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The South Africa I know, the home I understand

## Census 2011:

## **Migration Dynamics in South Africa**

**Statistics South Africa** 

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Pali Lehohla Statistician-General

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Evidence based decision-making has become an indispensable practice universally because of its role in ensuring efficient management of population, economic and social affairs. It is in this regard that Statistics South Africa (Stats SA) is mandated to provide the state and other stakeholders with official statistics on the demographic, economic and social situations of the country to support planning, monitoring and evaluation of the implementation of programmes and other initiatives. In fulfilling its mandate prescribed in Statistics Act, (Act No. 6 of 1999), Stats SA has conducted three Censuses (1996, 2001 and 2011) and various household-based surveys. Censuses remain one of the key data sources that provide government planners, policy-makers and administrators with information on which to base their social and economic development plans and programmes at all levels of geography. Census information is also used in monitoring of national priorities and their achievement, and the universally adopted Millennium Development Goals. This demand for evidence-based policy-making continues to create new pressures for the organisation to go beyond statistical releases that profile basic information and embark on the production of in-depth analytical reports that reveal unique challenges and opportunities that the citizenry have at all levels of geography. This analytical work also enhances intellectual debates which are critical for policy review and interventions.

The above process is aimed at enabling the organisation to respond to, and support evidencebased policy-making adequately, build analytical capacity and identify emerging populations, socio-economic and social issues that require attention in terms of policy formulation and research. The monograph series represents the first phase of detailed analytical reports that are theme-based addressing topics of education, disability, ageing, nuptiality, age structure, migration, fertility, and mortality among others.

This monograph provides an analysis of migration in South Africa for the period 2001 to 2011 at an internal and international level.

PJ Lehohla Statistician-General Statistics South Africa wishes to express special thanks to the following persons for the contribution they made in the compilation of this thematic report as well as for providing constructive peer reviewing of each other's work: Mark Collinson, Carren Ginsburg, Nkechi Obisie-Nmehielle, Pieter Kok, Louis van Tonder, Niel Roux, Diego Iturralde, Princelle Dasappa-Venketsamy, Lesego Lefakane, Chantal Munthree and Thendo Netshivera.

#### **Executive summary**

Migration is at the best of times a very complex phenomenon to study, and at the same time it is currently one of the most hotly contested themes in contemporary public debates and discussion. Because of its complexity, this volume is structured in such a way as to reflect the varied and dynamic context of the study of migration.

The volume begins with a review of the discipline of migration, setting out various definitions and reviewing various data sources along with their strengths and limitations. It is clear that migration is a key component in understanding various sectors of society, ranging from health to education and security. An assessment of migration data was done by comparing it to registration data from the Independent Electoral Commission (IEC), and it was clear that migration streams are for most cases pointing in the same direction – even if the number of people for a particular stream are not. It must, however, be borne in mind that registration for election is voluntary, is open only to those over 18 years of age and who are citizens of the country, and will only be done by persons who are interested in voting for a given election. For these reasons and perhaps others, the total number of people who changed their registration from one place to another will not match those reported in Census 2011, which did not have any such limitations.

The analysis proceeds by looking at a bivariate analysis of internal migrants and their characteristics as well as a logistic regression, which looks to predict which characteristics best predict one as a migrant. This analysis shows that a quarter of all internal migration movements occur between Gauteng and Limpopo, and Gauteng and KwaZulu-Natal. Key findings show that internal migration is no longer the domain of males only, and that only in the two aforementioned streams males are dominant. Proportionally, whites are most migratory, followed by black Africans, but the dominance of whites moving from Western Cape to Gauteng and Indian/Asians from KwaZulu-Natal to Gauteng are two findings that stand out. Migrants heading to Gauteng form various parts of the country have at least a matric, with those coming from Gauteng having further post-matric qualifications. Those moving from Limpopo to Gauteng or from Eastern Cape to Gauteng or Western Cape were unemployed at the time of enumeration. The latter also appeared to be migrants with no income at the place of destination. Migration still appears to be an event of the young, as these appear to be more inclined to have moved recently. From the

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logistic regression analysis, it is evident that any increase in the level of education increases the odds of migration. Other characteristics point out that people with access to poor services or who rent their accommodation have less to lose by moving to somewhere where their lives might change. The strongest indicator of migrating though was through unemployment, whereby a single percentage point change in unemployment equated to a 448% increase in the predicted odds of producing an inter-municipal migration.

The analysis proceeds to look at person and household characteristics of internal migration, whereby it is evident that internal migration across provincial boundaries is mostly the domain of males and of young adults aged 20–39 when viewed in numerical terms. The destination of most people – Gauteng – has 45% of people residing there that were not born there. An interesting observation is that, whilst there is a peak across all population groups aged 25–29, the white population group also shows a secondary peak at 60–64 – most likely for those going on pension. Whilst plenty has been said in the literature and in this publication elsewhere about the distribution of numbers of migrants, when looking at households whose head is a migrant, the picture depicts that Gauteng and North West have the highest proportions of migrant households, whereas Eastern Cape and KwaZulu-Natal have the smallest. These households are mostly formal dwellings amongst migrant households.

The 2011 Census also asked questions to measure international migrants based on country of birth, citizenship and year of most recent entry into South Africa. What the Census does not do is to measure emigration, ask about living conditions in the place of origin or enquire about the legal status of migrants. Census 2011 showed there were just over 2,1 million international migrants in 2011, which equates to 4,2% of the total population. Most of these came from Africa (75,3%) and of these, 68% from the SADC region. Of these, 45,2% came from Zimbabwe. A third of international migrants were aged 25–34. With regard to demographics, 60% of international migrants are males, which contrasts with the distribution of internal migrants described earlier. Just less than half of international migrants (47%) entered South Africa recently between 2006 and 2011, bearing in mind that Census only asked about their last move into South Africa, in the case of multiple entries into the country. Three-quarters of these movements came from the SADC region. Just over half of these international migrants (52%) chose Gauteng as their place of residence. It is noted that about 40% of international migrants were amongst those with a

higher education than males. This is consistent amongst various other categories of international migrants. Those with no formal education found themselves mostly in lower-income groups. Exactly half of international migrants were household heads. Of those in lower-income groups, most were women, but those in medium- and higher-income groups were mostly male. Across most household services, international migrants had a high access to services in their current place of residence.

The volume ends with a section around migration and settlement change and, using a triangulated approach, asks what we can conclude about the urbanisation process under way in South Africa. Using Gotz typology of settlement types, the Census is able to measure movements between these using a *de facto* design. Using longitudinal data from the Agincourt Health and Demographic Surveillance System (HDSS), analysis of permanent and temporary migrants using a *de jure* design was possible. Census revealed a high prevalence of movement from core metro to core metro, but that flows and counterflows exist between all settlement types. The Agincourt HDSS currently is home to over 100 000 persons. It is a rural, densely settled area with about a third of them being Mozambican immigrants. The HDSS data shows quite consistent permanent migration movements within the area, but temporary migrants (those who are away from the household most of the time but who retain a significant link to the household) are far more prevalent, suggesting the preponderance of circular migration, a phenomenon that is expected. In essence, metropolitanisation is very evident, but a high proportion of this urbanward movement is temporary with strong interdependencies between urban and rural areas.

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#### Organisation of the monograph

The objective of this monograph is to produce a detailed migration profile for South Africa based on Census 2011. It will explore migration at an internal and international level, as well as compare the data to other data sources.

Chapter 1 provides a **broad introduction to concepts and terms related to migration**. It also reviews the various sources of migration data that are available and highlights the questions on migration that were found in Census 2011 and which are the subject of the analysis that this volume contains. Furthermore it elaborates on the assessment of migration data in Census with that of registration data from the Independent Electoral Commission (IEC).

The purpose of chapter 2 is to provide a **profile of internal migrants** as identified during Census 2011. A profile of migrants relates to the distinction between migrants and non-migrants with a view to determining who tends to migrate and who does not. Following a brief introduction to migration selectivity, the profiles of migrants in the main streams of the major migration corridors in the country are described. A logistic regression analysis was undertaken to obtain a multivariate profile of recent internal migrants in South Africa.

Chapter 3 looks at internal migration in South Africa at individual and household levels from Census 2011. The study looks at migration between provinces and for the period 2006–2011. The study analyses various migration indices (crude net migration, index of relative representativity and net migration) as well as lifetime and period migration. At the individual level, sociodemographic characteristics of migrants and non-migrants are analysed. Analyses at the household level included socio-demographic and living conditions. The purpose of analysing migration and housing is to determine differences in the living conditions between migrant and non-migrant households.

Based on theoretical and empirical evidence from the 2011 South Africa Population Census, chapter 4 provides information about volume, social, economic and demographic **characteristics of international migration** in South Africa in 2011. The chapter is divided into different sections. The first section provides an overview and the implication of international migration globally, in Africa, the Southern African Development Community (SADC) region, and South Africa. The second

section describes the data and limitations of the census, while the third section describes the social, economic and demographic characteristics of international migrants at individual and household levels based on the 2011 South African Population Census. The last section consists of a conclusion and recommendations.

Chapter 5 examines **internal migration and settlement change** in both national and sub-district settings using Census 2011 data and an external data source, namely the Agincourt Health and Demographic Surveillance System (HDSS). The aims of the chapter are three-fold: to describe the contemporary patterns of migration and settlement change in South Africa using both the Census 2011 and HDSS datasets, to explore the role of temporary migration in relation to these trends using HDSS data and to comment on the process of urbanisation underway in South Africa using a triangulated approach based on both data sources.

#### Chapter 1: Broad introduction to concepts and terms related to migration

#### 1. Introduction to this volume

Twenty years into democracy, the knowledge about the movement of people into, out of and within South Africa has been limited, mainly due to a lack of efficient data. An understanding of recent migration patterns in South Africa, as well as the implications thereof is essential in planning for the population of the area to and from which they migrate. Shryock et al. (1976:374) defines migration as "a form of geographic or spatial movement involving a change of residence between clearly defined geographic units which involves a change in social functions of the migrants concerned. Both the place of destination and place of origin are affected in the migration process".

On the continent of Africa, South Africa has shown to be a receiver of migrants from Africa (Stats SA, 2014). Reasons for the immigration of Africans across Africa to South Africa range from economic to social and political. Beyond the African continent, South Africa is also known as a sending country, experiencing the immigration of its citizens to more to developed counties such as UK, USA, Australia, etc. (Phillips, 2006). Migration can be considered an instrument of development, which has the potential to facilitate economic, social and political freedom; however, it may also, in its process, hinder economies, and create social instability and anarchy. Consequences of immigration for a sending country such as South Africa include brain drain and loss of skills. Although there is the potential for brain gain and increased skills via immigration, there are also consequences such as lack of basic infrastructure, depletion of social and economic resources, and the overall inability of a country to cater for the needs of a growing population. Understanding migration patterns in South Africa is not only imperative in evaluating current socioeconomic development plans, but also necessary in developing future socioeconomic development plans.

It is imperative that the current terminologies, concepts and definitions of migration be understood, as the derived estimates of migration flows are determined by the parameters of the definitions. The definitions used in measuring a fluctuating phenomenon such as migration thus influence policies and priorities used to police migration.

#### 2. Definitions

#### 2.1 International migration

International migration refers to movement from one country to another and involves the crossing of national borders. International migration comprises two processes, namely immigration and emigration. Immigration is a process of entering a country, which is not of origin to settle permanently, while emigration refers to the process of leaving a country to settle permanently in another country. Migrants differ from visitors in that they have to have resided in the area of destination for a year or more (Weeks, 2008; Edmonston and Michalowski, 1976).

#### 2.2 Internal migration

Mostert et al. (1998:168) define internal migration as the movement between various provinces, regions and cities as well as the movement from rural to urban areas and vice versa. Internal migration refers to a process of crossing boundaries but within the country. A person who leaves an administrative area to live in another administrative area within the same country is regarded as an out-migrant in the administrative area of origin and is regarded as an in-migrant in the administration.

#### 2.3 Lifetime migration versus period migration (migration interval)

According to the United Nations (1970), a person whose area of residence at the census/survey date differs from his/her area of birth, is a lifetime migrant. In contrast, period migration refers to a definite interval. Though migration is a continuous process that occurs over time, in order to study its incidence, data have to be compiled with reference to specified periods of time. Unlike lifetime migration, the interval for period migration is definite, for example, one year, five years, ten years, or an intercensal period.

#### 2.4 Migration stream

A migration stream is the total number of moves made during a given migration interval that have a common area of origin and a common area of destination. In practice, it is usually a body of migrations having a common area of origin and a common area of destination (UN, 1970).

#### 2.5 Gross and net migration

According to Edmonston and Michalowski (1976), gross migration is the absolute sum of immigration and emigration experienced by a country. Gross internal migration is the absolute sum of in-migration and out-migration. Net migration is the difference between the two flows. The level of gross migration is always greater than the level of net migration (it can never be less) because of the tendency for counter streams of returning migrants to develop.

#### 2.6 Sources of migration data in South Africa

Capturing data on migration is often problematic, especially for developing countries where registration data on migration cannot be relied upon to produce reliable estimates (Dorrington and Hill, 2013). Information on internal migration is usually unreliable or unavailable, especially in developing countries as most countries do not keep information or statistics on population movements within national geographic boundaries (i.e. movement across province, municipality, district or city), and therefore, census data (though only available every 5 to 10 years) is commonly used.

The difficulty in obtaining reliable and good quality migration data that is specific in space and time can often lead to misleading analysis (Goddard et al., 1975).

#### 2.7 Administrative records

In most countries (including South Africa), administrative records can be used to capture information on immigration. In collaboration with the Department of Home Affairs (DHA), Stats SA processes and analyses data collected by immigration officers at all air, land and sea ports of entry, documenting immigrants into South Africa (Stats SA, 2012). In addition to the volume of

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immigrants, the DHA records capture characteristics of immigrants such as age, sex, occupation, country of birth, country of previous residence, nationality, mode of travel and port of entry. It should be noted that administrative records in South Africa only capture documented migrants, therefore excluding illegal immigrants.

#### 2.8 Health and demographic surveillance sites

The Health and Demographic Surveillance Sites (HDSS) across the various continents are a source of valuable migration data. These are sites with research centres located within them to track and analyse movement of people in a demarcated zone. Surveillance data has been regarded as less susceptible to recall bias and more accurate with regard to the timing of migration, as events that could affect migration are timely recorded (Adazu, 2009). The continuous surveillance of individuals in HDSS sites makes for time series as well as event history analyses at different levels (individual, household and community) (Ibid). However, this data can be regarded as bias only to the geographic area under study and may therefore not be representative of the migration in the country. It is important, however, to note that data from these sites is advantageous as it can measure temporary circular movements unlike censuses/surveys, and this is of particular importance especially when studying labour migration. There are three HDSS sites in South Africa, i.e. Agincourt in Mpumalanga, Dikgale in Limpopo and Hlabisa in KwaZulu-Natal.

#### 2.9 Surveys

Household surveys can also be used to gather migration data. South Africa has a few surveys that have collected migration data, which include the 2007 Community Survey, and the Quarterly Labour Force Survey (QLFS), which includes a migration module every three years for one quarter and includes questions on reasons for migrating. Prior to 2002, Stats SA conducted a survey called the October Household Survey (OHS), which also collected information on migration. However, this survey has since been discontinued and was replaced by the General Household Survey (GHS), and the migration module was terminated. The National Income Dynamics Study (NIDS) run by researchers at the University of Cape Town on behalf of the South African Presidency is another household survey that collects migration data. Migration-dedicated surveys naturally include full migration histories. Surveys such as these raise complex analytical issues relating to migration; however, they tend not to be focused on estimating the number of migrants/migrations in a

country (unlike censuses and general surveys). The 2001/2002 migration survey is a migrationdedicated survey in South Africa and was conducted by the Human Sciences Research Council (HSRC).

Household surveys represent an alternative source of migration data that countries can use to monitor demographic and socioeconomic changes among their populations. Surveys are less costly than censuses and have the advantage of enabling the collection of more information than the census. For example, many household surveys collect data on household consumption and income. This type of data is not collected in censuses, but can enable assessment of welfare and poverty (and establish whether they are linked to migration/remittances). Although surveys provide data that is useful for different types of migration analyses, they generally do not serve as a sufficient basis for measuring and analysing migration at lower geographic levels due to small sample sizes as well as sample design issues (Morrison, Bryan et al. 2004).

#### 3. Censuses

Countries have endeavoured to carryout censuses that accommodate migration modules at least once every five/ten years, and this has led to availability of migration data for analysis over time. However, there are limitations to the migration data gathered from a census. The nature of censuses as a data collection method means that only "the last move" is captured, leaving out other migratory moves that persons would have gone through before the current/last move. As a result, the census migration data underestimates the mobility of people. Despite this, the postapartheid South African censuses (1996, 2001 and 2011) have asked individuals questions on migration and can therefore be used to estimate international and internal migration patterns and flows for the country over time.

The major advantage of using census data in migration analysis is the national coverage, which allows for representivity. The substantial sample size inherent in a census allows analysis not only at national level, but also at provincial, district and at municipal levels. However, the large sample size of the census is achieved by sacrificing more detailed information; as a result, research explanatory variables regarding migration are compromised. Most census data on migration lack information relating to the process of migration, such as reasons for migrating (which may be collected in household or migration-focused surveys). International immigrants are usually 1

underrepresented in censuses and reasons for this may include the fact that many of them are in the country illegally, and may thus not want to declare their status. Furthermore, prevalence of xenophobic attacks and negative attitudes toward foreign migrants fuelled by high unemployment, poverty, deprivation and crime in South Africa has made many migrants feeling fearful and vulnerable (Dorrington and Hill, 2013; Harris, 2001). A counterview of this is that census-takers are not interested in their migrant status and that by engaging with migrant community representatives prior to enumeration their support can be gained. Furthermore, the random nature of the post-enumeration survey (PES) is such that anyone not enumerated has an equal chance of being sampled in a PES and of contributing to an adjustment factor that adjusts the enumerated population for those not counted. The latter scenario seems to have been the case in the 2011 Population Census of South Africa.

Bearing in mind the agreed terminologies of migration as well as the benefits and failures of the various data collection methods and instruments, surveys and censuses attempt to gather necessary data to understand the migration patterns that exist internally and internationally, over a lifetime as well as over a defined period of time. Much of the migration analysis within this report makes use of the most recent and available data gathered from the nationally representative 2011 Census. The migration questions within the Census 2011 questionnaire will be discussed, detailing the strengths and limitations of the data items as well as highlighting the usefulness of the questions developed for Census 2011.

#### 3.1 Census 2011 migration questions

Census 2011 comprised three questionnaires that were administered to people within the geographical boundaries of South Africa on census night. Questionnaire A gathered data on individuals within households; Questionnaire B was used to gather information from individuals in transit, whilst Questionnaire C gathered information on individuals residing within institutions. Only Questionnaire A contained a comprehensive module on migration, whilst Questionnaire B, developed for people in transit, had a limited number of the migration module questions. Furthermore, information regarding location, i.e. residence, was captured on the first page of all questionnaires. This chapter interrogates the manner in which the data items or questions of Census 2011 can be used to develop migration measures as well as the strengths and weaknesses of these measures.

#### Lifetime migration

#### **Figure 1: Lifetime migration**

P-07 PROVINCE OF BIRTH	P-08 COUNTRY OF BIRTH	P-08a YEAR MOVED TO SOUTH AFRICA	P-09 SOUTH AFRICAN CITIZENSHIP	P-10 USUAL RESIDENCE	P-10a PROVINCE OF USUAL RESIDENCE	P-106 MUNICIPALITY/ MAGISTERIAL DISTRICT OF USUAL RESIDENCE	P-10c CITY/TOWN OF USUAL RESIDENCE
In which province was (name) born? 01 = Western Cape 02 = Eastern Cape 03 = Northern Cape 04 = Free State 05 = Kwo-Zulu Natal 06 = North West 07 = Gauteng 08 = Mpumalanga 09 = Limpopo 10 = Outside South Africa 11 = Do not know White the appropriate code in the boxes. If 01-09 or 11, 0 ot p-20	In which country was (name) born? Use CAPITAL LETTERS only Examples: NEWZEALAND, BOTSWANA, SIERRALEONE	In which year did (name) move to South Africa? If moved more than once into South Africa, please indicate the year of last move.	Is (name) a South African citizen? 1 = Yes 2 = No Mark the appropriate circle with an X.	Does (namo) usually live in this household for at least four nights a week and has done so for the last six months? OR intends to live in this household for at least four mights a week for the next six months? 1 = Yes 2 = No Mark the appropriate circle with an X. If 1, Go to P-ff	In which province does (name) usually live? 01 = Western Cape 03 = Northern Cape 03 = Northern Cape 03 = Northern Cape 04 = Free State 05 = Kwa-Zila Natal 05 = North West 07 = Gauteng 08 = Mpumalanga 09 = Limpopo 10 = Outside South Africa 11 = Do not know Write the appropriate code in the boxes. If 10, Go to P-ff	In which municipality or megisterial district does (name) usually live? Use CAPITAL LETTERS only Example J O B U R G M E T R O	In which city/town does (name) usually live or what is the nearest city/town? Use CAPITAL LETTERS only

Figure 1 shows the census questions P-07 to P-10b, used to determine lifetime migration, occurring internally as well as internationally. In Figure 1, the questions essentially ascertain where a person was born in relation to their current place of residence at the time of the census. If the person currently resides in the same place, i.e. province in which he or she was born, this person is regarded as a non-migrant. If the person currently resides in a different place, i.e. a province or country different from the one in which he or she was born, this is regarded as lifetime migration. If a person was born outside South Africa, they were asked to report the country of their birth as well as the year of arrival into South Africa. Such individuals may be referred to as foreign-born. All foreign-born enumerated persons in South Africa are automatically considered immigrants. Lifetime migration occurs not only at an international level, but also internally. The questions related to province and country of birth capture immigrants and in-migrants and can therefore be used to estimate migration stock at country level and provincial level. Knowing the proportion of individuals residing in South Africa who have been born outside South Africa provides an indication of the pull that South Africa may have as a receiving country, and the pattern of that pull over time. Knowing the country in which foreign-born migrants were born allows analysts to better understand the profile of its constituents.

