995. Conceptualizing international labor migration: A Structurationist perspective. *International Migration Review*. 29(2): 317-351.

Graves PE, Sexton RL & Knapp TA 1984. "A multi-disciplinary interpretation of migration: Amenity capitalization in both land and labour markets," *The Annals of Regional Science,* 18: 35-44.

Hammar T 1995. Development and immobility: Why have not many more emigrants left the south? In R van der Erf & L Heering (Eds) *causes of international migration*. Proceedings of a Workshop. Luxemburg, 14-16 Brussels: Eurostat.

Harris J & Todaro M 1970. 'Migration, unemployment and development: A two-sector analysis', *American Economic Review*, 60(5): 126 –42.

Kahn K, Collison M, Tollman S, Wolff B, Garenne M, & Clark S 2003. *Health consequences of migration: Evidence from South Africa's rural Northeast (Agincourt)*. Paper prepared for Conference on African Migration in Comparative Perspective, Johannesburg, South Africa, 4-7 June 2003.

Kok P & Aliber M 2005. *The causes and impact of human migration: Case study of migration from Eastern Cape, Northern Cape and Limpopo to the nine major cities in South Africa.* Report to the Department of Trade and Industry.

Kok P, Gelderblom D, Oucho JO &Van Zyl J 2006. *Migration in South and Southern Africa. Dynamics and determinants.* Tokai: HSRC Press.

Ladinsky J 1967. Sources of geographic mobility among professional workers: A multivariate analysis, *Demography,* 4: 293-309.

Lall SV, Selod H, & Shalizi Zmarak, 2006. *Rural-urban migration in developing countries: A survey of theoretical predictions and empirical findings*. World Bank Policy Research Working Paper 3915. Washington, D.C.:Worl Bank.

Lee ES 1966. A theory of migration. *Demography* 3:47-57.

Lipton M 1980. Migration from rural areas of poor countries: The impact of rural productivity and income distribution, *World Development* 8: 1-24.

Long HH 1974. "Women's labor force participation and the residential mobility of families," *Social Forces* 52: 342-348.

Lucas REB 1997. Internal migration in developing countries. *Handbook of Population and family economics*. Volume 1B, edited by Mark R. Rosenzweig and Oded Stark. Amsterdam; New York: Elsevier.

Lurie M 2000. Migration and AIDS in Southern Africa: a review. *South African Journal of Science*, 96: 343-347.

Macpherson C 2000. *Some social and economic consequences of migration* [online]. Auckland: University of Auckland. Available from: http://www2.unescobkk.org/elib/publications/migrate_samoa/Samoa-Migration.pdf [Accessed 17 May 2014].

Mahmud S, Sabur A & Tamanna S 2009. *International migration, remittances and development* online]. Available from: http://www.ccsenet.org/journal/index.php/jsd/article/viewFile/298/265 [Accessed 27 June 2014].

Mattes R & Richmond W 2000. The brain drain: What do skilled South Africans think? Losing our minds: Skills migration and the South African brain drain. In: J Crush (Ed.): *Migration Policy Series No.18*, 9-35. Cape Town: Idasa.

Mischaikow MK 1984. Metropolitan migration and labor market changes by industry, *The Annals of Regional Science* 18: 11-24.

Mueller CF 1982. The economies of labor migration: *A behavioral analysis*. New York: Academic Press.

Oosthuizen M & Naidoo P 2004. *Internal migration to the Gauteng Province*. Cape Town: University of Cape Town. Development Policy Research Unit.

Peberdy S 2009. Selecting Immigrants: *National identity and South Africa's immigration policies, 1910-2008*. Johannesburg:Wits University Press.

Peberdy S, Crush J & Msibi N 2004. Migrants in the city of Johannesburg. *A report for the City of Johannesburg* [online]. Available from: http://www.joburg-archive.co.za/corporate_planning/migrants.pdf [Accessed 16 October 2014].

Petras E 1981. The global labour market in the modern world economy. In Kritz, M.M., Keely, C.B. and Tomasi, S.M. (eds.) *Global trends in migration: Theory and research on international population movements* 44-63. New York: Center of Migration Studies.

Piore M 1979. *Birds of Passage: Migrant labor in industrial societies.* Cambridge: Cambridge University Press.

Polzer T 2010. *Population movements in and to South Africa*. Johannesburg: University of the Witwatersrand.

Rasool F, Botha CJ & Bisschoff CA 2012. *Push and pull factors in relation to skills shortages in South Africa*. Potchefstroom: North-West University.

Ratha D, Mohapatra S & Scheja E 2011. *Impact of migration on economic and social development: A review of evidence and emerging issues.* Policy Research Working Paper No. 5558, World Bank.

Ravenstein EG 1889. The laws of migration. *Journal of the Royal Statistical Society* 52:214-301.

Roux N 2009. Migration and urbanization. *Towards a 10-year review of the population policy implementation in South Africa (1998-2008).* Pretoria: Department of Social Development.

Shaw RP 1975. Migration theory and fact: *A review and bibliography of current literature.* Philadelphia: Regional Science Research Institute.

Simmons A 1986. Recent studies on place-utility and the intension to migrate: An international comparison, *Population and Environment* 8: 120-140.

Skeldon R 1997. Migration and development: *A global perspective*. Essex: Longman.

Stark O & Taylor JE. 1991. *Relative deprivation and migration: theory, evidence, and policy implications.* Policy, Research, and External Affairs Working Papers 656, World Bank.

Statistics South Africa 2001. *Census 2001 10% sample metadata*. Pretoria: Statistics South Africa.

Stats SA 2006. *Stats in brief*. Pretoria: Statistics South Africa.

Statistics South Africa 2011. *Census 2011 10% sample metadata*. Pretoria: Statistics South Africa.

Statistics South Africa 2012. *Census 2011*. Data made available through Stats SA Supercross.

Stats SA 2013. *Mid-year population estimates, 2013*, Statistical release P0302. Pretoria: Statistics South Africa.

Todaro M 1980. *Internal migration in developing countries: A survey*. University of Chicago Press.

Todaro MP 1976. Urban job expansion induced migration and rising unemployment. Formulation and simplified empirical test of LDCS. *Journal of Development Economics*, 3 (3): 211-225.

White PE & Woods RI 1980. *The foundation of migration study. The geographical impact of migration*. London: Longman, Inc.

Wolfel R 2002. Transition and the beached Diaspora: Proximate and structural determinants of migration between Uzbekistan and Russia during the early transitional era. *Journal of Central Asian Studies*.

Zhang T & Lin G. 2006. A supplemental indicator of high-value or low-value spatial clustering. *Geographical Analysis*, 38(2), 209-225.