Census questions provide for a distinction between foreign-born migrants and citizens. Question P-09 asks individuals within households if they are South African citizens. Though this question does not contribute to migration measures developed from the census, it can be used to develop

categories of citizenship. Using "citizenship" (P-09) in combination with questions pertaining to country of birth (P-08), it is possible to develop categories of native-born citizens, foreign-born citizens and non-citizens. Understanding the proportion of individuals residing in South Africa by citizenship can be used to determine the influence of migration on the age and sex structure of a population as well as other research agendas.

#### 3.2 Usual residence

Usual residence was determined from question P-10 within the migration module questions. Usual residence, according to census, was defined as a place in which individuals resided or intended to reside for more than four days a week and for more than six months in a year. For persons who were enumerated at their place of usual residence, the rest of their information on usual residence (province and municipality) was determined from the enumeration area (EA) number on the cover page of the questionnaire. If individuals were enumerated at a place other than their usual place of residence (meaning they were visitors on census night), they were then asked subsequent questions, i.e. P-10a, P-10b and P-10c, ascertaining their usual place of residence (i.e. province; municipality as well as their town/city of usual residence). Although there are questions about the city/town of usual residence, these were actually asked in order to buttress questions on municipalities. Because South African censuses use the de facto methodology of collecting information regarding the census night, collection of information about their usual residence becomes paramount, especially when people are highly mobile.

The accuracy of usual residence plays a key role in determining not only the accuracy of lifetime migration but also the level of internal and international migration, as questions related to usual residence provide the destination of migration. The last set of questions within the migration module questions (as shown in Figure 2) captured movements within the last ten years (since the 2001 Census).

#### 3.3 Period migration

The questions in Figure 2 are asked for the purpose of collecting information on recent migration. If people reported that they had moved in the past ten years since the last census in 2001, they were asked to report the month and year that they had moved. However, it is imperative that origin (previous residence) and destination (usual residence) of move be established if measures for migration are to be developed.

P-11 SINCE 2001	P-11a MONTH AND YEAR MOVED	P-11b PROVINCE OF PREVIOUS RESIDENCE	P-11c MUNICIPALITY/ MAGISTERIAL DIS- TRICT OF PREVIOUS RESIDENCE	P-11d CITY/TOWN OF PREVIOUS RESIDENCE
Has (name) been living in this place since October 2001? 1 = Yes 2 = No 3 = Born after October 2001 but never moved 4 = Born after October 2001 and moved Write the appropriate code in the box. If 1 or 3,	When did (name) move to this place? Write the month and year in the appropriate boxes. Example 0 4 2 0 0 2	In which province did (name) live before moving to this place? 01 = Western Cape 02 = Eastern Cape 03 = Northern Cape 04 = Free State 05 = Kwa-Zulu Natal 06 = North West 07 = Gauteng 08 = Mpumalanga 09 = Limpopo 10 = Outside South Africa 11 = Do not know Write the appropriate code in the boxes.	In which municipality or magisterial district did (name) live before moving to this place? Use CAPITAL LETTERS only Example J O B U R G M E T R O	In which city/town did (name) live before or what was the nearest city/town? Use CAPITAL LETTERS only JOHAN NESBU RGU
Go to P-12		If 10, Go to P-12		

#### Figure 2: Period migration (migration since 2001 Census)

#### **3.4** Previous residence

Previous residence provides information on the origin of migration. The combination of questions P-11b, P-11c and P-11d provides the origin from which individuals moved, be it outside South Africa, internally from another province, or at a lower level, i.e. from another municipality. Similar to the measure of "usual residence", questions about the city/town that they moved from were merely asked to buttress questions on municipalities. Establishing "previous residence" is imperative in determining international and internal period migration.

#### 3.5 International versus internal migration

It is important to remember that, by definition, a census will not give information on people who have migrated out of the country, as they are no longer residents within a household in the country. Rather, it will provide information only on those that have returned and on immigrants (foreign-born residents or foreigners).

The combination of usual residence and previous residence migration streams occurring at specific points in time (year of move) can be used to determine migration streams. Migration streams

gathered from the census include people coming from outside the country (international migration) as well as outside the province (internal migration). Lower levels of movement (across municipalities) can be derived; however, this is only possible for internal migration as only internal migrants reported the municipality and city/town of previous residence. The specific country from which an individual migrated as well as the lower level of geography outside South Africa is unknown.

A failing of the migration module design is that individuals answering the census questionnaire were asked to report only information pertaining to their last move between the previous census and the current census. It is not only possible, but highly probable, that a number of individuals and even households have moved more than once and more so across internal boundaries (i.e. provinces) in a ten-year period. Thus, it is likely that higher rates of migration are expected to occur towards the latter end of the ten-year period, with the largest number of individuals migrating both internationally and internally, in 2011.

Although population movements have clearly proved to be difficult to measure, there is still high demand for such information by various professions and policymakers.

#### 3.6 Assessment of data

Unlike birth and death registrations, migration does not have such an equivalent in South Africa. A source of data that is available and that can be used is the registration data from the Independent Electoral Commission (IEC). Comparisons can be done in as far as commonalities between the two sources exist, but even so, such comparisons should be done with caution. It must be noted that those registering are over 18, they are South African citizens only, and most importantly, the data only include those interested in voting. One might also find a case whereby persons who have moved a short distance from where they were previously registered might not be bothered to reregister in their new place of residence. One may even find that people who have moved (be it long or short distances) fail to re-register, and are content with the consequences that they would lose their provincial and local government vote and only be able to vote at national level. For this reason, the comparison looked only at trends in terms of direction of the migration stream between provinces. In order to make this comparison possible, 2011 ward boundaries would need to be linked to the geography of previous elections. For 2011, the wards match perfectly, since a

local government election took place in that same year. From the census data on usual residence and previous residence, one must bear in mind that if one is visiting somebody else, or visiting a different place for whatever purpose at the time of enumeration, that usual residence then refers to the place where such a person usually lives and not where they were enumerated. Also worth noting is that only the last move of an individual is recorded. With the limited level of comparison possible, it was clear that direction of the trends was compatible in the greater majority of cases, but that closer analysis between census and IEC data is required for a better understanding of how the two data sources relate to each other.

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#### Chapter 2: A profile of recent migrants in South Africa

#### 1. Introduction

The purpose of this chapter is to provide a profile of the internal migrants as identified during Census 2011. A "profile of migrants" relates to the distinction between migrants and non-migrants with a view to determining who tends to migrate and who does not (cf. Kok, O'Donovan, Bouare & Van Zyl, 2003). "Migration selectivity", a technical term that refers to the phenomenon that persons with certain characteristics (or from certain types of areas) tend to be more migratory than others, is consequently the topic of this chapter.

Following a brief introduction to migration selectivity, the profiles of migrants in the main streams of the major migration corridors in the country are described. The findings from a logistic regression analysis, which was undertaken to obtain a multivariate profile of recent internal migrants in South Africa, cover the bulk of this chapter. The variables included in the logistic regression were selected in an exploratory fashion on the basis of findings from some descriptions of bivariate (involving two variables, one of which is migration) and multivariate (involving migration and two or more other variables) that are presented in an annexure to this report. Some policy and planning implications of the findings from the logistic regression are discussed in conclusion.

#### 2. A brief overview of migration selectivity

"International trends show that young adults and their small children generally have the highest probability of migrating. In addition, the experience in Africa (as in many other parts of the world) shows that men are generally more migratory than women" (Kok et al., 2003:55). The two bestknown selectivity characteristics are therefore age and sex, but others, such as educational attainment and locality type, have also been identified in the migration literature. To determine the selectivity factors that apply to South African internal migrants, it is necessary first to distinguish migrants from non-migrants. Although Census 2011 makes provision for the analysis of migration over a 10-year period, it was decided that it would be better to restrict the main analysis to a shorter period with a view to avoiding too much of a change since the migration actually took place. A period of five years is regarded as sufficiently short for the purposes of selectivity analyses, and it allows enough time for a sufficient number of migratory moves to have taken place. *The migration interval used here is therefore restricted to the period 1 October 2006 to 9 October 2011*.

The variable denoting the migration/non-migration differential depicts persons who migrated between October 2006 and October 2011 against persons who did not migrate during this period. Our interest here is to compare the characteristics of the inter-municipality migrants and the places (local municipalities) they moved away from, on the one hand, to the profiles of non-migrants and the places (municipalities) in which they lived during the entire migration interval, on the other hand. To obtain a general, descriptive picture of the differentials in migration levels, these characteristics will firstly be compared in a bivariate (two-way tabular) form with the migration/non-migration differential (see the section labelled "Bivariate description" below). This will be followed by a multivariate logistic regression analysis based largely on the key variables identified during the bivariate-descriptive look at the profiles of persons who migrated in the most prominent internal migration corridors in the country.

#### 3. Migrant profiles of the streams in the major internal migration corridors

A "migration stream" refers to the route taken by migrants from a common area of origin to a single area of destination. When a particular migration stream plus the stream in the opposite direction in combination cover a significant proportion of all migratory moves in the country, one can refer to it as an "internal migration corridor".

For the purposes of the identification of major internal migration streams and corridors, the full dataset (covering *all* unit records for *all* ages) and the entire migration interval covered by Census 2011 (October 2001 to October 2011) is used.<sup>1</sup> This is done to maximise the coverage of internal migration in the country with a view to obtaining the most comprehensive picture of inter-

<sup>&</sup>lt;sup>1</sup> The only exception is that people who were not enumerated at their place of usual residence were excluded to avoid the impacts of coding and related problems.

provincial migrant flows in the country that is possible with the available data. The main interprovincial migration *streams* with more than 2 per cent of all inter-provincial migratory moves are indicated as highlighted cells in Table 1.

Table 1 confirms the well-known fact that Gauteng is the main migration destination in South Africa, and it also happens to be the main origin for inter-provincial migratory moves. From the table it is clear that the 10 main inter-provincial migration streams in the country (with more than 3 per cent of all inter-provincial migratory moves) are as follows:

- 1. Limpopo to Gauteng (12,06% of all inter-provincial migratory moves);
- 2. KwaZulu-Natal to Gauteng (8,27%);
- 3. Eastern Cape to Western Cape (7,67%);
- 4. Eastern Cape to Gauteng (6,04%);
- 5. Mpumalanga to Gauteng (4,71%);
- 6. North West to Gauteng (4,23%);
- 7. Eastern Cape to KwaZulu-Natal (3,87%);
- 8. Gauteng to North West (3,69%);
- 9. Gauteng to Western Cape (3,42%); and
- 10. Free State to Gauteng (3,37%).

The following seven major inter-provincial migration *corridors* (each with more than 5 per cent of all inter-provincial migratory moves) can be identified from the total two-way percentages in Table 1:

- 1. Limpopo  $\leftrightarrow$  Gauteng: 14,50% of all inter-provincial migratory moves (12,06% + 2,44%);
- 2. KwaZulu-Natal  $\leftrightarrow$  Gauteng: 10,82% (2,55% + 8,27%);
- 3. Eastern Cape ↔ Western Cape: 9,43% (7,67% + 1,77%);
- 4. North West  $\leftrightarrow$  Gauteng: 7,92% (4,23% + 3,69%);
- 5. Eastern Cape ↔ Gauteng: 7,80% (6,04% + 1,76%);
- 6. Mpumalanga  $\leftrightarrow$  Gauteng: 7,59% (4,71% + 2,88%); and
- 7. Western Cape  $\leftrightarrow$  Gauteng: 5,70% (2,29% + 3,42%).

Previous			Curi	ent provir	nce (Migrat	ion destinat	tion)			
province (Migration										
origin)	wc	EC	NC	FS	KZN	NW	GT	MP	LIM	Total
Western Cape		37 540	9 829	5 145	10 230	5 463	48 609	5 033	3 423	125 272
(WC)		1,77%	0,46%	0.24%	0,48%	0,26%	2,29%	0,24%	0,16%	5,89%
Eastern Cape	162 918		6 842	16 991	82 333	32 589	128 373	14 819	11 055	455 920
(EC)	7,67%		0,32%	0.80%	3,87%	1,53%	6,04%	0,70%	0,52%	21,45%
Northern	16 541	3 248		7 241	4 075	10 530	15 087	3 193	1 822	61 737
Cape (NC)	0,78%	0,15%		0.34%	0,19%	0,50%	0,71%	0,15%	0,09%	2,90%
Free State	12 214	7 863	6 799		7 922	22 966	71 668	10 276	5 147	144 855
(FS)	0,57%	0,37%	0,32%		0,37%	1,08%	3,37%	0,48%	0,24%	6,82%
KwaZulu-	26 746	20 159	2 252	10 946		10 034	175 860	28 657	6 460	281 114
Natal (KZN)	1,26%	0,95%	0,11%	0.51%		0,47%	8,27%	1,35%	0,30%	13,23%
North West	7 343	3 873	16 256	9 634	4 542		89 845	8 521	14 023	154 037
(NW)	0,35%	0,18%	0,76%	0.45%	0,21%		4,23%	0,40%	0,66%	7,25%
Gauteng (GT)	72 590	37 433	9 225	31 113	54 113	78 407		61 316	51 867	396 064
Gauteng (GT)	3,42%	1,76%	0,43%	1.46%	2,55%	3,69%		2,88%	2,44%	18,63%
Mpumalanga	7 375	3 118	1 659	4 610	11 669	11 061	100 065		21 443	161 000
(MP)	0,35%	0,15%	0,08%	0.22%	0,55%	0,52%	4,71%		1,01%	7,57%
Limpopo	9 090	3 800	2 098	5 433	6 399	25 909	256 305	36 445		345 479
(LIM)	0,43%	0,18%	0,10%	0.26%	0,30%	1,22%	12,06%	1,71%		16,25%
Total	314 817	117 034	54 960	91 113	181 283	196 959	885 812	168 260	115 240	2 125 478
Total	14,81%	5,51%	2,59%	4.29%	8,53%	9,27%	41,68%	7,92%	5,42%	100,00%

## Table 1: The major inter-provincial migration streams during the period 2001–2011: Findings from the full Census 2011 dataset for all ages

These corridors will not be discussed here because the profiles one looks for here should preferably reflect the individual streams (one-way flows) and not the corridors (two-way flows). Two-way flows may hide important, perhaps unique, characteristics of migrants moving in one direction that may be neutralised by the combined-directions profiles.

The migrant profiles for each of the earlier-mentioned 10 streams can now be described individually, by viewing the characteristics of the inter-provincial migrants in each of these streams during their last migratory move. For these analyses, the following seven demographic, social and economic variables are used: (1) sex, (2) age at the time of the last inter-provincial move, (3) population group, (4) enumerator area (EA) type at the destination (in 2011), (5) level of education (in 2011), (6) official employment status at the destination (in 2011), and (7) personal income at the destination (in 2011).

In order to ensure that the abovementioned seven characteristics are still as valid as possible for the last move, *the migration interval 2006-2011 is used* – as will be the case with all the analyses that follow. The full Migration Community Profile data from Census 2011, kindly provided by Statistics South Africa, has been used to describe the selectivity factors associated with recent migration (between October 2006 and October 2011).

#### 1. Limpopo to Gauteng

In Figure 3, some demographic, social and economic characteristics of migrants in the Limpopo-to-Gauteng migration stream compared to other inter-provincial migrants during the period 2001–2011 are shown.

# Figure 3: Demographic and socioeconomic characteristics of migrants in the Limpopo $\rightarrow$ Gauteng migration stream during their last inter-provincial move: Proportion (%) of all inter-provincial migrants in this stream during the period 2001–2011



Figure 1a shows that male migrants are a slight majority (53%) in the Limpopo-to-Gauteng migration stream as in other migrant streams elsewhere in the country (also 53%). Particularly noteworthy in Figure 1b is the very high peak for the migration age group 20–24 years (31%). While black African migrants are overwhelmingly dominant (94%) in this stream (see Figure 1c), whites represent a much smaller proportion in this stream (5%) compared to inter-provincial migrants in other streams elsewhere (23%). Figure 1d shows that the majority of recent (2006–2011) migrants in this stream are currently (in 2011) found in formal residential areas (68%), but the proportion living in informal residential areas (22%) is much greater than in other streams elsewhere in South Africa (9%). A very interesting finding illustrated in Figure 1e is the high proportion of migrants with matric (Grade 12/Standard 10) in the Limpopo-to-Gauteng stream (46%) compared to other streams elsewhere in the country (35%). Furthermore, almost half of the recent migrants in this stream are currently employed (48%), but this proportion is 10 percentage points lower than for other streams elsewhere (see Figure 1f), and a large proportion (44%) reportedly has no income (Figure 1g).

In the logistic regression analysis to be described here, this migration stream (which represents 11,5% of all inter-provincial migratory moves in South Africa during the period 2006–2011) is compared to other streams in the country.

#### 2. KwaZulu-Natal (KZN) to Gauteng

Noteworthy features depicted in Figure 4 are the relatively high proportion (15%) of Indian/Asian persons involved in inter-provincial migration as part of this stream than elsewhere (see Figure 2c), the comparatively high proportion (25%) of migrants in the 20–24 years age group (Figure 2d), the much higher proportion (77%) of recent migrants found in formal residential areas in 2011 (Figure 2e), and the relatively high proportion of migrants (66%) with matric or better qualifications (Figure 2f).




### 3. Eastern Cape to Western Cape

In Figure 5, the demographic and socioeconomic characteristics of recent migrants in the Eastern Cape-to-Western Cape migration stream are shown. It is interesting to note in Figure 3a that male and female migrants are equally represented – 50 per cent each – in this migration stream. Figure 3b shows that the proportion of migrants (28%) in the age group 20–24 who moved in this stream is even higher than in the previously discussed stream. The 86% black Africans in this stream is much higher (almost 16 percentage points) than among other inter-provincial migrants, while the proportion whites (8%) is much lower (almost 14 percentage points) than among migrants elsewhere (cf. Figure 3c). The 29% recent migrants found in informal settlements in the Western

Cape also tends to be much higher (more than 19 percentage points) than in the case of other inter-provincial migrant destinations (see Figure 3d). The mere 10% of recent migrants in this stream with higher-than-matric qualifications is also notably lower (more than 12 percentage points) than among other recent inter-provincial migrants (see Figure 3e). Also noteworthy here is the fact that there are no "traditional residential areas" in the Western Cape (cf. Figure 3d).

Figure 5: Demographic and socioeconomic characteristics of migrants in the *Eastern Cape*  $\rightarrow$  *Western Cape migration stream* during their last inter-provincial move: Proportion (%) of all inter-provincial migrants in this stream during the period 2001–2011



The bar charts in Figure 6 show the demographic and socioeconomic characteristics of interprovincial migrants in the Eastern Cape-to-Gauteng stream. The differences between migrants in this stream and other inter-provincial migrants are too small to warrant any comment.

Figure 6: Demographic and socioeconomic characteristics of migrants in the *Eastern Cape*  $\rightarrow$  *Gauteng migration stream* during their last inter-provincial move: Proportion (%) of all inter-provincial migrants in this stream during the period 2001–2011



Figure 7 shows the demographic and socioeconomic characteristics of migrants in the Mpumalanga-to-Gauteng stream compared to other inter-provincial migrants elsewhere. Pretty much the same picture emerges here as in the case of the Eastern Cape-to-Gauteng stream depicted in Figure 4 above, but, if anything, the differences are even less pronounced here.

Figure 7: Demographic and socioeconomic characteristics of migrants in the *Mpumalanga*  $\rightarrow$  *Gauteng migration stream* during their last inter-provincial move: Proportion (%) of all interprovincial migrants in this stream during the period 2001–2011



#### 6. North West to Gauteng

In Figure 8, the characteristics of recent migrants in the North West-to-Gauteng stream are shown compared to those of other inter-provincial migrants elsewhere in the country. Again, these differences are not worth discussing.

Figure 8: Demographic and socioeconomic characteristics of migrants in the North West  $\rightarrow$  Gauteng migration stream during their last inter-provincial move: Proportion (%) of all inter-provincial migrants in this stream during the period 2001–2011



From Figure 9 it can be concluded that the migrants from the Gauteng-to-Western Cape stream differ quite substantially from those in the other inter-provincial migrant streams. Figure 7c shows that white migrants are in a clear majority in this stream (61%, or more than 41 percentage points higher than among other inter-provincial migrants), while the proportion of black African migrants is comparatively speaking very low (27%). Also, Figure 7d shows that a far greater proportion of the recent migrants in this stream (88%) is found in formal residential areas, which is more than 21 percentage points higher than among other inter-provincial migrants. Also noteworthy in Figure 7e is that the proportion of migrants with post-matric qualifications (41%) is much greater (more than 20 percentage points) than among other migrants. Also, Figure 7f shows that almost two-thirds (66%) of the recent migrants in this stream were employed at the destination in 2011. Related to this is the finding to be derived from Figure 7g that a lower proportion (31%) of migrants in this stream reported no income, compared to other inter-provincial migrants (38%), and double the proportion (34%) had incomes above R76 800 p.a. compared to their counterparts elsewhere (17%).

# Figure 9: Demographic and socioeconomic characteristics of migrants in the Gauteng $\rightarrow$ Western Cape migration stream during their last inter-provincial move: Proportion (%) of all inter-provincial migrants in this stream during the period 2001–2011





As was the case with the Eastern Cape-to-Western Cape migration stream (Section 3 above), the logistic regression model here did not converge because of the absence of "traditional residential areas" in the Western Cape. The logit analysis was therefore run without that specific EA type category here as well.

# 8. Eastern Cape to KwaZulu-Natal

From Figure 10 it is clear that male and female migrants participated in moves within the Eastern Cape-to-KwaZulu-Natal stream to exactly the same extent (50% of males and also 50% of females). Figure 8c shows that the proportion of white migrants (5%) is particularly low compared to other inter-provincial migrant streams (being almost 16 percentage points lower). According to Figure 8d, the proportion of recent migrants found in informal residential areas in the destination of this stream (20%) is double the proportion among other migrants (10%). Also noteworthy in Figure 8d is the finding that the proportion recent migrants in formal residential areas in KwaZulu-Natal destinations (50%) is almost 18 percentage points lower than among inter-provincial migrants in other streams. Figure 8e shows that the proportion migrants in this stream with post-matric qualifications (11%) is only half of that of migrants in other streams (22%).

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### 9. Gauteng to North West

Figure 11 shows the demographic and socioeconomic characteristics of recent migrants in the Gauteng-to-North West migration stream. The picture shown in Figure 9e is that of a comparatively high proportion of migrants found in traditional residential areas (37%, or almost 29 percentage points higher than among migrants elsewhere) and a relatively low proportion in formal residential areas (43%) compared to migrants in other streams (68%).





#### 10. Free State to Gauteng

In Figure 12, the profile of migrants in the Free State-to-Gauteng stream is shown. As in the case of the Eastern Cape-to-Western Cape and the Eastern Cape-to-KwaZulu-Natal streams, Figure 10a shows that the proportions of the two sexes involved in recent migration in this stream were equal (50% each). From Figure 10d it is clear that the proportion of recent migrants in formal residential areas at the destination (78%) is much higher (almost 12 percentage points) than among interprovincial migrants in other streams.





# 11. Comparing the above 10 major streams

Compared to inter-provincial migrants in the rest of South Africa, male migrants dominate slightly in only two streams, namely Limpopo to Gauteng and KwaZulu-Natal to Gauteng (see Figures 1a and 2a), while females in all other streams are more dominant than inter-provincial female migrants elsewhere, namely in the Eastern Cape to Western Cape (Figure 3a), Gauteng to Western Cape (Figure 7a), Eastern Cape to Gauteng (Figure 4a), Mpumalanga to Gauteng (Figure 5a), and North West to Gauteng (Figure 6a). Young children and their young adult parents are dominant (compared to inter-provincial migrants elsewhere) in two streams, namely Limpopo to Gauteng (Figure 1b) and Eastern Cape to Western Cape (Figure 3b), while older migrants dominate especially in two streams, namely Eastern Cape to Gauteng (Figure 4b) and Gauteng to Western Cape (Figure 7b).

Black African migrants are more dominant in the Limpopo-to-Gauteng (Figure 1c), Eastern Capeto-Western Cape (Figure 3c), Eastern Cape-to-Gauteng (Figure 4c) and Mpumalanga-to-Gauteng (Figure 5c) streams than elsewhere. The dominance of white migrants in the Gauteng-to-Western Cape (Figure 7c) stream is particularly conspicuous, while the dominance of Indian/Asian migrants in the KwaZulu-Natal-to-Gauteng stream (Figure 2c) also stands out.

In three of the ten streams discussed here, migrants ending up in formal residential areas dominate (compared to inter-provincial migrants elsewhere). These are the KwaZulu-Natal-to-Gauteng (see Figure 2d), Gauteng-to-Western Cape (Figure 7d), and Mpumalanga-to-Gauteng (Figure 5d) streams. In three of the streams, those ending up in informal residential areas dominate: Eastern Cape to Western Cape (Figure 3d), Limpopo to Gauteng (Figure 1d), and Mpumalanga to Gauteng (Figure 5d). In the case of the Eastern Cape-to-Gauteng stream, those ending up in traditional residential areas dominate (Figure 4d).

As noted earlier, migrants in the Western Cape-to-Gauteng stream were far more likely to have post-matric qualifications in 2011 than inter-provincial migrants elsewhere (Figure 7e). This is also true for migrants in the KwaZulu-Natal-to-Gauteng stream (Figure 2e) and (to a far lesser extent) in the Eastern Cape-to-Gauteng stream (see Figure 4e). Migrants with matric (Grade 12 or equivalent) dominated in the following streams (compared to inter-provincial migrants elsewhere): Limpopo to Gauteng (Figure 1e), KwaZulu-Natal to Gauteng (Figure 2e), and North West to Gauteng (Figure 6e).

In only two streams, Gauteng to Western Cape (Figure 7f) and KwaZulu-Natal to Gauteng (Figure 2f), employed migrants are dominant (compared to inter-provincial migrants elsewhere), while in three streams, namely Limpopo to Gauteng (Figure 1f), Eastern Cape to Western Cape (Figure 3f) and Mpumalanga to Gauteng (Figure 5f), unemployed migrants are dominant.

Migrants with no income at the destination are notably dominant, compared to inter-provincial migrants elsewhere, in three streams, namely Limpopo to Gauteng (Figure 1g), Eastern Cape to Western Cape (see Figure 3g) and Mpumalanga to Gauteng (Figure 5g). Only in the case of the Gauteng-to-Western Cape (Figure 7g) stream are the migrants *less* likely to have no income at the destination than inter-provincial migrants elsewhere.

# 4. Bivariate description

As indicated above, the descriptive evaluation reported here entails the use of bivariate comparisons. The migration variable for the descriptive evaluations to be described here is the binary (dichotomous) variable "mun\_migr" ("Inter-municipality migrant since October 2006?"), with the values zero (no, non-migrant) and 1 (yes, migrant). All observations are weighted by the new official weight variable for the Migration Community Profile data, "New person weight" ("PP\_WGT\_RED"). Because of the fact that data from the full census is used, all the findings are *descriptive* (i.e. no conclusions based on inferential statistics, applicable only to sample data, should consequently be made here).

The variables used in the bivariate descriptions are the following: (1) "Sex" ("Person's sex"), (2) "Age" ("Person's current age (in completed years)" [and also "age cat" ("Person's current age (categorised)")], (3) "PopGroup" ("Person's population group"), (4) "MaritalStatus" ("Person's present marital status"), (5) "Relation" ("Person's relationship to head or acting head of current household"), (6) "Head" ("Is the person the head of the current household (or his/her husband/wife/partner)?"), (7) "hd female" ("Is the person's current household head a female "Derived Educ Level" ("Person's current person?"), (8) level of education"), (9) "DERP FUNCLTERACY" ("Person's current functional literacy"), (10) "Derived Employ Status" ("Person's current labour market status"), (11) "Unemployed" ("Is the person currently unemployed (in 2011)?"), (12) "EA TYPE C" ("Current enumerator area (EA) type code"), (13) "DER AGRIC ACTIVITIES" ("Is the person's current household involved in agricultural activities?"), (14) "DERP DISABILITY INDEX" ("Person's current disability index"), (15) "cur metro" ("Is the person currently living in a metropolitan area?"), (16) "cur sec city" ("Is the person currently living in a secondary city (covering 12 of the cities on the list produced by John, 2012)?"), (17) "DERH ANINCOME" ("Current household's annual income (Rand value)" [and also "hhinc cat" ("Current household's income (categorised)")], (18) "H01\_QUARTERS" ("Current type of living quarters"), (19) "H02\_MAINDWELLING" ("Current type of main dwelling"), (20) "H04\_TENURE" ("Current household's tenure status"), (21) "H05\_ESTPROPERTYVAL" ("Estimated value of the currently occupied property"), (22) "H06\_PROPERTYAGE" ("Age of the currently occupied property"), (23) "H07\_WATERPIPED" ("Current household's access to piped water"), (24) "H10\_TOILET" ("Current household's toilet facilities"), (25) "H11\_ENERGY\_COOKING" ("Current household's use of energy or fuel for cooking"), (26) "H12\_REFUSE" ("Current household's refuse or rubbish removal"), (27) "P16\_INCOME" ("Person's current monthly income category"), (28) "P17\_SCHOOLATTEND" ("Is the person currently attending school?"), and (29) "UsualRes" ("Does person usually live in this household (4+ nights/week)?".

A number of new variables denoting "characteristics of the area" were created in an attempt to describe the situation in the area of 'origin'<sup>2</sup> for the purpose of the selectivity descriptions. These 13 new variables are (a) "Province of 'origin'", (b) "Proportion households in 'origin' main place (MP) cooking with electricity or solar power (in 2011)", (c) "Proportion of population in 'origin' MP being unemployed (in 2011)", (d) "Mean educational level in 'origin' municipality", (e) "Proportion households in 'origin' MP with piped water in dwelling (in 2011)", (f) "Mean annual household income of population in 'origin' MP (in 2011)", (g) "Proportion households in 'origin' MP whose property's value was greater than R400 000 (in 2011)", (h) "Proportion of population in 'origin' MP being functionally literate (in 2011)", (i) Proportion households in 'origin' MP owning their dwellings (in 2011)", (j) "Proportion households in 'origin' MP iving in formal dwellings (in 2011)", (k) "Is the MP of 'origin' in a metropolitan area?"; (l) "Proportion households in 'origin' MP with flush/chemical toilets (in 2011)", and (m) "Proportion households in 'origin' municipality whose refuse is removed weekly by their local government".

The details of the bivariate descriptions are given in Appendix 2. Two sets of variables are identified as having potentially significant relationships with the dependent variable "mun\_migr". The first set, covering the "continuous" variables, identified the following 11 variables that showed a proportional difference of 0,20% or greater between the means for non-migrants and migrants.<sup>3</sup> These are: (a) "DERH\_ANINCOME"; (b) "Head"; (c) "mn\_func\_lit"; (d) "prpval\_aboveR400k"; (e)

<sup>&</sup>lt;sup>2</sup> The word 'origin' is used with apostrophes to indicate that the place is not only denoting the migrant's place of origin before the migratory move but also a non-migrant's place of residence during the entire migration interval (October 2006 to October 2011).

<sup>&</sup>lt;sup>3</sup> The 0,20% cut-off point is purely arbitrary, but this perceived threshold is assumed to indicate some potentially notable proportional difference in the means between recent migrants and non-migrants.

"educ\_level"; (f) "mn\_hh\_income"; (g) "hd\_female"; (h) "p\_w\_inside"; (i) "mn\_ed\_lev"; (j) "ref\_week\_lg"; and (k) "toilet\_fl\_ch". It may be useful to see how many of these 11 variables would also have notable partial ("standardised"<sup>4</sup>) relationships with the dependent variable "mun\_migr" ("Inter-municipality migrant since October 2006?") in multivariate analyses.

The second set in Appendix 2, covering the categorical variables, contains the following 16 variables, each of which has at least one category with 10 per cent or more migrants<sup>5</sup>: (a) "Derived\_Educ\_Level"; (b) "Derived\_Employ\_Status"; (c) "EA\_TYPE\_C"; (d) "H01\_QUARTERS"; (e) "H02\_MAINDWELLING"; (f) "H04\_TENURE"; (g) "H05\_ESTPROPERTYVAL"; (h) "H06\_PROPERTYAGE"; (i) "H10\_TOILET"; (j) "H11\_ENERGY\_COOKING"; (k) "hd\_female"; (l) "hhinc\_cat"; (m) "P16\_INCOME"; (n) "PopGroup"; (o) "Relation"; and (p) "UsualRes". It remains to be seen how many of these 16 variables will each still have a category with a sufficiently large "standardised" relationship with recent migration/non-migration in a multivariate analysis.

# 5. Multivariate analysis

Following the bivariate descriptions reported in Appendix 2, it is essential to also make use of multivariate analytical techniques to properly analyse migration selectivity. The example from Kok et al. (2003) should help to explain why a multivariate statistical technique is necessary for this study:

If one finds differences in the probability of migrating between provinces, it is important to know to which socio-economic differences they can be attributed. Are the observed differences due to the circumstances peculiar to the province or can they be accounted for by differing age, race, education or employment profiles? Put differently, if the provinces had the same age, race, education, etc. profiles would there still be differences that can be attributed to the provinces? By eliminating the effects of these socio-economic differences through the 'standardisation' of the provinces, one is better able to 'compare apples with apples'. Standardisation is thus a means of giving effect to the ceteris paribus [other things

<sup>&</sup>lt;sup>4</sup> See the section on multivariate analysis below.

<sup>&</sup>lt;sup>5</sup> Again, the cut-off point (10% in this case) is purely arbitrary, but this perceived threshold is assumed to indicate a proportion of recent migrants potentially worthy of note. (This proportion is of course still almost double the *overall* proportion of 5,6% migrants.)

being equal] requirement needed to attribute effects uniquely. Multivariate analyses provide the means to achieve such a 'standardisation' (pp. 52–53).

The next logical question is likely to be: which multivariate, analytical technique is the best for this study? Bearing in mind that the key dependent (outcome) variable, migration/non-migration, is "dichotomous" (i.e. has only two legitimate values, namely yes (1) or no (0)), and the aim is to determine how this outcome is influenced by various characteristics of the individuals concerned (often categorical or nominal-scaled) and their places of residence<sup>6</sup> (often continuous or interval-scaled), **logistic regression**<sup>7</sup> provides a very useful mechanism to undertake such analyses because it is particularly well suited to making use of such different variable-type combinations.<sup>8</sup>

What we are interested in here is whether the selected independent variables, which describe the features of the individual (e.g. his/her age, sex, education, etc.) or the characteristics of the place where the individual lives (e.g. its level of unemployment, services, etc.), have an impact on the **probability** of migration (see, for example, Brinkley, 2009). Closely related to the **probability** of migration (say, *P*) is the *odds* of migrating, which is given by:

$$Odds = \frac{P}{1-P}$$

Sometimes one wants to convert from *odds* back to *probabilities* and the formula for doing this is simply:

$$P = \frac{Odds}{1 + Odds}$$

Footnote continues...

<sup>&</sup>lt;sup>6</sup> The characteristics of interest may be either "categorical" (e.g. sex – male vs female) or "continuous" (e.g. age in single years, which is a variable strictly speaking not truly continuous because the number of values it can have is not infinitive and therefore it is actually measured on an interval scale).

<sup>&</sup>lt;sup>7</sup> In logistic regression (also known as logit analysis) one models the outcome log(p/(1-p)), which is called the logit function, where logit(p) = log(p/(1-p)) and p is the probability of "success" (in this case, migration).

<sup>&</sup>lt;sup>8</sup> Kleinbaum (1994) states that the logistic model, on which logistic regression is based, is [also] popular because it (a) provides estimates that can lie only in the interval 0-1, and (b) is underlain by "[a]n appealing S-shaped description of the combined effect of several risk factors on the risk..." (p. 7) of a particular outcome, e.g. migration. With reference to the latter advantage, Kleinbaum shows that the S shape "...of f(z) indicates that the effect of z on an individual's risk is minimal for low z's until some **threshold** is reached. The risk then rises rapidly over a certain range of intermediate z values, and then remains extremely high around 1 once z gets large enough" (p. 7) [emphasis added by author].

According to Allison (1999:15) the logit model is more popular than alternative models with similar S-shaped curves (e.g. the probit and complementary log-log models) because (1) the logit model's "coefficients have a simple interpretation in terms of odds ratios", (2) "the logit model is intimately related to the loglinear model", (3) "the logit model has desirable sampling properties", and (4) "the model can be easily generalized to allow for multiple, unordered categories for the dependent variable". Heckman (1979) identifies "the bias that results from using nonrandomly selected samples to estimate behavioral relationships" (p. 160), and Allison (1999) shows that this bias problem, common to linear models, does not apply to the logit model: "You can do disproportionate stratified random sampling on the dependent variable without biasing the coefficient estimates" (p. 78).

To compare the *odds* of migrating between different groups (e.g. different sexes) we use *odds ratios*, which are directly related to the parameters of the logit model (Allison, 1999:13). Odds ratios are obtained from the parameter estimates in a logistic regression model by computing  $e^{\beta}$ , where  $\beta_x$  is the parameter estimate for any independent variable *x* (Allison, 1999:29). Odds ratios are discussed in more detail later.

### 5.1 Introduction to the logistic regression

The statistical inferential components of logistic regression are based on the principles of samplebased observations, and with a view to maintaining this inherent requirement, a random sample of one individual in the age bracket 18–69 years from the official *10% sample* of Census 2011, instead of the data for the full census (as in the section on bivariate descriptions above), has been used.<sup>9</sup> To avoid this issue of dependency among observations and with a view to restricting the logit analysis to adults in their working and early retirement ages, one individual in the age bracket 18–69 years was randomly selected from the members of selected households in the official 10% sample.

The response variable for the logistic regression analyses described here is the migration variable "MUN\_MIGR" ("Inter-municipality migrant since October 2006?") described and used earlier (see Appendix 2). All observations are weighted by the official weight variable for the 10% sample, "Person weight" ("PERSON\_10PER\_WGT"). The probability modelled here is for "MUN\_MIGR" = 1 (yes, migrant).

Three variables in the bivariate descriptions Appendix used reported in 2, "H05 ESTPROPERTYVAL" ("Estimated value of the occupied currently property"), "H06 PROPERTYAGE" ("Age of the currently occupied property"), and "DERP LITERACY"/"DERP FUNCLTERACY" do not appear in the dataset of the official 10% sample and could therefore not be used in the logistic regression. The omission of the former and latter variables also had the effect that "prpval aboveR400k" ("Proportion households in 'origin'

<sup>&</sup>lt;sup>9</sup> There would have been a validity problem due to some interdependence among observations. The 10% unit level sample was drawn from Census 2001 as follows: (1) a 10% sample of household records classified as either "Housing Units" or "Converted Hostels", (2) *all persons in the sampled households* in (1), and (3) an independent 10% sample of persons who reside in living quarters other than those of the selected households (see Item 4, "design of the sample", in the "readme" document titled "Census 2011: 10% Sample of unit records" that accompanied the sample data). The problem here is that "all persons in the sampled households" were included in the 10% sample, which would have undermined the sampling principle of independence among observations, especially for the purposes of statistical inference. It was consequently decided to draw a random sample of individuals, limited to one per selected household.

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municipality whose property's value > R400 000 (in 2011)") and "mn\_func\_lit" ("Proportion of population in 'origin' municipality being functionally literate (in 2011))", respectively, could not be used either. Furthermore, because one deals here simultaneously with a combination of household and individual characteristics *in the same analysis* it was necessary to restrict the analysis to individuals who were enumerated at the places where their 'usual' households resided, which means that the variable "UsualRes" ("Does the person usually live in this household (4+ nights/week)?" also had to be excluded. Lastly, the variable "H01\_QUARTERS" ("Current household's type of living quarters") in the dataset for the official 10% sample that will be used in the logistic regression, has only two categories, namely "Housing unit" and "Converted hostel (e.g. family unit)", which makes it unfeasible to include as a predictor.

As mentioned before, 13 new variables denoting the "area characteristics" of the place (in this case the municipality) of 'origin' were created. Of these 13 explanatory variables, six have since exhibited multicollinearity with other explanatory variables that were better suited for the logistic regression model and therefore had to be discarded for the purposes of the multivariate analysis. These rejected variables were: (1) "ref\_week\_lg" ("Proportion households in 'origin' municipality whose refuse is removed weekly by their local government"); (2) "mn\_hh\_income" ("Mean household income in 'origin' municipality"); (3) "p\_w\_inside" ("Proportion of households in 'origin' municipality"); (3) "p\_w\_inside" ("Mean educational level in 'origin' municipality"); (5) "toilet\_fl\_ch" ("Proportion households in 'origin' municipality having flush/chemical toilets"); and (6) "dwel\_owned" ("Proportion households in 'origin' MP owning their dwellings)". The variables "DERH\_ANINCOME" ("Current household's annual income (derived)") and "DERH\_INCOME\_CLASS" ("Current household's annual income category" – see "hhinc\_cat" in Appendix 2) also had to be removed because of their severe negative skewness.

Even though two of the variables denoting "area characteristics", namely "PROVINCE" (Province of 'origin') and "METRO" (Is the municipality of 'origin' a metropolitan area?"), did not feature in the bivariate descriptions as having at least 10 per cent representation in any of their categories, they are included in the multivariate analyses as control variables.

#### 5.2 A national profile of migrants, based on a logit analysis

The "tolerances" and "variance inflation factors (VIFs)" for the variables that remain after removing the seven variables mentioned above, are given in Table 2. The variance inflation factor (VIF) of an independent variable indicates the strength of the linear relationship between the variable and the other explanatory variables in the model, and high VIFs correspond to high multicollinearity. (The VIF is merely the reciprocal of the tolerance.) A high tolerance therefore corresponds to a low multicollinearity (cf. Der & Everitt, 2002).

Variable	Label	Tolerance	VIF*
FO2 AGE	F02. Person's age at last birthday (single years, in the age bracket		
	18-69)	0,756	1,323
F03_SEX	F03. Person's sex	0,668	1,497
P02_RELATION	P02. Person's relationship to household head	0,903	1,108
P05_POP_GROUP	P05. Person's population group	0,738	1,354
P16_INCOME	P16. Person's annual income category	0,500	2,000
P20_EDULEVEL	P20. Person's level of education (revised)	0,658	1,520
DERP_EMPLOY_STATUS_OFFICIAL	DP_EMPST_OFF. Person's derived official employment status	0,641	1,560
DERH_HHSEX	DH_HHSEX. Derived sex of household head	0,667	1,500
H_GEOTYPE	H_GEOTYPE. Derived household geographical location type	0,621	1,609
H02_MAINDWELLING	H02. Type of main dwelling	0,853	1,172
H04_TENURE	H04. Tenure status	0,828	1,208
H10_TOILET	H10. Toilet facilities	0,695	1,439
H11_ENERGY_COOKING	H11. Energy/fuel current household uses for cooking	0,727	1,375
PROVINCE	Province of 'origin'	0,893	1,120
METRO	Is municipality of 'origin' in a metropolitan area?	0,656	1,524
	Proportion persons in 'origin' municipality being unemployed		
	(expanded definition)	0,831	1,203
EL SOL COOK	Proportion households in 'origin' municipality using		
	electricity/solar energy for cooking	0,544	1,839

Table 2: Logistic regression: Collinearity statistics for the variables used

\* VIF = Variance inflation factor

According to Der and Everitt (2002), "a rough rule of thumb is that variance inflation factors greater than 10 give some cause for concern" (Chapter 4). Based on this criterion, all the variables in the model have totally acceptable VIFs. According to Pallant (2007:167), "tolerance values that are very low (less than 1) indicate that the variable has high correlations with other variables in the model", but Allison (1999:50) on the other hand, already becomes worried when he sees tolerances below 0,40. Fortunately, in this case the lowest tolerance (0,500) is for the variable "P16\_INCOME" ("P16. Person's annual income category"), which is well above 0,40. The variables included in Table 2 consequently exhibit no notable multicollinearity.

The logistic regression is based on 952 880 observations,<sup>10</sup> and contains the 17 explanatory variables covered in Table 2: (1) "F02\_AGE" (Person's age at last birthday (single years, in the age bracket 18-69), interval-scaled and treated as "continuous"); (2) "F03 SEX" (Person's sex, categorical); (3) "P02 RELATION" (P02. Person's relationship to household head, categorical); (4) "P05\_POP\_GROUP" (P05. Person's population group, categorical); (5) "P16\_INCOME" (P16. Person's annual income category, categorical); (6) "P20 EDULEVEL" (P20. Person's level of education (revised), ordinal-scaled (with 28 levels), treated as "continuous"); (7) "DERP\_EMPLOY\_STATUS\_OFFICIAL" (DP\_EMPST\_OFF. Person's derived official employment status (derived), categorical); (8) "H GEOTYPE" (H GEOTYPE. Derived household geographical location type, categorical); (9) "DERH\_HHSEX" (DH\_HHSEX. Derived sex of household head, categorical); (10) "H02 MAINDWELLING" (H02. Type of main dwelling, categorical); (11) "H04 TENURE" H04. Tenure status, categorical); (12) "H10\_TOILET" (H10. Toilet facilities, categorical); (13) "H11 ENERGY COOKING" (H11. Energy/fuel current household uses for cooking, categorical); (14) "PROVINCE" (Province of 'origin', categorical); (15) "METRO" (Is municipality of 'origin' in a metropolitan area? - categorical); (16) "PROP UNEMPL" (Proportion persons in 'origin' municipality being unemployed (expanded definition), continuous); and (17) "EL SOL COOK" (Proportion households in 'origin' municipality using electricity/solar energy for cooking, continuous).

Table 3: Logistic regression: Basic information on the dependent variable

MUN_MIGR*	Number	%
No (0)	9 204 115	81,02
Yes (1)	2 156 318	18,98
Total	11 360 433	100,00

\* Is the person an inter-municipality migrant during period 2006-2011? (Probability modelled is "mun\_migr"=1.)

In Table 3, the basic information on the dependent variable (i.e. the "response profile") is given. The overall probability of a person having migrated between different municipalities in South Africa during the period 1 October 2006 to 9 October 2011 is 0,1898 (18,98%). This proportion is notably higher than earlier findings, which indicated that migration levels (at comparable spatial levels) tended to be quite consistent (around 11%–13%) over three different five-year periods between 1975 and 2001 (see Kok & Collinson, 2006:8). However, *it should be noted that in this case only persons in the age bracket 18–69 years are included – and remember that children* 

<sup>&</sup>lt;sup>10</sup> A total of 127 774 (11.8% of) observations were deleted due to missing values for the response or explanatory variables.

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between about the ages of 10 and 16 years, as well as elderly people, tend to be less migratory than persons in the working-age group (18–69 years).

The basic statistics for the logistic regression for the interested reader are not given here but in Appendix 2 in an attempt to simplify the main text. Consequently, only the odds ratios derived from the logistic regression are discussed here.

Since the sample size for the logistic regression is so large, almost all the estimated parameters (regression coefficients) are statistically significant at the 5% level, which makes it unnecessary to report them here. Some category parameters are not significant, but these can be shown in the 95% confidence intervals for the odds ratio estimates: in cases where the lower limit of a confidence interval is *below* 1,0 and the upper limit *above* 1,0 the odds ratio estimate is not significant at the 5% level. These will be indicated as such.

In Table 4, the estimated odds ratios are given. The odds of having migrated recently are defined here as the *ratio* of the *probability of having migrated* during the said period over the *probability of not having migrated* during the same period.<sup>11</sup> *Odds ratios* are used to compare the relative odds of the occurrence of the outcome of interest (in this case migration), given the characteristics of the person (e.g. age or sex) or the circumstances in the area of interest (e.g. unemployment rate in 'origin'). The odds ratio can also be used to determine whether a particular characteristic or circumstance constitutes a selectivity factor for migration, and then to compare the magnitude of the impact of the various selectivity factors on migration.

It would undoubtedly be important to look at the entire profile of migrants as provided by the odds ratios shown in Table 4. These are provided in the column labelled "Point Estimate". For the purposes of this discussion, these odds ratios for the individual explanatory variables in this logit model will be dealt with from the top of the table:

<sup>&</sup>lt;sup>11</sup> Please note that while a probability ranges from 0 to 1, odds (and odds ratios) can range from 0 to positive infinity (see, for example, Allison, 1999:12).

Variable	Reference category	Effect of interest (where applicable)	Point Estimate	95 Confidenc	5% Wald
E02 AGE			0.051	0.051	0.051
FO2_AGL	2 Eomolo	1 Malo	0,931	0,931	0,931
FUS_SLA	2. Feilidie	1. Wale	0,974	0,908	0,979
		01. Head/Acting field	0,633	0,623	0,642
		02. Husballu/ Wile/Partiler	0,604	0,595	0,014
		03. Child (SOI/Daughter)	0,133	0,131	0,130
		04. Adopted Soll/daughter	0,285	0,208	0,304
		05. Stepson/Stepdaughter	0,235	0,223	0,247
	14. Non-related	06. Brother/Sister	0,425	0,417	0,433
PU2_RELATION	person	07. Parent (Mother/Father)	1,325	1,269	1,383
		08. Mother-in-law/Father-in-law	2,718	2,450	3,017
		10. See in law/Daughter in law	0,077	0,074	0,080
		10. Son-in-law/Daughter-in-law	0,410	0,397	0,424
		11. Brotner-In-law/Sister-In-law	0,659	0,637	0,681
		12. Grandmotner/Grandfather	1,823	1,454	2,285
		13. Other relative	0,446	0,438	0,455
		1. Black African	0,747	0,732	0,762
P05_POP_GRO	5. Other	2. Coloured	0,571	0,559	0,584
UP		3. Indian/Asian	0,725	0,709	0,742
		4. White	1,022	1,001	1,043
		01. No income	0,700	0,676	0,724
		02. R1 - R400 p.m.	0,677	0,653	0,701
		03. R401 - R800 p.m.	0,705	0,681	0,730
		04. R801 - R1 600 p.m.	0,784	0,758	0,812
	12. R204 801 or	05. R1 601 - R3 200 p.m.	0,827	0,799	0,856
P16_INCOME	more p.m.	06. R3 201 - R6 400 p.m.	0,827	0,799	0,856
		07. R6 401 - R12 800 p.m.	0,898	0,867	0,929
		08. R12 801 - R25 600 p.m.	0,976*	0,943	1,010
		09. R25 601 - R51 200 p.m.	1,187	1,146	1,229
		10. R51 201 - R102 400 p.m.	1,120	1,079	1,163
		11. R102 401 - R204 800 p.m.	1,000*	0,957	1,045
P20_EDULEVEL			1,029	1,029	1,030
DERP_EMPLOY	5. N/A (Age less	1. Employed	1,238	1,231	1,246
_STATUS_OFFIC	than 15 years)	2. Unemployed	1,090	1,083	1,096
IAL		3. Discouraged work-seeker	0,894	0,885	0,902
DERH_HHSEX	2. Female	1. Male	1,015	1,010	1,021
H GEOTYPE	3. Farm area	1. Urban area	0,742	0,736	0,747
		2. Tribal/Traditional area	0,404	0,400	0,408
		U1. House or brick/concrete block structure on a	0,842	0,827	0,857
		02 Traditional dwelling/but/structure made of			
		traditional materials	0,472	0,462	0,482
		03. Flat or apartment in a block of flats	1,425	1,026	1,065
		04. Cluster house in complex	1,783	1,744	1,824
		05. Townhouse (semi-detached house in a	1.000	1.000	1.000
H02_MAINDWE	12. Other	complex)	1,866	1,826	1,906
LLING		06. Semi-detached house	0,897	0,877	0,918
		07. House/flat/room in backyard	0,990*	0,971	1,010
		08. Informal dwelling (shack in backyard)	0,868	0,851	0,884
		09. Informal dwelling (shack NOT in backyard)	1,162	1,140	1,184
		10. Room/flatlet on a property or a larger	1 202	1 175	1 221
		dwelling/servants quarters/granny flat	1,203	1,175	1,231
		11. Caravan/tent	2,008	1,917	2,104
			* Not signifi	icant at the	5% level

# Table 4: The logistic regression odds ratio (OR) estimates

Variable	Reference category	Effect of interest (where applicable)	Point Estimate	95 Confidenc	% Wald
	(mere appreader)	1. Rented	1.839	1.821	1.857
		2. Owned but not vet paid off	0.821	0.812	0.829
H04_TENURE	5. Other	3. Occupied rent-free	0.938	0.928	0.947
		4. Owned and fully paid off	0.531	0.526	0.536
		01. Flush toilet (connected to sewerage system)	1,193	1,175	1,212
		02. Flush toilet (with septic tank)	1,371	1,353	1,390
		03. Chemical toilet	1,325	1,304	1,346
H10 TOILET	10. None	04. Pit toilet with ventilation (VIP)	0,908	0,829	0,924
_		05. Pit toilet without ventilation	0,907	0,893	0,921
		06. Bucket toilet	0,968	0,955	0,982
		07. Other	1,044	1,026	1,062
		01. Electricity	1,375	1,311	1,442
		02. Gas	1,215	1,176	1,254
		03. Paraffin	1,582	1,531	1,636
H11_ENERGY_C	10 Naza	04. Wood	1,768	1,711	1,827
OOKING	10. None	05. Coal	0,813	0,786	0,840
		07. Animal dung	0,923	0,886	0,963
		08. Solar	0,978*	0,922	1,037
		09. Other	1,110	1,052	1,072
		01. Western Cape	0,631	0,625	0,637
		02. Eastern Cape	0,910	0,903	0,917
		03. Northern Cape	0,821	0,809	0,832
Brovinco	00 Limpopo	04. Free State	0,506	0,501	0,511
FIOVINCE		05. KwaZulu-Natal	0,546	0,542	0,550
		06. North West	0,695	0,688	0,701
		07. Gauteng	0,603	0,598	0,607
		08. Mpumalanga	0,559	0,554	0,564
METRO	1. Yes	0. No	0,925	0,920	0,930
PROP_UNEMPL			5,482	5,157	5,827
EL_SOL_COOK			0,396	0,390	0,402
			* Not signifi	cant at the	5% level

1. Current age (in single years) ("F02\_AGE"): The odds ratio of 0,951 in Table 4 confirms that younger people are more inclined to have migrated recently. Generally speaking, a one-unit (i.e. one-year) increase in people's age reduces the odds that they would have migrated recently by 4,9% (that is, 0,951 minus 1, times 100 = -4,9). However, this general conclusion does not take into account that *there is no linear relationship between age and migration propensity*. In fact, as various authors have shown (see, for example, Hofmeyr, 1988; Castro & Rogers, 1983, Kok et al., 2003), there are often two peaks of higher migration propensity during the adult ages, the first often being between the late teens and early thirties (the so-called labour force peak) and the second around the mid-sixties (the "retirement peak").<sup>12</sup>

<sup>&</sup>lt;sup>12</sup> Migration studies in various countries (see, for example, Castro & Rogers, 1983) have shown "a common age-dependent characteristic", which indicates the "fundamental age pattern of migration with peaks occurring at infancy, young adulthood, and at retirement" (Hofmeyr, 1988:24).

- 2. Sex ("F03\_SEX"): The odds of a male person having recently migrated are very similar to those of females (i.e. 97,4%) when the effects of the other explanatory variables in the logit model, including age, have been removed. It should therefore be clear that there is no sex selectivity worth mentioning in South African internal migration. This is a conclusion that largely confirms findings from other local migration studies utilising a multivariate approach, which found the same (see, for example, Wentzel, Viljoen & Kok, 2006:185). Kok, O'Donovan, Bouare & Van Zyl (2003) also concluded: "Although it has been shown earlier that men are generally more migratory than women in most age categories, [our analysis] shows that the general difference is insignificant. The elimination of the effects of the other explanatory variables in the model makes virtually no difference. One should, therefore, be careful not to attempt explaining an observed general male dominance in migration on any theoretical grounds" (p.66).
- 3. Relationship to current household head ("PO2\_RELATION"): In some respects this variable indicates relative dependence/independence within the household, and one can therefore expect non-related persons to be most migratory, followed by the more socially distant relatives of the household head. In fact, parents-in-law (2,718), grandparents (1,823) and parents (1,325) of the head are the only household members with odds ratios greater than non-relatives (the reference category). Brothers-in-law/sisters-in-law of the head (0,659), household heads themselves (0,633) and their spouses/partners (0,604) are the next most migrating categories of household members. In line with our above-mentioned proposition, the usually most dependent household members, namely grandchildren and great-grandchildren (0,077), own children (0,133), stepchildren (0,235) and adopted children (0,285) of the household head have the lowest odds ratios. Since we are dealing here with adults only (aged 18–69 years), this is an interesting finding.
- 4. Population group ("P05\_POP\_GROUP"): The bivariate descriptions in Appendix 2 (see Table 2.2) show that the reference category for this variable, "other", has a comparatively high proportion of recent migrants (12%). This means that the four main population groups will be compared with a rather mobile group of people *after controlling for (i.e. "standardising")* the other explanatory variables in the logit model, including, for example, provincial and metropolitan/non-metropolitan 'origin'. In fact, the only group with an odds ratio greater than 1,0 are "whites", and for them the odds are 1.022 times the odds for the "other" group to have recent migrants in their midst. In other words, the odds of being a recent migrant for "whites" are only 2% higher than the odds for the "other" group. Of the four main population groups, "whites" are therefore most migratory, followed by "black Africans" (0,747), then "Indian/Asian" persons with an odds ratio of 0,725, and lastly "coloured" persons (0,571).
- 5. Current personal monthly income ("P16\_INCOME"): Further to the previous discussion, Todaro (1980) stated that according to his model "expected gains are measured by the difference in real incomes between rural and urban work opportunities and the probability of a new migrant's obtaining an urban job" (pp. 364–365). Persons in our analysis with individual incomes of more than R12 800 per month have notably higher odds ratios

(between 0,976 and 1,187) of being recent migrants – compared to individuals with very high incomes of R204 801 or more p.m. who are likely to be well settled in the area where they live – than those with incomes below R12 800 p.m. (odds ratios between 0,677 and 0,898), thereby confirming that recent migration can, generally speaking, be associated with higher personal incomes.

- 6. **Current level of education ("P20\_EDULEVEL")**: A better education is expected to open more employment and other opportunities elsewhere, and to some extent, this expectation is also borne out by the results of this analysis. The odds ratio of 1,029, albeit not particularly noteworthy, does show that every single higher level of education attained on this 28-point ordinal scale is associated with an increase of 2,9% in the odds of migration.
- 7. Current employment status ("DERP\_EMPLOY\_STATUS\_OFFICIAL"): The most generally expected gain from migration is employment (see, for example, Todaro, 1969<sup>13</sup>), and from the odds ratio for currently employed persons (1,239) as against unemployed persons (1,090) both to the odds of minors aged less than 15 years it is clear that migration probably does tend to provide the expected advantages in terms of employment status. Only discouraged work-seekers have lower odds of having migrated than children (0,894), and this is also an important finding in terms of planning and policy implications: the rural-born youth, lacking qualifications, networks, and experience, are being particularly disadvantaged in a heavily saturated *permanent* labour market (Rankin, 2013; Posel et al., 2013) and potentially spending their entire working lives in the precarious *temporary* work market (Cross, 2014).
- 8. Sex of the current household head ("DERH\_HHSEX"): The odds of being a recent migrant if one is a member of a *male*-headed household are 1,015 (or merely 1,5% *higher*) compared to the odds for a *female*-headed household. As indicated by Kok et al. (2003:71), female-headed households, many of which are found in rural areas, are often vulnerable and very poor. This probably makes it exceptionally difficult for them and the members of their households to participate in inter-municipality migration, which comes with various costs, as described in the migration literature (see, for example, the classic reviews by Sjaastad, 1962 and Shaw, 1975, and the analysis by DaVanzo, 1981), in an attempt to improve their situation.
- 9. Geography type of the current area of residence ("H\_GEOTYPE"): The odds of urban areas to have recent migrants are 74% of the odds for farm areas (odds ratio: 0,742), but this odds ratio is notably higher than the 40% for tribal/traditional areas (odds ratio: 0,404). Conversely, the odds of finding a recent migrant among people living on farms are almost 2,5 (1/0,404 = 2,475) times the odds for people currently living in tribal/traditional areas. There is consequently little evidence from these analyses of any so-called return migration to tribal/traditional areas of origin.

<sup>&</sup>lt;sup>13</sup> The core of the original Todaro model is the migration function, whereby the fraction of the rural labour force that migrates to the city is a function of, amongst other things, the *probability* that an urban labourer can get a job (see, for example, Porter, 1973:2).

10. **Current type of dwelling ("H02\_MAINDWELLING")**: As mentioned before, the likelihood of finding recent migrants among the people living in caravans or tents is the greatest for all dwelling types. In fact, the odds ratio (OR) of 2,008 for "caravan/tent" indicates that the predicted odds of a recent migrant being among caravan/tent dwellers are 100,8% (2,008 minus 1, times 100) *higher* than the odds for people in the reference category ("other" dwelling types). Next in the dwelling-type rank order is "townhouse (semi-detached house in a complex)" with an odds ratio of 1,866, followed by "cluster house in complex" (OR: 1,783), "flat or apartment in a block of flats" (1,425), "room/flatlet on a property or a larger dwelling/servants quarters/granny flat" (OR: 1,203), and "informal dwelling (shack NOT in backyard)" with an odds ratio of 1,162. These relatively high odds ratios (all greater than 1,0) seem to perhaps imply some lack of permanence.

The remaining dwelling types each has a migration likelihood *lower* than that of the reference category: (a) "traditional dwelling/hut/structure made of traditional materials" (odds ratio: 0,472, which means that the odds of being a recent migrant are almost 47% of the odds for someone currently living in the reference ("other" dwelling-type) category; (b) "house or brick/concrete block structure on a separate stand/yard or on a farm" (OR: 0,842); (c) "informal dwelling (shack in backyard)" (0,868); (d) "semi-detached house" (0,897), and (e) "house/flat/room in backyard" with an odds ratio of 0,990. The two (backyard) dwelling types, with some of the highest odds ratios smaller than 1,0, clearly also imply some level of impermanence.

- 11. **Current household's tenure status ("H04\_TENURE")**: People occupying "rented" accommodation have the highest odds of being a recent migrant compared to those with "other" tenure arrangements (odds ratio: 1,839). Next in the order of migration propensity are people living in accommodation that is occupied "rent-free" (OR: 0,938), followed by "owned but not yet paid off" (0,821), and "owned and fully paid off" (OR: 0,531). The latter indicates that the odds of recent migrants as members of households currently living in accommodation they fully own are 53% of the odds for households in the reference ("other") tenure-status category.
- 12. **Current household's toilet facilities ("H10\_TOILET")**: The odds of containing recent migrants are the highest for households with "flush toilets connected to septic tanks" compared to odds for the reference category of "no toilet facilities" (OR: 1,371).<sup>14</sup> Next in the rank order are households with "chemical toilets" (1,325), "flush toilets connected to sewerage systems" (OR: 1,193), and "other" types of toilet facilities (1,044). These are followed by households with odds ratios lower than those for the reference category, namely with (1) "bucket toilets" (OR: 0,968); (2) "pit toilets with ventilation", i.e. the so-called VIP latrines (0,908), and (3) "pit toilets without ventilation" (0,907).

<sup>&</sup>lt;sup>14</sup> The "no toilet" category might have been associated with unserviced squatter settlements, but this is clearly not the case given the relatively low inter-municipality migrant component (4,2%) of these households (see Table 2.2 in Appendix 2). It follows therefore that these households are probably found predominantly in rural tribal/traditional areas with comparatively low levels of out-migration – see the earlier discussion in respect of the variable "Geography type of the current area of residence" ("H\_GEOTYPE").

- 13. Energy or fuel used by the current household for cooking ("H11\_ENERGY\_COOKING"): Households using wood (OR: 1,768) and paraffin (1,582) for cooking have the greatest likelihood of accommodating recent migrants. The odds of these households currently having recent migrants as members are consequently more than 15% *higher* than the odds for households in the reference category, "none"<sup>15</sup>. Next in the rank order for migrant propensities are households using electricity (1,375), gas (1,215) and "other" energy source/fuel (1,110) for cooking. The other categories of fuel/energy used for cooking have all lower odds of recent migrants than the category "none": least likely to have migrants are households using "coal" (0,813), which indicates that the odds of recent migrants being in households using coal for cooking are 81% of the odds for households not cooking their food. These are followed by households using "animal dung" (0,923) and "solar energy" (0,978).
- 14. **Province of 'origin' ("PROVINCE")**: The province with highest odds of having recently produced inter-municipality out-migrants compared to Limpopo (the reference province) is the Eastern Cape (OR: 0,910). The odds ratios for all the provinces are also less than 1,0, which shows that Limpopo also has a notable proportion (6,2%) of recent migrants (see Table 2.2 in Appendix 2). Gauteng, the economic heart of South Africa, has the third lowest odds ratio for producing inter-municipality migrants (0,603) after the Free State (0,506) and KwaZulu-Natal (0,546) indicating of course that the odds of Limpopo producing migrants are about 1,66 times (1/0,603 = 1,658) those of Gauteng *after controlling for (i.e. keeping constant) the other explanatory variables in the logit model (including, for example, metropolitan/non-metropolitan 'origin'* to be discussed next). The Northern Cape has the second highest odds ratio (0,821), followed by North West (0,695), Western Cape (0,631), and Mpumalanga (0,559). The latter odds ratio translates into Limpopo having not much less than twice (1/0,559 = 1,79) the odds of having produced recent inter-municipality migrants compared to the Mpumalanga.
- 15. Is the local government of 'origin' a metropolitan municipality? ("METRO"): Given an odds ratio of 0,925, the predicted odds for non-metropolitan areas of having produced recent inter-municipality migrants are about 93% that of metropolitan areas *after controlling for the other predictors in the model, including provincial 'origin'*.
- 16. Level of unemployment in 'origin' municipality ("PROP\_UNEMPL"): This is the most important predictor of inter-municipality migration, which is clearly confirmed by the odds ratio of 5,482. This indicates that a single percentage point increase in the level of unemployment is associated with a 448% (5,482 minus 1, times 100 = 448,2%) increase in the predicted odds of having produced recent inter-municipality migration.
- 17. Proportion of households in the 'origin' municipality using electricity or solar energy for cooking ("EL\_SOL\_COOK"): This variable can probably be regarded as an indicator of the impact of access to important basic services at 'origin' on migration propensity. The odds

 $<sup>^{15}</sup>$  The category "none" probably means that these households do not cook their food – a rather curious category for households not being in institutions or similar types of living quarters (as is the case with the official 10% sample for Census 2011).

ratio of 0,396 shows that, holding all other independent variables in the model constant, people tend to move away from areas where electricity is not available (and used by households for cooking). The odds for people to have recently migrated from or remained in local municipalities where households do *not* generally use electricity for cooking are 40% of the odds for persons from/in municipalities where households *do* tend to use electricity for cooking.

## 6. Conclusions and some policy and planning implications

The seven major migration corridors in South Africa identified above accommodated 63,76% of all the inter-provincial migratory moves taking place in the country during the 10-year period 2001–2011 (as measured by "last move"). The significance of these corridors, each accounting for more than 5 per cent of all such moves, for planning and policy purposes is therefore indisputable. The profiles of migrants within the 10 main inter-provincial migration streams in the country (with more than 3 per cent of all inter-provincial migratory moves) were discussed early in this chapter. It was found, amongst other things, that females are dominant in most of these streams than inter-provincial female migrants elsewhere. Also, and as would have been expected, black African migrants are more dominant in most of the reported streams than elsewhere, yet the dominance of white migrants in the Western Cape-to-Gauteng stream is particularly conspicuous, while the dominance of Indian/Asian migrants in the KwaZulu-Natal-to-Gauteng stream also stands out. Migrants in the Western Cape-to-Gauteng stream were far more likely to have post-matric qualifications in 2011 than inter-provincial migrants elsewhere, and this was also true for migrants in the KwaZulu-Natal-to-Gauteng stream and, to a far lesser extent, in the North West-to-Gauteng stream. It was also found that only in the case of the Western Cape-to-Gauteng stream, the migrants were *less* likely to have no income at the destination than inter-provincial migrants elsewhere.

Although the magnitude of the official 10% sample for the most part prohibited the use of inferential statistics in the interpretation of the logistic regression model described here, it was possible to obtain quite a decent profile of recent inter-municipality migrants in South Africa based on the findings from Census 2011. What should be clearly understood, though, is that due to a lack of space, *this profile is limited to a* national *picture of migration selectivity* and consequently does not apply equally well to all provinces or municipalities.

Controlling for (i.e. holding constant the effect of) the other independent variables in the model, the conspicuously high odds ratio (5,482) for "level of unemployment in 'origin' municipality" ("PROP\_UNEMPL") indicates that a one-unit increase (1 percentage point) in the level of unemployment in municipalities of 'origin' is associated with a massive 448%<sup>16</sup> increase in the odds of people migrating between different local municipalities. This clearly indicates that *people tend to move away from areas with high unemployment levels*. Albeit much less pronounced, *non-*metropolitan municipalities (see the variable "METRO") also tend to shed a greater proportion of people than metropolitan municipalities – in fact, the odds ratio of 0,925 indicates that the predicted odds of producing migrants for *non*-metropolitan municipalities are about 93% of the odds for metropolitan municipalities.

The conspicuously low odds ratio (0,077) of *adult* grandchildren or great-grandchildren of the household head (see "P02\_RELATION") being recent migrants, compared to household members not related to the head, is not much smaller than the odds ratios for *adult* sons or daughters (0,133), adopted children (0,285) or stepchildren (0,235) of the head of the household.

The most outstanding characteristics of recent migrants, as represented by the *highest odds ratios* for most of the variables considered in the model, would appear to be as follows (more or less in order of importance): a person (whether male or female) from a local municipality with a high unemployment level, being the parent-in-law of the current household head, the latter *not* being a female person, living in rented or other less permanent accommodation, with a good formal education, being currently gainfully employed, and earning a monthly income of more than R25 600. The policy and planning implications for the rural periphery are far-reaching:

Young people, increasingly better equipped educationally, leave [the rural districts on the periphery of the economy] in large numbers. Another consequence of this selectivity is that women, who have tended to be the ones remaining behind in the rural areas, ... outnumber men in all provinces but one – Gauteng... In practice, this means that the rural areas are left with high proportions of female-headed households. Apart from the obvious social implications, such as family disintegration, this also has serious economic implications. Female-headed households in rural areas are often highly vulnerable and particularly prone

<sup>&</sup>lt;sup>16</sup> This is calculated as follows: (5,482 minus 1 = 4,482). This is then expressed as a percentage (i.e. multiplied by 100) = 448,2%.

to poverty. It is doubted whether migration in search of better opportunities will ever be an option – or even a solution – for such poor households (Kok et al., 2003:71).

Of course the above profile description does not represent that of the majority of migrants in South Africa, but it does give insight into the selectivity factors best associated with the highest recent migration *propensity* (i.e. the probability of any person having migrated recently). Nevertheless, the stark implications of the selectivity profile described above are that recent intermunicipality migrants are prone to end up in households in impermanent urban accommodation and where wood and paraffin (instead of the safer, more convenient and environmentally friendly electricity or solar energy) are used for cooking.

Unfortunately, the 10% sample data does not allow an investigation into the settlement strategies of recent city in-migrants, but other studies have confirmed that these migrants find accommodation in the city periphery far from the main employment and other opportunities, being unable to afford, or gain access to, accommodation closer to the centre of the city. This tends to make the "compact city" an elusive dream –the main urban planning conundrum for developing countries in general (Angel et al., 2011), and South Africa in particular (see, for example, Kok & Gelderblom, 1994; Nel & Rogerson, 2009; Landman, 2010; Cross, 2013):

The shape of the employment/income/migration gradients in the main cities may not remain constant, highlighting the coming challenge of continuing monitoring for divergent employment realities in different places, for youth and for women, and in different types of settlement. Planning and policy may need to be adapted to mirror and respond to a complex new reality still to be recognised (Cross, 2013: 269).

A final comment is probably needed: looking solely at migrant profiles one gets only a partial perspective on the features and complexity of migration in this country. The other chapters in this monograph provide insights that help to complete the picture.

### 7. References

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# 1. Bivariate descriptions of recent inter-municipality migration and the basic statistics for a logistic regression analysis of this internal migration phenomenon in South Africa

In Table A1 the differences between the means (averages) of "continuous" (interval-scaled and ordinal-scaled) and "dichotomous" (binary) variables for non-migrants and migrants are given. "Migrants" are persons who migrated between different local municipalities during the period 1 October 2006 to 10 October 2011. "Non-migrants", on the other hand, are persons who did not migrate between different local municipalities during the said period.

# Table A1: Migration selectivity: Differences between the means of "continuous" and"dichotomous" variables for non-migrants and migrants

Variable		Means (a	verages)
Variable	Label	Non-migrants	Migrants
Age	Person's current age (in completed years)	27,781	28,372
DERH_ANINCOME	Current household's annual income (Rand value)	R106 305,98	R181 266,20
mn_ed_lev	Mean level of education of the population in 'origin' MP (in 2011)	8,447	10,347
mn_func_lit	Proportion of population in 'origin' MP being functionally literate (in 2011)	0,006	0,003
mn_hh_income	Mean annual household income of population in 'origin' MP (in 2011)	R82 412,75	R109 935,47
mn_unemp	Proportion of population in 'origin' MP being unemployed (in 2011)	0,212	0,197
educ_level	Person's current level of education (in 2011)	8,469	11,634
dwel_owned	Proportion households in 'origin' MP that own their dwellings (in 2011)	0,559	0,488
el_sol_cook	Proportion households in 'origin' MP cooking with electricity or solar power (in 2011)	0,705	0,760
formal_dwel	Proportion households in 'origin' MP living in formal dwellings (in 2011)	0,760	0,802
hd_female	Is the person's current household head a female person? (Yes=1/No=0)	0,428	0,326
Head	Is person the head of the current household or his/her husband/wife/partner? (Yes=1/No=0)	0,382	0,589
metro	Is main place (MP) of 'origin' in a metropolitan area? (Yes=1/No=0)	0,391	0,374
p_w_inside	Proportion households in 'origin' MP with piped water in dwelling (in 2011)	0,401	0,492
prpval_aboveR400k	Proportion households in 'origin' MP whose property's value > R400 000 (in 2011)	0,182	0,250
toilet_fl_ch	Proportion households in 'origin' MP with flush/chemical toilets (in 2011)	0,556	0,666
Unemployed	Is the person currently unemployed (in 2011)? (Yes=1/No=0)	0,211	0,189

The following main conclusions can be drawn from the means depicted in Table A1:

(a) Proportionally the largest mean difference between migrants and non-migrants is in respect of the variable "DERH\_ANINCOME" ("Current annual household income (Rand value)"), with migrants now being part of households with greater *incomes* than those of non-migrants (difference: (R181 266,2-R106 305,98)/ R106 305,98 = 70%).

- (b) The second largest mean difference (54%) is in respect of the variable "Head" ("Is the person the head of the household or his/her husband/wife/partner? (Yes=1/No=0)"), with current *household heads* being far more likely to have migrated than other members of the household.
- (c) Third in the rank order, with a mean difference of -44% (note the negative sign), is the variable "mn\_func\_lit" ("Proportion of population in 'origin' MP' being functionally literate (in 2011)"), which indicates that places with higher *literacy levels* are far less likely to have produced migrants than places with lower literacy levels.
- (d) The fourth largest mean difference (37,5%) is in respect of the variable "prpval\_above R400k" ("Proportion households in 'origin MP' whose property's value > R400 000 (in 2011)"), indicating that households living in more expensive *housing* are more likely to have produced migrants.
- (e) Fifth in the rank order of proportional mean differences (37%) is the variable "educ\_level" ("Current educational level of the person (in 2011)"), with better *educated* persons being notably more likely to have migrated than their less educated counterparts.
- (f) The sixth largest mean difference (33%) is in respect of the variable "mn\_hh\_income" ("Mean annual *household income* of population in 'origin MP' (in 2011)"), with better-off households being more likely to have produced migrants than lower-income households.
- (g) Variables with the least absolute mean difference (of less than 10 per cent) between migrants and non-migrants are: (i) "Age" ("Age in completed years"): 2% difference; (ii) "metro" ("Is main place (MP) of 'origin' in a metropolitan area? (Yes=1/ No=0)"): -4%; (iii) "formal\_dwel" ("Proportion households in 'origin MP' living in formal dwellings (in 2011)"): 6%; and (iv) "mn\_unemp" ("Proportion of population in 'origin MP' being unemployed (in 2011)"): -4%.

Eleven variables show a proportional difference of 0.20% or greater between the means for nonmigrants and migrants.<sup>17</sup> These are: (a) "DERH\_ANINCOME"; (b) "Head"; (c) "mn\_func\_lit"; (d) "prpval\_aboveR400k"; (e) "educ\_level"; (f) "mn\_hh\_income"; (g) "hd\_female"; (h) "p\_w\_inside"; (i) "mn\_ed\_lev"; (j) "ref\_week\_lg"; and (k) "toilet\_fl\_ch". It may be useful to see how many of these 11 variables will also have comparatively partial ("standardised"<sup>18</sup>) relationships with the

<sup>&</sup>lt;sup>17</sup> The 0,20% cut-off point is purely arbitrary, but this perceived threshold is assumed to indicate some potentially notable proportional difference in the means between recent migrants and non-migrants.

<sup>&</sup>lt;sup>18</sup> See the section on multivariate analysis later in the text.

dependent variable "mun\_migr" ("Inter-municipality migrant since October 2006?") in multivariate analyses. This matter is discussed in the section on the logistic regression in the main text (see "multivariate analysis" in Chapter 3).

In Table A2, the differences in the frequencies and proportions (percentages) for a variety of categorical variables (and the same dichotomous variables as in Table A1) in respect of migrants and non-migrants are given.

The magnitude and details of Table A2 are somewhat overwhelming, and it may be necessary to simplify the contents by again looking only at the most important and least important differences between migrants and non-migrants (as was done in the case of Table A1). Nevertheless, all the other entries in the table are again retained for possible use by the interested reader.

The following category-specific conclusions can be drawn from Table A2:

- (a) As could possibly have been expected, people enumerated in *residential hotels* have by far the highest proportion of recent migrants (26%) – see the variable "H01\_QUARTERS" ("Current household's type of living quarters"). It is likely that some migrants with short expected stays at the destination would prefer residential hotels.
- (b) Next in the rank order are people currently living in *commercial areas*, with 22% recent migrants see the variable "EA\_TYPE\_C" ("Current enumerator area (EA) type"). "Commercial areas" probably include central business districts (CBDs), shopping centres and other concentrations of businesses, and it is possible that these areas house a notable proportion of people "in transit" and not only "permanent" residents.
- (c) People living in *caravans or tents* are third in the rank order, with almost 21% recent migrants – see the variable "H02\_MAINDWELLING" ("Current household's type of main dwelling"). People in caravans and tents are almost by definition "in transit" and this would explain the relatively high proportion of migrants in their midst.
- (d) People living in a *townhouse*, described by Stats SA as a "semi-detached house in a complex"
   see "H02\_MAINDWELLING" ("Current household's type of main dwelling") are next in the rank order. Again almost 21% of the residents of townhouses were recent migrants.

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Variable	Label	Category	No		Yes		Total	
			Number	%	Number	%	Number	%
		Male	21 710 000	94,0	1 396 063	6,0	23 100 000	100,0
ЭЕХ		Female	23 540 000	94,8	1 299 301	5,2	24 840 000	100,0
		0-17	16 850 000	6'96	540 523	3,1	17 390 000	100,0
		18-29	9 975 776	90,4	1 065 452	9,7	11 040 000	100,0
age_cat	rerson's current age	30-44	8 618 482	92,2	729 672	7,8	9 348 154	100,0
	(nacing an is a line of the li	45-64	7 282 232	96,2	285 825	3,8	7 568 057	100,0
		65+	2 522 476	97,2	73 892	2,8	2 596 368	100,0
		Black African	36 310 000	95,0	1 932 829	5,1	38 240 000	100,0
		Coloured	4 247 154	97,0	131 621	3,0	4 378 775	100,0
PopGroup		Indian/Asian	1 088 413	93,9	70 551	6,1	1 158 964	100,0
	group	White	3 448 061	86,5	539 695	13,5	3 987 756	100,0
		Other	151 900	88,0	20 668	12,0	172 568	100,0
		Married	9 870 805	93,1	727 808	6,9	10 600 000	100,0
		Living together like married partners	2 893 571	90,2	315 463	9,8	3 209 034	100,0
MaritalCtatuc	Person's present	Never married	30 030 000	95,1	1 541 309	4,9	31 570 000	100,0
IVIAI ILAIDLALUD	marital status	Widower/ Widow	1 673 268	97,1	49 212	2,9	1 722 480	100,0
		Separated	284 858	94,8	15 595	5,2	300 453	100,0
		Divorced	489 629	91,4	45 977	8,6	535 606	100,0
		Head/Acting head	12 290 000	91,3	1 165 553	8,7	13 460 000	100,0
		Husband/Wife/Partner	4 975 473	92,2	422 464	7,8	5 397 938	100,0
		Son/daughter	15 110 000	96,7	509 439	3,3	15 620 000	100,0
		Adopted Son/Daughter	171 527	95,0	9 087	5,0	180 614	100,0
		Stepchild	247 634	94,0	15 784	6,0	263 418	100,0
		Brother/sister	1 421 409	92,1	122 078	7,9	1 543 487	100,0
Dolotion	Relationship to head or	Parent Mother/Father	207 919	92,9	15 780	7,1	223 698	100,0
	household	Parent-in-law	48 240	88,6	6 213	11,4	54 452	100,0
		Grand/Great-Grandchild	6 228 303	98,8	72 915	1,2	6 301 218	100,0
		Son/Daughter-in-law	319 652	94,4	18 940	5,6	338 592	100,0
		Brother/Sister-in-law	189 701	89,3	22 824	10,7	212 525	100,0
		Grandmother/Father	30 376	94,4	1 793	5,6	32 169	100,0
		Other relative	3 312 849	94,5	192 933	5,5	3 505 782	100,0
		Non-related person	685 730	85,2	119 560	14,8	805 290	100,0

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			-	nter-muni	icipality migra	nt (since	Oct. 2006)?	
Variable	Label	Category	No		Yes		Total	
			Number	%	Number	%	Number	%
	Is the person head of the current household	No	27 980 000	96,2	1 107 347	3,8	29 090 000	100,0
	(or his/her husband/ wife/ partner)?	Yes	17 270 000	91,6	1 588 017	8,4	18 860 000	100,0
ما <del>ا</del> مسمام	Is the person's current	ON	7 029 792	0'06	785 037	10,0	7 814 829	100,0
nu_remare	female person?	Yes	5 261 746	93,3	380 515	6,7	5 642 261	100,0
		No schooling	2 941 738	97,3	80 997	2,7	3 022 735	100,0
		Some primary	10 920 000	96,7	370 601	3,3	11 290 000	100,0
		Completed primary	2 217 964	95,9	95 019	4,1	2 312 983	100,0
Derived_Educ_Level	of adjiration	Some secondary	12 830 000	94,4	764 519	5,6	13 590 000	100,0
	הו במתרמווחו	Grade 12/Std 10	8 007 708	91,3	761 427	8,7	8 769 135	100,0
		Higher	2 837 442	86,1	457 684	13,9	3 295 126	100,0
		Other	87 119	88,8	10 980	11,2	98 099	100,0
		Writing name	645 457	97,0	19 683	3,0	665 140	100,0
		Reading in any language	31 356	97,2	887	2,8	32 243	100,0
	Person's current	Filling in a form	20 880	97,8	461	2,2	21341	100,0
	functional literacy	Writing a letter (in any language)	23 702	97,4	636	2,6	24 338	100,0
		Calculating	158 072	97,3	4 412	2,7	162 484	100,0
		Reading road signs	65 985	96,6	2 295	3,4	68 280	100,0
		Employed	10 740 000	89,5	1 257 384	10,5	12 000 000	100,0
Dorivod Employ Ctatuc	Person's current labour	Unemployed	4 965 148	93,9	324 403	6,1	5 289 551	100,0
ueilveu_ciiipiuy_status	market status	Discouraged work-seeker	1 698 403	95,9	71 761	4,1	1 770 164	100,0
		N/A (Age less than 15 years)	14 140 000	96,9	443 997	3,0	14 590 000	100,0
Inomological	Is the person currently	No	24 880 000	93,6	1 701 381	6,4	26 580 000	100,0
onempioyed	unemployed (in 2011)?	Yes	6 663 552	94,4	396 164	5,6	7 059 715	100,0
		Formal residential	24 690 000	93,2	1 794 634	6,8	26 490 000	100,0
		Informal residential	2 476 730	91,8	221 167	8,2	2 697 896	100,0
		Traditional residential	15 580 000	98,1	300 185	1,9	15 880 000	100,0
		Farms	1 660 462	89,7	190 711	10,3	1 851 173	100,0
C TVDE C	Current enumerator	Parks and recreation	19 230	80,3	4 714	19,7	23 944	100,0
	area (EA) type	Collective living quarters	222 813	79,7	56 683	20,3	279 497	100,0
		Industrial	85 248	80,0	21 336	20,0	106 584	100,0
		Small holdings	314 070	84,1	59 501	15,9	373 570	100,0
		Vacant	48 044	90,7	4 900	9,3	52 943	100,0
		Commercial	147 425	78,0	41 534	22,0	188 959	100,0

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			I	nter-muni	icipality migra	ant (since	Oct. 2006)?	
Variable	Label	Category	No		Yes		Total	
			Number	%	Number	%	Number	%
	Is the person's current	Yes	12 700 000	97,5	325 322	2,5	13 030 000	100,0
	nousenoid involved in agricultural activities?	No	32 540 000	93,2	2 370 041	6,8	34 910 000	100,0
		0	34 230 000	93,8	2 273 859	6,2	36 500 000	100,0
DERP_DISABILITY_INDEX	Person's current	1	5 571 799	95,4	266 018	4,6	5 837 817	100,0
	משמווו אווומפנוח	6	44 323	0'26	1 348	3,0	45 671	100,0
	Is the person currently	No	27 580 000	95,0	1 441 556	5,0	29 020 000	100,0
cur_metro	iiving in a metropolitan area?	Yes	17 670 000	93,4	1 253 807	6,6	18 920 000	100,0
- the second	Currently living in a secondary city (covering 12 of the	No	40 640 000	94,5	2 377 322	5,5	43 020 000	100,0
נמו-265 נווץ	cities on the list produced by John, 2012)?	Yes	4 603 800	93,5	318 042	6,5	4 921 842	100,0
(	Is main place (MP) of	No	27 580 000	94,3	1 688 396	5,8	29 260 000	100,0
metro	origin in a metropolitan area?	Yes	17 670 000	94,6	1 006 968	5,4	18 680 000	100,0
		R0-R2 500 p.m.	21 890 000	95,3	1 086 261	4,7	22 970 000	100,0
		R2 501–R8 000 p.m.	10 570 000	95,7	482 205	4,4	11 050 000	100,0
hhinc_cat		R8 001–R20 000 p.m.	5 407 226	91,8	483 272	8,2	5 890 498	100,0
		R20 001–R30 000 p.m.	1 253 742	91,6	115 029	8,4	1 368 772	100,0
		Above R30 000 p.m.	2 523 860	88,5	327 058	11,5	2 850 919	100,0
		Housing unit	43 680 000	94,6	2 471 258	5,4	46 150 000	100,0
		Converted hostel (e.g. family unit)	525 886	86,8	80 263	13,2	606 148	100,0
H01_QUARTERS	type of living quarters	Residential hotel	38 854	73,9	13 714	26,1	52 569	100,0
	נאשב טו וועוווצ קעמו נכו א	Home for the aged	22 362	92,1	1 930	7,9	24 292	100,0
		Other non-housing units	773 385	86,7	118 542	13,3	891 927	100,0

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			L	ter-muni	cipality migra	int (since	Oct. 2006)?	
Variable	Label	Category	No		Yes		Total	
			Number	%	Number	%	Number	%
		House or brick/concrete block structure on a separate stand or yard or on a farm	000 026 08	95,3	1 535 656	4,7	32 510 000	100,0
		Traditional dwelling/hut/structure made of traditional materials	4 983 667	98,6	72 231	1,4	5 055 898	100,0
		Flat or apartment in a block of flats	1 400 110	86,4	220 746	13,6	1 620 857	100,0
		Cluster house in complex	264 064	82,4	56 442	17,6	320 506	100,0
		Townhouse (semi-detached house in a complex)	344 074	79,4	89 105	20,6	433 180	100,0
		Semi-detached house	759 761	96,9	24 320	3,1	784 080	100,0
H02_MAINDWELLING	type of main dwalling	House/flat/room in backyard	891 621	90,6	92 833	9,4	984 455	100,0
		Informal dwelling (shack in backyard)	1 388 051	90,8	140 144	9,2	1 528 195	100,0
		Informal dwelling (shack NOT in backyard, e.g. in an	2 744 176	91,4	258 985	8,6	3 003 160	100,0
		intormal/squatter settlement or on a tarm)						
		Room/flatlet on a property or a larger dwelling/servants quarters/sranny flat	161 470	82,8	33 531	17,2	195 001	100,0
		Caravan/tent	20 615	79,2	5 407	20,8	26 023	100,0
		Other	276 447	92,6	22 120	7,4	298 567	100,0
		Rented	6 162 324	83,7	1 201 793	16,3	7 364 117	100,0
	Tenure status:	Owned but not yet paid off	5 618 328	94,2	347 342	5,8	5 965 671	100,0
H04_TENURE	household's current	Occupied rent-free	8 382 943	95,4	402 840	4,6	8 785 783	100,0
	property	Owned and fully paid off	22 530 000	97,7	525 194	2,3	23 060 000	100,0
		Other	1 509 880	95,3	74 351	4,7	1 584 232	100,0
		Less than R50 000	18 720 000	94,6	1 071 086	5,4	19 790 000	100,0
		R50 001–R100 000	8 134 055	97,0	254 181	3,0	8 388 236	100,0
	- 44 J 1 1 1 1 1 1	R100 001–R200 000	4 134 487	97,0	128 541	3,0	4 263 029	100,0
	Estimated value of the	R200 001–R400 000	4 423 992	95,3	217 014	4,7	4 641 006	100,0
		R400 001-R800 000	4 081 583	91,7	370 787	8,3	4 452 369	100,0
		R800 001-R1 600 000	2 810 615	90,0	313 624	10,0	3 124 239	100,0
		R1 600 001–R3 200 000	1 313 156	90,2	142 216	9,8	1 455 372	100,0
		More than R3 200 000	588 627	91,6	54 071	8,4	642 699	100,0

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			-	nter-mun	icipality migra	nt (since	Oct. 2006)?	
Variable	Label	Category	No		Yes		Total	
			Number	%	Number	%	Number	%
		Less than one year	1 228 483	89,0	152 439	11,0	1 380 923	100,0
		1–5 years	5 345 235	90,7	548 516	9,3	5 893 751	100,0
		6–10 years	6 408 169	95,7	290 950	4,3	6 699 119	100,0
	0	11–20 years	9 822 953	97,2	289 042	2,9	10 110 000	100,0
H06_PROPERTYAGE	Age of the household s	21–30 years	6 033 824	97,3	168 306	2,7	6 202 130	100,0
	רמו ו בו ור או חאבו וא	31–40 years	3 772 634	97,2	110 383	2,8	3 883 016	100,0
		41–50 years	2 297 094	97,2	65 972	2,8	2 363 067	100,0
		51–60 years	1 338 217	97,1	40 653	2,9	1 378 870	100,0
		61 years or older	1 514 088	96,4	57 123	3,6	1 571 211	100,0
		Piped (tap) water inside dwelling/institution	19 620 000	92,7	1 547 204	7,3	21 170 000	100,0
		Piped (tap) water inside yard	11 920 000	94,8	645 597	5,1	12 570 000	100,0
		Piped (tap) water on community stand: less than 200 m from dwelling/institution	5 366 034	95,7	241 701	4,3	5 607 735	100,0
H07_WATERPIPED	Current household's	Piped (tap) water on community stand: 200-500 m from dwelling/institution	1 754 985	96,0	73 015	4,0	1 828 000	100,0
	access to piped water	Piped (tap) water on community stand: 500-1000 m from dwelling/institution	780 219	96,2	30 411	3,8	810 630	100,0
		Piped (tap) water on community stand: more than 1 km from dwelling/institution	449 822	96,6	15 598	3,4	465 420	100,0
		No access to piped (tap) water	5 146 816	97,5	132 180	2,5	5 278 996	100,0
		None	2 511 403	95,8	109 405	4,2	2 620 808	100,0
		Flush toilet (connected to sewerage system)	23 230 000	92,6	1 854 525	7,4	25 090 000	100,0
		Flush toilet (with septic tank)	1 142 312	89,8	129 812	10,2	1 272 125	100,0
	Current household's	Chemical toilet	1 344 913	97,0	41 884	3,0	1 386 797	100,0
	toilet facilities	Pit toilet with ventilation (VIP)	4 906 732	97,5	126 984	2,5	5 033 716	100,0
		Pit toilet without ventilation	10 010 000	96,8	323 866	3,1	10 340 000	100,0
		Bucket toilet	840 523	94,0	53 220	6,0	893 742	100,0
		Other	1 050 651	95,8	46 010	4,2	1 096 661	100,0

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			-	nter-muni	cipality migra	int (since	Oct. 2006)?	
Variable	Label	Category	No		Yes		Total	
			Number	%	Number	%	Number	%
		None	60 325	93,1	4 480	6,9	64 804	100,0
		Electricity	31 940 000	93,8	2 106 005	6,2	34 040 000	100,0
		Gas	1 444 520	91,0	142 689	9'0	1 587 209	100,0
	Energy or fuel used for	Paraffin	2 698 171	90,9	270 768	9,1	2 968 939	100,0
H11_ENERGY_COOKING	cooking in current	Wood	8 108 594	98,4	132 647	1,6	8 241 241	100,0
	household	Coal	461 741	97,4	12 175	2,6	473 916	100,0
		Animal dung	205 141	98,0	4 248	2,0	209 389	100,0
		Solar	68 807	94,3	4 172	5,7	72 978	100,0
		Other	57 057	87,0	8 523	13,0	65 581	100,0
		Removed by local authority/private company at least once a week	25 290 000	92,9	1 931 009	7,1	27 220 000	100,0
	Dofine or middled	Removed by local authority/private company less often	613 019	92,4	50 741	7,6	663 759	100,0
H13 DEELICE	reluse of futurish	Communal refuse dump	740 497	92,3	61 563	7,7	802 060	100,0
	household	Own refuse dump	15 130 000	96,7	515 003	3,3	15 640 000	100,0
		No rubbish disposal	2 847 549	96,6	101 283	3,4	2 948 833	100,0
		Other	428 448	94,3	26 107	5,7	454 555	100,0
		No income	18 930 000	95,0	995 740	5,0	19 930 000	100,0
		R1–R400 p.m.	8 567 673	97,7	204 660	2,3	8 772 334	100,0
		R401–R800	1 443 653	93,8	95 348	6,2	1 539 001	100,0
		R801–R1 600	5 216 589	94,8	287 299	5,2	5 503 888	100,0
		R1 601–R3 200	2 443 588	90,6	254 084	9,4	2 697 672	100,0
	merson's current	R3 201–R6 400	1 831 860	89,9	204 905	10,1	2 036 766	100,0
		R6 401–R12 800	1 536 051	88,6	198 004	11,4	1 734 054	100,0
	category	R12 801–R25 600	1 081 441	86,9	162 991	13,1	1 244 431	100,0
		R25 601–R51 200	420 062	84,3	78 141	15,7	498 203	100,0
		R51 201–R102 400	124 948	84,6	22 686	15,4	147 634	100,0
		R102 401–R204 800	49 545	87,7	6 974	12,3	56519	100,0
		R204 801 or more p.m.	34 291	87,7	4 788	12,3	39 078	100,0
	Person currently	Yes	14 010 000	95,3	683 947	4,7	14 700 000	100,0
	attending school?	No	23 940 000	93,1	1 783 896	6,9	25 720 000	100,0
	Does the person usually live in the current	Yes	44 160 000	94,6	2 516 395	5,4	46 670 000	100,0
Osuaires	household (4+ nights/week)?	No	1 088 629	85,9	178 944	14,1	1 267 574	100,0

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			E	ter-muni	cipality migraı	nt (since C	Oct. 2006)?	
Variable	Label	Category	No		Yes		Total	
			Number	%	Number	%	Number	%
		Western Cape	4 957 465	96,6	176 848	3,4	5 134 313	100,0
		Eastern Cape	6 060 291	93,7	409 334	6,3	6 469 625	100,0
		Northern Cape	1 002 650	92,7	783 98.7	7,3	1 081 049	100,0
		Free State	2 434 302	93,8	160 150	6,2	2 594 451	100,0
Province	Province of 'origin'	KwaZulu-Natal	9 455 766	95,9	407 720	4,1	9 863 485	100,0
		North West	3 012 041	93,9	196 044	6,1	3 208 085	100,0
		Gauteng	9 784 915	93,4	695 243	6,6	1.05E+07	100,0
		Mpumalanga	3 599 870	94,8	198 924	5,2	3 798 793	100,0
		Limpopo	4 937 423	93,8	326 367	6,2	5 263 791	100,0
Overall (total)			45 240 000	94,4	2 695 364	5,6	47 940 000	100,0

- (e) Collective living quarters see "EA\_TYPE\_C" ("Current enumerator area (EA) type") contains the fifth highest proportion of recent migrants (20%). Collective living quarters 19 include hotels, rooming houses and other lodging houses, institutions (such as old-age homes, prisons and hospitals) and camps, and these would also be expected to accommodate a fairly large proportion of persons "in transit".
- (f) Sixth in the rank order are people living in *industrial areas* again see "EA\_TYPE\_C" also with 20% recent migrants, which is, once again, a reflection of the inherent non-permanence of residence in such areas.
- (g) People living in parks and recreation areas see "EA\_TYPE\_C" once again are seventh in the rank order with almost 20% recent migrants. As should be expected, non-permanence of residence is probably a characteristic of a notable proportion of the persons enumerated in such areas.
- (h) The *lowest* proportion of migrants was found among (i) grandchildren or great-grandchildren of household heads - see "Relation" ("Relationship to head or acting head of current household") - with only 1,2% recent migrants; (ii) People living in traditional dwellings/huts/structures made of traditional materials - see "H02 MAINDWELLING" ("Current household's type of main dwelling") – with 1,4% recent migrants; (iii) households using wood for cooking – see "H11 ENERGY COOKING" ("Energy or fuel used for cooking in current household") – with 1,6% recent migrants; (iv) and, as to be expected in view of (ii) above, people living in traditional residential areas – see "EA TYPE C" ("Current enumerator area (EA) type") – with 1,9% migrants; (v) households using animal dung as fuel for cooking – see "H11 ENERGY COOKING" - with 2,0% migrants; (vi) persons who are able to fill in a form - see "DERP FUNCLTERACY" ("Person's current functional literacy") - with 2,2% migrants; (vii) households whose houses are owned and fully paid off - see "HO4 TENURE" ("Tenure status: household's current property") – with 2,3% migrants; and (viii) persons with individual incomes of R1-R400 p.m. - see "P16\_INCOME" ("Person's current monthly income category") – also with only 2,3% recent migrants.

<sup>&</sup>lt;sup>19</sup> "Collective living quarters" are formally defined as follows: "Structurally separate and independent places of abode intended for habitation by large groups of individuals or several households. Such quarters usually have certain common facilities, such as cooking and ablution facilities, lounges or dormitories that are shared by the occupants. Collective living quarters may be further classified into hotels, rooming houses and other lodging houses, institutions and camps." (Stats SA. 2014:14).

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The following 16 variables have at least one category with 10 per cent or more migrants<sup>20</sup>: (a) "Derived\_Educ\_Level"; (b) "Derived\_Employ\_Status"; (c) "EA\_TYPE\_C"; (d) "H01\_QUARTERS"; (e) "H02 MAINDWELLING"; (f) "H04 TENURE"; (g) "H05 ESTPROPERTYVAL"; (h) "H06\_PROPERTYAGE"; (i) "H10\_TOILET"; (j) "H11\_ENERGY\_COOKING"; (k) "hd\_female"; (l) "hhinc\_cat"; (m) "P16\_INCOME"; (n) "PopGroup"; (o) "Relation"; and (p) "UsualRes". It remains to be seen how many of these 16 variables will each have a category with a sufficiently large "standardised" relationship with recent migration/non-migration. This is the topic of the section on "multivariate analysis" in the main text (see Chapter 3).

### 2. The basic statistics for the logistic regression

(single years, in the age bracket 18-69)

Mean unemployment level in 'origin'

Proportion households in 'origin'

municipality using electricity/solar

P20. Person's level of education

(revised)

municipality

energy for cooking

P20\_EDULEVEL

PROP\_UNEMPL

EL SOL COOK

Table A3 gives the descriptive statistics for the "continuous" variables used in the logistic regression model, while in Table A4 the frequency distributions for the *categorical* variables are given.

Table A3 shows that only for the variables "P20\_EDULEVEL" (P20. Person's level of education (revised)) and "F02 AGE" (F02. Person's age at last birthday (single years, in the age bracket 18–69) do the means for migrants and non-migrants differ notably. For "F02 AGE" the mean age of recent migrants (33,97) is much *lower* than for non-migrants (39,55) while in the case of "P20 EDULEVEL" the mean level of education is markedly higher for recent migrants (13,08) than for non-migrants (10,10). These findings confirm the findings in the migration literature that younger persons are more migratory than their older counterparts and better-educated persons are more likely to migrate than the lesser educated.

model						
Variable	Variable label	"mun_migr" (Recent migrant?)	Mean	Standard deviation	Minimum	Maximum
	502 Deveening and at least high days	1 (Yes)	33,97	37,644	18	69
F02 AGE	FUZ. Person's age at last birthday	0 (No)	39,55	46,093	18	69

Total

1 (Yes)

0 (No)

Total

1 (Yes)

0 (No)

1 (Yes)

0 (No)

Total

Total

38,45

13,08

10,10

10,68

0,22

0,22

0,22

0,76

0,73

0,73

45,236

22,342

20,410

21,197

0,112

0,126

0,124

0,595

0,646

0,638

18

0

0

0

0,0<u>5</u>

0,05

0,05

0,12

0,12

0,12

69

28

28

28

0,33

0,33

0,33

0,93

0,93

0,93

Table	A3:	Descriptive	statistics	for	the	"continuous"	independent	variables	used	in	the	logit
mode												

<sup>20</sup> Again, the cut-off point (10% in this case) is purely arbitrary, but this perceived threshold is assumed to indicate a proportion of recent migrants
potentially worthy of note. (This proportion is of course still almost double the <i>overall</i> proportion of 5,6% migrants.)

Class	Velue	Levels of "	nun_migr"	Total	%
Class		1 (Yes)	0 (No)	Total	Migrants
FO3 SEX	1. Male	1 416 402	5 209 967	6 626 369	21,38
	2. Female*	1 121 772	5 143 873	6 265 645	17,90
	1. Black African	1 841 999	8 272 127	10 114	18,21
	2. Coloured	155 353	833 904	989 256	15,70
P05_POP_GROUP	3. Indian/Asian	71 386	252 238	323 624	22,06
	4. White	445 918	930 563	1 376 481	32,40
	5. Other*	23 518	65 009	88 527	26,57
	01. Head/Acting head	1 890 963	6 755 010	8 645 973	21,87
	02. Husband/Wife/Partner	365 483	1 399 486	1 764 969	20,71
	03. Child (Son/Daughter)	90 025	1 346 327	1 436 351	6,27
	04. Adopted son/daughter	1 630,7	10 055	11 685	13,96
	05. Stepson/Stepdaughter	2 608,7	18 351	20 960	12,45
	06. Brother/Sister	56 743	266 843	323 585	17,54
	07. Parent (Mother/Father)	4 982,2	23 018	28 000	17,79
PU2_RELATION	08. Mother-in-law/Father-in-law	1 027,3	2 569,6	3 596,9	28,56
	09. Grandchild/Great-grandchild	3 811,1	115 602	119 413	3,19
	10. Son-in-law/Daughter-in-law	7 288,9	42 938	50 227	14,51
	11. Brother-in-law/Sister-in-law	8 336,9	29 566	37 903	22,00
	12. Grandmother/Grandfather	174,17	1 265,1	1 439,3	12,10
	13. Other relative	58 761	266 451	325 212	18,07
	14. Non-related person*	46 339	76 360	122 699	37,77
	1. Employed	1 668 784	4 584 157	6 252 941	26,69
DERP EMPLOY STA	2. Unemployed	333 469	1 668 684	2 002 153	16,66
TUS_OFFICIAL	3. Discouraged work-seeker	69 626	575 136	644 761	10,80
	5. N/A (Age less than 15 years)*	433 160	3 121 874	3 555 034	12,18
	01. No income	680 320	4 102 347	4 782 667	14,22
	02. R1–R400 p.a.	71 294	369 513	440 808	16,17
	03. R401–R800	106 637	503 525	610 162	17,48
	04. R801–R1 600	319 187	1 831 217	2 150 404	14,84
	05. R1 601–R3 200	336 266	1 042 392	1 378 658	24,39
	06. R3 201–R6 400	272 801	762 843	1 035 644	26,34
P16_INCOME	07. R6 401–R12 800	272 739	616 895	889 634	30,66
	08. R12 801–R25 600	228 856	444 154	673 010	34,00
	09. R25 601–R51 200	111 363	176 636	288 000	38,67
	10. R51 201–R102 400	31 906	58 010	89 916	35,48
	11. R102 401–R204 800	9 515,7	20 592	30 107	31,61
	12. R204 801 or more p.a.*	6 666,2	14 223	20 889	31,91
	0. No	1 696 888	6 071 211	7 768 099	21,84
DERH_HHSEX	1. Yes*	841 286	4 282 630	5 123 916	16,42
	1. Urban area	2 123 142	6 719 395	8 842 537	24,01
H GEOTYPE	2. Tribal/Traditional area	237 884	3 038 310	3 276 194	7,26
_	3. Farm area*	177 148	596 135	773 283	22.91

### Table A4: Weighted frequency distribution of class (categorical) variables used in the logistic regression

\* Reference category for the logistic regression.

# Table A4: Weighted frequency distribution of class (categorical) variables used in the logistic regression (concluded)

Class.	Malua	Levels of "	mun_migr"	Tatal	%
Class	value	1 (Yes)	0 (No)	lotai	Migrants
	01. House or brick/concrete block structure on a separate stand/yard or on a farm	1 425 553	6 976 071	8 401 624	16,97
	02. Traditional dwelling/hut/structure made of traditional materials	48 032	914 890	962 922	4,99
	03. Flat or apartment in a block of flats	271 264	368 498	639 762	42,40
	04. Cluster house in complex	57 946	68 950	126 896	45,66
	05. Townhouse (semi-detached house in a complex)	94 024	90 184	184 208	51,04
H02_MAINDWELLIN	06. Semi-detached house	33 949	157 347	191 296	17,75
G	07. House/flat/room in backyard	114 936	264 440	379 376	30,30
	08. Informal dwelling (shack in backyard)	159 417	484 301	643 717	24,77
	09. Informal dwelling (shack NOT in backyard	263 629	876 566	1 140 195	23,12
	10. Room/flatlet on a property or a larger dwelling/servants quarters/granny flat	41 090	66 740	107 830	38,11
	11. Caravan/tent	4 990,4	7 332,4	12 323	40,50
	12. Other*	23 344	78 521	101 864	22,92
	1. Rented	1 288 911	2 005 328	3 294 239	39,13
	2. Owned but not yet paid off	336 360	1 282 159	1 618 519	20,78
H04_TENURE	3. Occupied rent-free	400 792	2 002 324	2 403 116	16,68
	4. Owned and fully paid off	437 006	4 710 164	5 147 170	8,49
	5. Other*	75 105	353 864	428 969	17,51
	01. Electricity	5 537,7	21 102	26 640	20,79
	02. Gas	2 041 117	7 559 159	9 600 276	21,26
	03. Paraffin	115 161	353 638	468 799	24,57
	04. Wood	256 523	825 995	1 082 518	23,70
H11_ENERGY_COO	05. Coal	95 393	1 442 157	1 537 550	6,20
KING	07. Animal dung	7 863,7	84 900	92 764	8,48
	08. Solar	2 230,2	35 112	37 343	5,97
	09. Other	3 812	16 105	19 917	19,14
	10. None*	10 536	15 672	26 208	40,20
	01. Flush toilet (connected to sewerage system)	95 671	567 664	663 335	14,42
	02. Flush toilet (with septic tank)	1 851 168	5 624 073	7 475 240	24,76
	03. Chemical toilet	96 574	303 112	399 686	24,16
	04. Pit toilet with ventilation (VIP)	38 918	279 192	318 111	12,23
H10_TOILET	05. Pit toilet without ventilation	99 204	988 719	1 087 923	9,12
	06. Bucket toilet	266 178	2 141 753	2 407 931	11,05
	07. Other	53 080	219 088	272 168	19,50
	10. None*	37 382	230 239	267 621	13,97
	0. No	1 393 530	6 181 648	7 575 178	18,40
METRO	1. Yes*	1 144 644	4 172 192	5 316 836	21,53
	01. Western Cape	278 633	1 090 490	1 369 123	20,35
	02. Eastern Cape	317 481	1 239 291	1 556 772	20,39
	03. Northern Cape	49 775	219 432	269 207	18,49
	04. Free State	111 384	616 974	728 358	15,29
PROVINCE	05. KwaZulu-Natal	346 378	1 894 792	2 241 170	15,46
	06. North West	148 331	709 199	857 529	17,30
	07. Gauteng	809 467	2 421 015	3 230 483	25,06
	08. Mpumalanga	142 516	808 426	950 942	14,99
	09. Limpopo*	263 796	1 037 023	1 300 820	20,28

\* Reference category for the logistic regression.

From the last column in Table A4, it can be seen that, in the case of "Sex" ("F03\_SEX"), males (21,38%) appear to be more migratory than females (17,90%). In the case of the variable "Population group" ("P05\_POP\_GROUP"), the categories "white" (32,40%) and "other" (26,57%) tend to be more migratory than "black African" (18,21%), "coloured" (15,70%) and "Indian/Asian" (22,06%) persons. As far as "Relationship to head of household" ("P02\_RELATION") is concerned, it should be clear that "non-related persons" (37,77%) tend to be by far the most migratory members of their households. "Employed" persons (26,69%) are notably more migratory than those in the other employment status categories (see "DERP\_EMPLOY\_STATUS\_OFFICIAL"). More than 30 per cent of persons with annual incomes of more than R6 400 have recently migrated, which indicates that migrants tend to be better off financially than their non-migrant counterparts (whose migrant proportions range between 14,22% and 26,34%). Households with female heads (see the variable "DERH\_HHSEX") generally contain a lower proportion of recent migrants (16,42%) than male-headed households (21,84%).

It is clear from the derived household geographical location type ("H\_GEOTYPE") in Table A4 that persons living in "tribal/traditional areas" (7,26%) seem to be much less migratory than those living on farms (22,91%) and in urban areas (24,01%). As would probably have been expected, "townhouses (semi-detached houses in a complex)" (see "H02\_MAINDWELLING" in Table A4) tend to accommodate the highest proportion of recent migrants (51,04%), followed by "cluster houses in a complex" (45,66%), and "flats or apartments in blocks of flats" (42,40%). As far as "tenure status" ("H04\_TENURE") is concerned, "rented" accommodation house by far the highest proportion of recent migrants (39,13%). The energy source or fuel households use for cooking ("H11\_ENERGY\_COOKING") is probably associated closely with locality type (notably rural vs. urban), and as is clear from Table A4 households using solar energy for cooking tend to accommodate the lowest proportions of recent migrants (5,97%), while households reportedly using the least desirable fuels for cooking, namely "coal" (6,20%) and "animal dung" (8,48%), contain only slightly higher migrant proportions. As far as the variable "H10\_TOILET" is concerned, households having "flush toilets with septic tanks" (24,76%) and "chemical toilets" (24,16%) tend to contain the highest proportions of migrants.

Table A4 also shows that metropolitan areas of 'origin' ("METRO") produced a higher proportion of recent migrants (21,53%) than non-metropolitan areas of 'origin' (18,40%). As far as provincial 'origin' ("PROVINCE") is concerned, Gauteng produced the highest proportion of recent intermunicipality migrants (25,06%), while Mpumalanga (14,99%), Free State (15,29%) and KwaZulu-Natal (15,46%) produced the lowest proportions.

As discussed in the section on "multivariate analysis" above, these bivariate relationships need to be placed in a proper context though. It is necessary to evaluate the unique relationships between each of these independent variables and the single response variable "MUN\_MIGR" when the effects of all the other independent variables in the model have been eliminated.

The SPSS-based logistic regression model summary is given in Table A5. The shaded rows (for Block 0) denote the situation *before* any predictors (independent variables) were entered into the model. The classification table in Block 0 shows the model in its basic state, i.e. containing only the intercept term (constant). Our initial model predicts that no-one would recently have migrated, which results in a perfect (100%) accuracy for non-migrants, but it does not at all accurately predict recent migration (0%), giving an overall correctly classified proportion of 81%. The next part of the initial-state output, see "Variables in the Equation", shows that, at this stage, the value of the constant (b<sub>0</sub>) is estimated to be -1,451 with a highly significant Wald statistic of 3 679 455 835. (This constant therefore significantly differs from zero.) The final entry in the shaded part of Table A5 is labelled "Variables not in the Equation", which gives the overall details of Roa's (1973, quoted in Field, 2005:235) "efficient score statistic" for the variables not yet included in the analysis. Only the bottom line of the original table is shown in Table A5, because, as would be expected in the case of such a very large sample, all 17 of the individual predictors (so far excluded) have highly significant score statistic. The overall residual chi-square statistic of 2 101 582 825 is also highly significant at p = 0,000.<sup>21</sup>

<sup>&</sup>lt;sup>21</sup> This tells us that the coefficients for the variables not yet in the model are significantly different from zero. In other words, "the addition of one or more of these variables to the model will significantly affect its predictive power" (Field, 2005:235). Had this residual chi-square not been significant it would have meant that none of the variables so far excluded from the model could make a significant contribution to the predictive power of the model, in which case the analysis would have terminated at this early stage already (see Field, 2005).

BLOCK	TABLE		S	TATISTICS	
		Observed		Predicted	
		Observed	No	Yes	Percentage Correct
	Classification	No	9 204 115	0	100,0
0: Beginning	Table*	Yes	2 156 318	0	0,0
block (with only the constant		Overall Percentage			81,0
included)	Variables in the	В	Wald	df	Sig.
	Equation	-1,451	3 679 455,835	1	,000
	Variables not in	Overall Statistics	Score	df	Sig.
	the Equation	Overall Statistics	2 101 582,825	78	0,000
	Model Summary	Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
	would Summary	1	8 817 933,446	0,178	0,286
1. Mathad -	Hosmer and	Step	Chi-square	df	Sig.
1: Method =	Lemeshow Test	1	8 306,461	8	,000
variables plus		Observed			Predicted
constant		Observed	No	Yes	Percentage Correct
included)	Classification	No	6 739 421	2 464 695	73,2
mendeur	Table*	Yes	583 619	1 572 699	72,9
		Overall Percentage			73,2

Table A5: Logistic regression model summary

\* The cut value is 0,20.

For Block 1 (with all the predictors now included in the model) there are three entries in Table A5: (a) "Model Summary", (b) "Hosmer and Lemeshow Test", and (c) "Classification Table". The "Model Summary" contains a *step* statistic that indicates the "-2 Log likelihood" improvement in the predictive power of the model since the previous (in this case initial<sup>22</sup>) stage. In models with multiple stages, this statistic is a measure of the improvement in the predictive power of the model since the last step.<sup>23</sup> The Cox & Snell R Square and the Nagelkerke R Square values in the same row "provide an indication of the amount of variation in the dependent variable explained by the model (from a minimum value of 0 to a maximum of approximately 1)" (Pallant, 2007:167). Although they differ in computation and in the answers one gets, both "provide a gauge of the substantive significance of the model" (Field, 2005:223). The model described here as a whole explains between 17,8% (Cox and Snell R square) and 28,6% (Nagelkerke R squared) of the variance in migrant status, and the classification table for Block 1 shows that the model correctly classifies 73,2% of cases.

<sup>&</sup>lt;sup>22</sup> There are only two stages involved here because the "forced entry method" instead of a stepwise method is used.

<sup>&</sup>lt;sup>23</sup> "If the improvement statistic is significant then it indicates that the model now predicts the outcome significantly better than it did at the last step, and in a [stepwise] forward regression this can be taken as an indication of the contribution of a predictor to the predictive power of the model" (Field, 2005:238).

However, this does not necessarily mean that the model fit is acceptable too. In fact, because one deals here with individual-level (as opposed to grouped/tabular) data, and in view of the sheer size of the 10% household sample from Census 2011 (resulting in a sample of almost a million selected individuals for this model), it is not desirable to use any of the chi-square-based statistics to indisputably gauge the adequacy of the model fit (see Allison, 1999:22 & 56). The entry in Table A5 labelled "Hosmer and Lemeshow Test" also contains a *step* "goodness-of-fit" statistic, which can generally be used to assess how well the chosen model fits the data. The chi-square value of 8 306 461, with 8 degrees of freedom (df) is highly significant (p = 0,000), which normally indicates a very bad fit, but, as indicated above, this chi-square statistic is also likely to be meaningless with very large samples of individual-level data.

### **Chapter 3: Internal migration in South Africa**

### 1. Introduction

The decision to migrate is not an isolated process, but rather made in the context of a given culture and society, represented by the community in which an individual lives in (Weeks 2012). The decision to migrate may be to seek better socio-economic opportunities and to improve the migrant's standard of living (Dudley, Poston et al. 2010). Some of these socioeconomic opportunities amongst others may include seeking better educational or work opportunities or simply moving for better access to services and pleasure (Ibid). Migration unlike other processes of demography is a complex and dynamic process (Weeks 2012).

Migration in this chapter looks at the movement of people within national boundaries, which is movement from one province to another. Before the epoch of the democratic South Africa, migration in South Africa was associated with labour migration. The racially discriminatory policies of the apartheid government (before 1994) were put in place to monitor and limit the movement of the black Africans when they were in urban areas and also ensured a labour reserve in the homelands. As a result; black African men in particular, moved to mines and other urban areas for employment while leaving their families at place of origin. The Black Land Act No. 27 of 1913 made it illegal for black Africans to own or rent land outside what the government had designated for them (Modise and Mtshiselwa 2013), while the Natives Act No. 21 of 1923 regulated the presence of black Africans in urban areas (O'Malley, 2015). Where the different population groups in the country could live and work was governed by the Group Areas Act No.41 of 1950 (Oosthuizen, n.a). The Bantu Authorities Act No. 68 of 1951 was implemented in order to evict black Africans permanently from urban areas into the established homelands (Sahistory.org.za, 2015). The pass laws that were efficiently used in restricting (influx control) black Africans from urban to homelands was eventually abandoned in 1986.

The post-apartheid political, social and economic changes that ensued in the 1990s brought about some changes in South Africa's internal migration patterns. Since the new democratic dispensation, there are no restrictions to movements. People can migrate on their own or as entire households (families) and this 'freedom in movement' has therefore increased the significance of migration in its contribution to provincial, district, municipal and place level composition. The country has therefore seen a dramatic move towards urbanisation as more and more people out-migrate from rural to urban areas which had not been seen before (Wentzel and Tlabela 2004; Kok and Collinson 2006).

Migration in South Africa had been rooted in racially discriminatory policies championed by the apartheid government and this resulted in internal migration in the country taking on an 'oscillating' (circular) pattern whereby individuals migrate back and forth between their rural homes and urban places of employment (Wilson 2001). Notwithstanding the fact that these restrictions have since been lifted, this pattern of circular movements appears to persist even after the democratic dispensation (Posel and Casale 2003).

Some have argued that migration as the third component of population change has not received the same attention as fertility and mortality and this may be because of the conceptual and methodological challenges that migration poses when compared to the other two components (Hinde 1998). According to Weeks (2012), internal migration can increase or decrease population size at a subnational level far more quickly than either mortality or fertility. The flow of people in and out of an area affects the social and economic structure of communities. The objective of this chapter is to profile the socio-economic characteristics of internal migrants using the Census 2011 data. This chapter will also profile both migrant and non-migrant households in South Africa. To understand the context of migration and poverty in South Africa, it is necessary to understand the living conditions of migrant compared with non-migrant households. Census 2011 is the latest census conducted in the country since the democratic South Africa and provides rich sources of data. Migration in this chapter is therefore defined as movements between provinces. The time period considered for movements is between 2006 and 2011.

### 2. Literature review

Understanding internal migration is important as its magnitude is usually greater than that of international migration (Deshingkar and Grimm 2005). Internal migration is an important component of population growth, especially in areas attracting migrants (Ibid). Effective policy making and implementation requires knowledge about the volume as well as socio-economic and demographic characteristics of migrants and non-migrants.

Romious (2009) noted that there are two generalisations that can be made about migration; one being the fact that migration is very selective in nature and the other being that the heightened propensity of individuals to migrate at certain stages within the life cycle is paramount in who becomes a migrant. Weeks (2012) conceptual framework that explains the migration process was adapted from De Jong and Fawcett's original framework in 1981 which was further reviewed by De Jong in 2000. The conceptual framework indicates the factors that affect an individual's propensity to migrate. These factors then contribute in helping a person in realising the benefits or constraints in migrating. The decision for a household to migrate may be a strategy to improve the household's quality of life. Internal migration in sub-Saharan Africa is largely motivated by an improvement in economic condition (Adepoju, 1977; Shaw, 2007). The household decisions to migrate are influenced by the socio-cultural environment in which the household members live which includes susceptibility to adverse living conditions in the areas of destination (Mberu 2006).

According to Franklin (2003), the "law" of migration states that in every society, young adults are far more likely to migrate than any other age group. Age is an important determinant of migration because it is highly related to different life cycle changes that affect persons. Internal migration is therefore an activity usually undertaken by young adults (Rogers, Little et al. 2010; Weeks 2012). Rogers, Little et al. (2010) argue that empirical schedules of age specific rates in demography exhibit persistent regularities in age patterns, this is because under normal circumstances mortality has a generally age specific pattern and the same can be applied to fertility. Migration is therefore not an exception as there are high concentration of migration among young adults and a decline in ages thereafter, although there is also a small peak in children who migrate with their young adult parents. Household characteristics are important due to selectivity of migrants, for example households with no young adults are less likely to decide to migrate. Using the 2008 and 2010 National Income Dynamics Study (NIDS) a South African panel study, Mbatha and Roodt

(2014) identified the most number of migration cases occurring in the age groups 15–30 and 31–45 years.

A contemporary issue relevant to migration is that of the feminisation of migration. A changing pattern has emerged worldwide, whereby many women are not only moving, but also moving on their own rather than to join up with their families (Landau, Segatti et al. 2011). It is estimated that nearly half of the people who live in a country other than that of their birth are female (Jolly 2003; Posel 2003; Landau, Segatti et al. 2011). In the South African context, the movement of women raises issues regarding childcare, monetary remittances and human trafficking (Yinger, 2007).

According to Hondagneu-Sotelo (2003), gender is a significant social aspect that shapes migration patterns and plays an important role on social changes. The increase in scholarships for women coupled with the exponential increase in international migration in the 1980's and 1990's brought attention to the importance of gender and migration interrelationship (Hondagneu-Sotelo 2003). Several studies on gender issues viewed migration as a step towards liberation for women (Grasmuck and Pessar 1991; Anthias 2000; Roggeband and Mieke 2007; Dayton-Johnson, Pfeiffer et al. 2009). These studies argued that migration leads to empowerment and independence for women, mainly because migration provides better opportunities for employment leading women to have financial freedom and control for themselves and their families (Pessar 2003).

Literature states that in rural areas of developing countries, internal migration has become a key component of household economic strategies (Weeks 2012). Studies have shown that when migrant networks are well developed and accessible, labour migration becomes widely diffused among households because of its reliability and ability to produce a better quality of life (Taylor 1986; Deshingkar and Anderson 2004; Mendola 2006). It has been argued that within the context of developing countries, an individual is motivated to move not only for his/her own goals but also for the survival of the household (Lauby and Stark 1988). Arif (2005) however argues that the type of move is what determines the effects migrating households experience, that is, did the household move from rural-urban or rural-rural.

Research has shown some misconceptions about migration. Gelderblom and Kok (1994) indicate that large scale in-migration (movement into an area) may not have a negative impact on the

receiving area provided it has a strong economy that can absorb these migrants. Another misconception is that rural to urban migration causes unemployment, however, migrants simply displace unemployment by moving their unemployed status from one place (rural) to another (urban). Only in cases where an employed rural person moves to an urban area and becomes unemployed does s/he create unemployment. However, with high levels of unemployment in rural areas this is rarely the case (Kok and Collinson 2006). A third misconception is that high levels of unemployment in rural areas equal high levels of out-migration. In an analysis of the 1996 South African Census data, Kok, O'Donovan et al. (2003) found that highly unemployed rural areas were significantly associated with low levels of out-migration. This confirms the view of Gelderblom (1999) that members of poor households lack access to social and migrant networks that would enable them to escape their cycle of poverty.

According to Chakravarty and Barua (2012), the effect of migration on employment can be viewed in many aspects. The main cause of migration is said to be that of the income gap experienced between living in the place of destination and living in the place of origin, which is why most people leave their place of origin i.e. for better remunerative work at the place of destination. Research shows that workers who migrate to high income regions earn a median wage that is almost five times the level of that in the low-income regions (Dayton-Johnson, Pfeiffer et al. 2009).

Scholars have identified migration as an important process facilitating development in the place of origin (Centre 2009). Individuals left behind at the place of origin are said to benefit from investments in human and physical capital (Ibid). These individuals may be children, parents or spouses. According to Yang (2005) remittances increases investments in the education of migrant children. In a study by Dustmann and Glitz (2011), it was found that highly educated people are more likely to be mobile compared to those who are less educated. However this was different for other countries such as Mexico where individuals with less education were more likely to migrate (Ibid).

Migrants are considered a vulnerable group (de Varennes 2002). The link between household wellbeing and migration has been difficult to describe. However, previous studies indicate that migrant households are on average poorer than non-migrant households (Posel and Casale 2006). Migrants from poor backgrounds, who do not have access to social networks are said to be more likely to migrate to informal settlements. In informal settlements they are not able to access

adequate sanitation, water and energy (Weeks 2012). Using the 2001 South African Census and the 2002 South African Labour Force Survey data, Oosthuizen and Naidoo (2004) found that nonmigrant households in Gauteng have slightly better access to electricity for cooking, heating and lighting compared with migrant households in other provinces. This suggests greater levels of poverty and poorer housing quality (Oosthuizen and Naidoo 2004). According to findings by Richter, Norris et al. (2006) in the analysis of Children's School Survey conducted in 2002, migrant children particularly those who formerly lived in rural areas are disadvantaged in comparison with long term resident children in terms of housing type, access to electricity, refuse removal, water and sanitation. Migrant children also live in households that are less likely to have amenities such as a refrigerator, television, washing machine, telephone and motor vehicle.

### 3. Migration indices

Migration may be measured by a series of indices, ratios or rates. The difference between those who move in and those who move out of a specific geographic area is called net migration. The crude net migration rate is therefore the net number of migrants in a given time period (usually a year) per 1000 of the population at the mid-year. Total migration rate is the ratio of the sum of all the in- and out- migrants in a given period (a year) per 1000 of the mid-year population.

Another index often calculated is the share of migration to the total population size of the region. This is called the index of relative representation (IRR). This index controls for the relative population size of regions while examining their share of interregional in and out migration. It is computed by weighting the percentage share of in and/or out migration by the percent share of the population in each region. If the index of relative representation is higher than 100, it means that the relative share of in or out migration is higher than what it represents in the country's population.

According to Stillwell, Bell et al. (2000), the migration effectiveness index measures the degree of imbalance in the flows of migration between places of origin and destinations. Therefore, the migration effectiveness for one area is defined as the absolute value of net-migration for that area expressed as a proportion of the sum of the gross in-migration flows and out-migration flows from that area.

By comparing the total migration rate with the net migration rate we get a sense of the turnover rate. Migration turnover is therefore defined as the ratio of the total migration rate to the crude net migration rate obtained by adding the number of in-migrants to out migrants. A related measure is migration effectiveness defined as the ratio of the crude net migration rate to the total migration rate and measures the effectiveness with which the volume of migration redistributes the population per 1000 of the population. The higher this number the more effectiveness the volume of migration has in redistributing the population.

Demographers also calculate intercensal net-migration rates by age and sex by combining census data with life table probabilities of survival. The contribution of migration to the population growth rate is measured by the migration ratio calculated as the ratio of the net number of migrants to natural increase (difference between the number of births and number of deaths) per 1000 of the population (Stillwell, Bell et al. 2000).

### 4. Results

### 4.1 Lifetime migration

A lifetime migrant is defined as a person whose province of enumeration is different from their province of birth. This section deals with analysis related to lifetime migration in order to ascertain which provinces were net losers or gainers of lifetime migrants.

Table 5 shows the percentage distribution of individuals by province of birth and where they were enumerated. Numbers encircled, indicates people who were enumerated in the province in which they were born and therefore are non-lifetime migrants (encircled). Ninety-two per cent of those living in the Eastern Cape are non-lifetime migrants (the highest in the country) as compared to 55,3 per cent in Gauteng (with the lowest). In Gauteng, 10,7 per cent of lifetime migrants were from Limpopo, followed by 9,3 per cent who were born outside of South Africa. Seventy-one per cent of the population who live in the Western Cape was born in Western Cape. Almost 16 per cent of people who live in the Western Cape are lifetime migrants from the Eastern Cape.

Province of birth	Eastern Cape	Free State	Gauteng	KwaZulu- Natal	Limpopo	Mpumalanga	North West	Northern Cape	Western Cape	Total
Eastern Cape	92,6	2,5	4,4	2,8	0,4	1,6	2,7	2,0	15,7	15,6
Free State	0,4	86,5	3,2	0,4	0,3	1,2	2,8	1,9	0,8	5,9
Gauteng	1,3	2,7	55,3	1,2	2,4	4,5	4,7	1,5	2,9	14,9
KwaZulu-Natal	0,7	1,0	5,8	90,1	0,2	2,6	1,0	0,7	1,1	19,9
Limpopo	0,1	0,6	10,7	0,2	90,0	4,2	2,8	0,3	0,3	12,6
Mpumalanga	0,2	0,5	4,2	0,4	1,5	78,9	1,2	0,3	0,4	7,6
North West	0,1	1,0	3,5	0,2	0,6	0,8	77,5	3,7	0,3	6,4
Northern Cape	0,4	1,0	0,8	0,6	0,1	0,7	1,4	84,5	1,5	2,6
Western Cape	1,6	0,7	1,5	0,3	0,4	0,4	0,4	2,4	71,0	8,7
Outside South Africa	1,2	2,5	9,3	1,6	3,0	3,8	4,4	1,7	4,5	4,3
Do not know	0,0	0,0	0,1	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Unspecified	1,5	0,9	1,2	2,1	1,0	1,3	1,0	0,9	1,3	1,4
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Table 5: Percentage distribution of population by province of birth and province of enumeration

Table 6 indicates lifetime net migration by province. Net migration illustrates the overall gains or losses to each province as a result of lifetime migration. Gauteng experienced a net migration of 4 457 642. Additional to the 6 672 370 individuals who were born in Gauteng (non-lifetime migrants), 5 392 106 lifetime migrants moved into the province from other provinces in South Africa and 1 124 861 lifetime migrants moved from outside South Africa. Lifetime migrants account for 44,7% of the total population in Gauteng. Although separate, Tables 5 and 6 should be read together to get the absolute numbers and the percentages which are easily interpretable, in addition to further details provided in Table 6.

Province of enumeration	Total population	Non-migrants	Immigrants	In-migrants	Out- migrants	Net migration	% Born outside the province
Eastern Cape	6 456 724	5 978 548	74 364	478 176	1 975 437	-1 497 261	7,4
Free State	2 674 393	2 314 021	67 608	360 372	672 905	-312 533	13,5
Gauteng	12 064 476	6 672 370	1 124 861	5 392 106	934 464	4 457 642	44,7
KwaZulu-Natal	10 150 925	9 146 295	167 048	1 004 630	997 901	6 729	9,9
Limpopo	5 335 214	4 802 769	162 578	532 445	1 625 204	-1 092 759	10,0
Mpumalanga	3 996 635	3 155 056	150 799	841 579	727 286	114 293	21,1
North West	3 454 277	2 678 272	150 474	776 005	596 072	179 933	22,5
Northern Cape	1 127 391	952 651	19 219	174 740	365 311	-190 571	15,5
Western Cape	5 672 546	4 027 679	256 459	1 644 867	421 817	1 223 050	29,0
Total	50 932 581	39 727 661	2 173 410	11 204 920	8 316 397	0	22.0

### Table 6: Lifetime migration status by province

Note: Only household population is used.

Figure 13 shows geographical visualisation of net population flows for lifetime migrants. Gauteng province had the most gains in terms of lifetime migrants, followed by Western Cape. Eastern Cape was the biggest loser as the outflows exceeded the inflows.





Figure 14 shows geographical visualisation of the provincial distribution of people who were not born in the province that they were enumerated in. Eastern Cape had the lowest percentage of people who were not born in the province (7,4%). Of note, almost half of the people in Gauteng were not born in Gauteng. Western Cape, North West and Mpumalanga also reported fairly high percentages of people who reported that they were not born in those particular provinces: 29,0%; 22,5% and 2,1% respectively.





## 5. Period migration (2006–2011)

This section of the chapter is on the analysis of data on previous residence in relation to the current residence of persons enumerated in Census 2011. Although the census included migration questions for a fixed time interval (between censuses 2001 and 2011), the analysis in this chapter is limited only to migration between 2006 and 2011 (5 years before the latter census). The questions on migration within the fixed time interval catered for children under the age of 10 years who were born within the census interval and had not moved as well as those who had moved within that period.

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### 5.1 Index of relative representativity (IRR)

The index of relative representativity is calculated by dividing the respective in/out migration percentage share by the Census 2011 provincial population share. An IRR higher than 100 is significant and indicates that the relative provincial share of migrants exceeds the provincial proportion of the national population. Table 3 indicates that the IRR is higher than 100 and is prevalent for in-migration in the case of Gauteng, North West and Western Cape, while the IRR for out-migration is higher than 100 for Eastern Cape, Free State, Limpopo, Mpumalanga, North West and the Northern Cape.

### 5.2 Migration effectiveness

Migration effectiveness (or efficiency) is calculated by expressing net migration as a proportion of migration turnover, where turnover is the sum of gross in-migration and out-migration. Like netmigration, migration effectiveness can take negative or positive values. However, it offers a measure of the extent to which net-migration re-distributes the population. Results from Table 3 show that the net out migration in Eastern Cape represents 49 per cent of the turnover in the province. Eastern Cape is the province with the highest net out-migration representation, followed by Limpopo with an out-migration of about 28,2% representation of the turnover. Gauteng and Western Cape have the highest positive net-migration representation of the turnover (with 56,9% and 53,7% respectively). The net out-migration in KwaZulu-Natal and Northern Cape showed the lowest representation of migration turnover of all the provinces (4,1% and 1,8% respectively).

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# Table 7: Period migration (total)

Province of enumeration	Total population	Non- migrants	Immigrants	In- migrants	Out- migrants	Net migration	IRR In- migration	IRR Out- migration	Migration effectiveness index
Eastern Cape	6 440 841	6 273 270	35 791	167 571	489 434	-321 863	38,9	165,4	-49,0
Free State	2 666 287	2 532 474	33 757	133 813	154 836	-21 023	75,0	126,4	-7,3
Gauteng	11 999 957	10 494 494	481 383	1 505 463	413 931	1 091 532	187,5	75,1	56,9
KwaZulu-Natal	10 122 877	9 840 702	74 168	282 175	306 121	-23 946	41,7	65,8	-4,1
Limpopo	5 327 299	5 102 662	99 764	224 637	401 353	-176 716	63,0	164,0	-28,2
Mpumalanga	3 987 233	3 728 436	72 296	258 797	183 919	74 878	97,0	100,4	16,9
North West	3 442 074	3 151 061	75 555	291 013	172 451	118 562	126,4	109,0	25,6
Northern Cape	1 122 958	1 055 390	7 081	67 568	70 047	-2 479	89,9	135,8	-1,8
Western Cape	5 638 690	5 174 710	110 495	463 980	139 745	324 235	123,0	53,9	53,7
Total	50 748 216	47 353 199	990 290	3 395 017	2 331 837				

Note: Only household population is used. Unspecified information on period of movement has been excluded.

Net migration can be defined as the difference between in-migration and out-migration, and can take on a negative or a positive value depending on the direction of the migration. From the results (Table 7), it can be seen that Gauteng has the highest positive net migration; this shows that most people migrate into Gauteng than out of this province. This is followed by the Western Cape and the North West provinces. The Eastern Cape on the other hand has the highest negative net migration of all the provinces, meaning that more people migrate out of the Eastern Cape compared to other provinces, followed by Limpopo. The Northern Cape has the lowest negative net migration of all the provinces, while the Free State has the lowest positive net migration of all the provinces. Figure 15 shows the net-period migration and consistencies with lifetime migration can be seen, as Gauteng and Western Cape reported the biggest gains in migrants, while Eastern Cape was the biggest loser. It should be noted that North West reported an increase in inflows during the five-year period before Census 2011 and also had one of the highest proportions of persons born outside the province.



### Figure 15: Net-period migration

Table 8 illustrates the percentage distribution of migrant streams by place of residence in 2006. Of all persons who lived in Eastern Cape in 2006, about 93% of them remained within Eastern Cape, while about 3% moved to Western Cape by 2011. Limpopo also had a similar percentage of persons who lived in the province in 2006 and were still there in 2011 (92,7%). KwaZulu-Natal and Western Cape had the highest percentages of people who were in the province in 2006 and were still there in 2011 (about 97% for both provinces).

Province of	Province of enumeration									
previous residence	Eastern Cape	Free State	Gauteng	KwaZulu- Natal	Limpopo	Mpumalanga	North West	Northern Cape	Western Cape	Total
Eastern Cape	92,8	0,3	2,1	1,3	0,2	0,2	0,5	0,1	2,6	100,0
Free State	0,3	94,2	2,9	0,3	0,2	0,4	0,9	0,3	0,5	100,0
Gauteng	0,4	0,3	96,2	0,5	0,5	0,6	0,7	0,1	0,7	100,0
KwaZulu-Natal	0,2	0,1	1,9	97,0	0,1	0,3	0,1	0,0	0,3	100,0
Limpopo	0,1	0,1	5,4	0,1	92,7	0,8	0,5	0,0	0,2	100,0
Mpumalanga	0,1	0,1	3,0	0,3	0,6	95,3	0,3	0,0	0,2	100,0
North West	0,1	0,3	3,1	0,2	0,5	0,3	94,8	0,5	0,2	100,0
Northern Cape	0,3	0,7	1,6	0,5	0,2	0,3	1,0	93,8	1,6	100,0
Western Cape	0,8	0,1	1,0	0,2	0,1	0,1	0,1	0,2	97,4	100,0
Outside South Africa	3,6	3,4	48,6	7,5	10,1	7,3	7,6	0,7	11,2	100,0
Unspecified	8,3	3,7	33,7	15,9	3,6	5,1	7,1	2,1	20,5	100,0
Total	12,7	5,3	23,6	19,9	10,5	7,9	6,8	2,2	11,1	100,0

 Table 8: Percentage distribution of population by province of previous residence and by place of enumeration

Table 9 shows the percentage distribution of streams of 5-year migrants by place residence in 2011. Of all persons enumerated in Gauteng in 2011, about 88% were living in Gauteng in 2006, while 4% were living outside the country and 2,5% were living in Limpopo. Gauteng has the lowest percentage of persons who were in the province in 2006 and were still there in 2011, followed by North West and Western Cape (91,5% and 91,8% respectively). This means that these are the three provinces that attract the most migrants.

Province of	Province of enumeration									
previous residence	Eastern Cape	Free State	Gauteng	KwaZulu- Natal	Limpopo	Mpumalanga	North West	Northern Cape	Western Cape	Total
Eastern Cape	97,4	0,7	1,2	0,9	0,2	0,4	1,0	0,6	3,1	13,3
Free State	0,1	95,0	0,6	0,1	0,1	0,3	0,7	0,6	0,2	5,3
Gauteng	0,6	1,2	87,5	0,6	1,0	1,6	2,4	0,9	1,4	21,5
KwaZulu-Natal	0,3	0,4	1,6	97,2	0,1	0,8	0,3	0,2	0,5	20,0
Limpopo	0,1	0,2	2,5	0,1	95,8	1,0	0,8	0,2	0,2	10,8
Mpumalanga	0,1	0,2	1,0	0,1	0,4	93,5	0,4	0,2	0,2	7,7
North West	0,1	0,4	0,9	0,0	0,3	0,2	91,5	1,6	0,1	6,5
Northern Cape	0,1	0,3	0,1	0,1	0,0	0,1	0,3	94,0	0,3	2,2
Western Cape	0,6	0,2	0,5	0,1	0,1	0,1	0,2	1,0	91,8	10,5
Outside South Africa	0,6	1,3	4,0	0,7	1,9	1,8	2,2	0,6	2,0	2,0
Unspecified	0,1	0,1	0,2	0,1	0,0	0,1	0,2	0,1	0,3	0,1
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Table 9: Percentage distribution of population by province of enumeration and province of previous residence

### 6. Demographic characteristics

### 6.1 Age and sex selectivity of migration by province

Certain age groups are more likely to migrate than others: young adults are more likely to migrate than children and the elderly (Newell 1988). Males are also more likely to migrate than females in most countries/regions (ibid). Figure 16 shows the general distribution of migrants and non-migrants by age and sex. Consistent with literature, the majority of people who migrate are young adults.





See appendix D

Analysis by population group is a unique feature in the South African landscape and context shaped by the country's history. Figure 17 shows that all population groups have a peak in the young adult ages: around ages 25-29. In addition, the migration age structure pattern for the white population has a slight peak in the 60-64 age group, which can be argued to be representing somewhat of a retirement peak and therefore bi-modal peaks as suggested by Rogers (2008). Further research may be needed in order to understand.





See appendix E

Figure 18 shows the distribution of migrants by age and the province of destination. It is interesting to note the higher proportions of children in the ages 0-4 and 5-9 whose province of destination was Eastern Cape. This province has one of the highest negative net-migration (refer to Table 3), and these might be children born to parents who are originally from Eastern Cape and who are sending their own children to their province of origin to be cared for by other family members. Of note, the slight peak in the 60-64 age group destined for Eastern Cape which also coincide with retirement.





See appendix F

Figure 19 looks at migrants and where they originate within the 5 years prior to census. Western Cape reported higher proportions of migrants in 0-4 and 5-9 ages. Regarding migration within the young adult age categories, those from Limpopo outside South Africa and Eastern Cape reported higher proportions. Gauteng and Western Cape reported lower proportions (compared to other provinces) in the young adult ages, while they conversely reported slightly higher proportions in the older adult and elderly years.





See appendix G

Figure 20 looks at migration status by sex of the migrant. In six of the nine provinces, there are more male migrants than female migrants (Western Cape, Northern Cape, Free State, KwaZulu-Natal, Gauteng and Limpopo). The other three provinces (Eastern Cape, North West and Mpumalanga) show more female migrants. Only two provinces have more male non-migrants than female non-migrants (Mpumalanga and Eastern Cape).



### Figure 20: Migration status by sex

Figure 21 show the difference in age structures for both migrants and non-migrants for the major population groups in South Africa. There is a stark contrast in the adult ages between migrants and their non-migrant counterparts across all population groups (provide numbers). The age selectivity of migrants is also evident for each of the population groups.





See appendix E

Figure 22 shows the migration status for both migrants and non-migrants for each of the province. The proportions of people who reported that they were never married or are married (legally married or living together) is higher in all provinces for both migrants and non-migrants. In general, most migrants in all the provinces (except Northern Cape and KwaZulu-Natal) reported that they were married. Gauteng on the other hand was the only province that reported similar proportions for migrants who were single and married. Of note is the stark difference in marital statuses for non-migrants in Gauteng whereby proportions who reported being never married is the highest of all the provinces while those married are the lowest in the country. Only four provinces reported higher proportions for non-migrants who were widowed (Eastern Cape, Free State, Mpumalanga and Limpopo.



Figure 22: Provincial distribution of migrants and non-migrants by marital status for ages 18 years and above
Education is one of the important variables in migration as literature shows that more educated people are more likely to migrate. In general, Figure 23 shows that the majority of people reported that they had some secondary or Grade 12 education irrespective of whether they were migrants or non-migrants. Of note migrants in Limpopo who reported having some secondary education were the highest of all the provinces (42, 3%). The most educated migrants who reported having higher education qualification (of about 20% or higher) were reported in only three provinces, namely Western Cape, Eastern Cape and Gauteng. In general, migrants were more educated than non-migrants with higher proportions of migrants reporting having higher education and higher proportions of non-migrants having no schooling or some primary education.





Figure 24 shows the distribution of migrants and non-migrants aged 15-64 by employment status. This analysis is important as it sheds some light into the differences in employment status for both migrants as well as non-migrants. What is evident from the analysis is the glaring contrast between proportions of employed migrants and non-migrants in all the provinces. Western Cape and Gauteng are the only provinces where the difference of employed migrants and non-migrants is not as large as it is seen in the other provinces (59% compared to 51% in Western Cape and 55% compared to 51% in Gauteng). Of note is that the majority of non-migrants reported being Other/Not economically active.





### 7.1 Methodology

For the purpose of this section, households are categorised as either migrant or non-migrant depending on the migration status of the head of household. If the household head is a migrant i.e. the household head has moved between provinces between 2006 and 2011, then that household will be classified as a migrant household (MH). Conversely, if the household head has not moved between provinces, then the household will be classified as a non-migrant household will be classified head has not moved between provinces, then the household will be classified as a non-migrant household will be classified as a non-migrant household will be classified as a non-migrant household (NMH).

The head of household is used as the reference individual on the assumption that the economic situation of the head is the most significant indicator in influencing the family's economic status (Mclanahan and Booth 1989). Socio-demographic characteristics of households by migration status provide a status of the experiences of households in South Africa. Socio-demographic variables from Census 2011 that are analysed in this section include sex, population group and age of head of household. Type of main dwelling, access to piped water, toilet facilitates, energy/fuel for lighting, ownership of cell phone and access to internet are also included.

The findings of this analysis therefore provides a critical assessment of the levels of development in the country as well as the extent of service delivery and the quality of services in a number of key services sectors for migrants and non-migrants.

### 7.2 Results

In South Africa 7,0% of all households are migrant households. Figure 25 shows that Eastern Cape and KwaZulu-Natal have the lowest proportion of migrant households (3,0 and 3,7%), whilst Gauteng and North West and have the largest proportion of migrant households (10,9% and 9,4%). Provincial variation in the proportion of migrant households can be related to labour migration patterns over time, urbanisation and feminisation of migration.



### Figure 25: Percentage distribution of migrant households in South Africa

### 7.3 Sex of the head of the household

In South Africa, the household heads are predominantly male. This is more so among migrants households, whereby migrant households are predominantly headed by males (70,7%) when compared to females (29,3%). This pattern prevails within all provinces. With regards to non-migrant households, in Eastern Cape and Limpopo, the proportion of households headed by females is higher compared to those headed by males in respect of non-migrant households (Figure 26).





black African. However Table 10 below shows that the proportion of coloured migrant households (2,4%) are lower than that of non-migrant households (7,7%), indicating low interprovincial migration among coloureds between 2006 and 2011. In contrast the proportion of white migrant proportion of migrant heads of household are aged 18-34 (63,0%) when compared to non-migrant heads of household (26,0%) in the same age group. Provincial variation indicates that Eastern Cape has the lowest proportion of migrant headed households aged 18-34 (50,1%) whilst Gauteng heads aged 35-59 (52,3%). Nationally, 4,7% of migrant heads of household are aged 60 years and older. The highest proportion of elderly migrant households (15,3%) are higher than that of non-migrant households (10,8%), indicating high interprovincial migration among whites. The largest has the largest proportion (68,1%). In contrast non-migrant heads of household are predominantly older, with the highest proportion of household When considering the pattern of household headship by population group, it is clear that migrant and non-migrant households are predominantly heads of household are found in Eastern cape (10,0%), whilst the lowest is found in Gauteng (2,7%).

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	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	ΗM	HMN	НΜ	HMN	НΜ	HMN	ΗM	HMN	ΗM	HMN	НΜ	HMN	ΗM	HMN	ΗM	HMN	ΗM	HMN	ΗМ	ΣN
Population Group																				
Black African	69,1	85,5	67,9	87,0	82,0	77,5	76,2	84,0	84,7	96,9	82,0	92,3	81,1	90,5	55,9	50,5	55,7	34,5	76,6	78
Coloured	3,9	7,4	3,0	2,6	1,5	2,8	1,4	1,3	0,8	0,2	1,0	0,6	1,1	1,6	15,4	38,4	6,5	41,7	2,4	7
Indian/Asian	2,7	0,4	3,7	0,3	3,6	2,2	3,5	8,4	1,8	0,2	2,2	0,5	2,2	0,4	3,2	0,5	2,0	0,9	3,0	2
Other	6,5	0,3	3,2	0,2	1,4	0,4	3,0	0,3	2,5	0,1	2,1	0,2	1,9	0,2	5,8	1,4	6,0	1,1	2,7	0
White	17,8	6,5	22,2	10,0	11,5	17,1	15,9	6,0	10,2	2,6	12,7	6,5	13,6	7,3	19,7	9,2	29,8	21,7	15,3	10
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Age																				
0-17	0,9	1,0	0,7	0,5	0,5	0,2	0,8	0,9	1,1	1,4	0,7	0,9	0,5	0,5	0,4	0,5	0,4	0,2	0,6	0
18-34	50,1	21,0	58,3	25,8	68,1	29,9	61,7	26,5	61,8	23,6	61,0	26,9	59,7	24,5	52,7	22,4	59,6	24,8	63,0	26
35-59	38,9	49,8	34,4	52,5	28,8	54,6	31,2	50,0	32,7	49,0	34,5	52,4	35,6	53,0	41,0	54,2	31,8	54,9	31,8	52
60+	10,0	28,2	6,7	21,1	2,7	15,3	6,3	22,7	4,5	26,0	3,7	19,8	4,1	22,0	5,9	22,9	8,2	20,0	4,7	21
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
						Ż	ote: MH=N	<b>Migrant</b> hou	usehold an	nd NMH=Nc	on-migran	t househol	p							

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Table 10: Distribution of migration status of household head by demographic characteristics, 2011

### 8. Main dwelling

### 8.1 Informal dwellings

Census 2011 defines informal dwellings as shacks not in a backyard, e.g. in an informal/squatter settlement or on a farm. Nationally, a higher proportion of migrant households (22,0%) reside in informal dwellings, as opposed to 12,9% of non-migrant households (Figure 27). This pattern is similar in Western Cape, KwaZulu-Natal, North West, Gauteng, Mpumalanga and Limpopo The biggest difference between migrant and non-migrant households is in Western Cape, where there are 12,3% more migrant households living in informal dwellings than non-migrant households.

Eastern Cape, Northern Cape and Free State are the only provinces where there is a higher proportion of non-migrant households residing in informal dwellings than migrant households.



Figure 27: Percentage distribution of migrant and non-migrant households by informal dwellings

Nationally, there are more non-migrant households (77,9%) residing in formal dwellings than migrant households (74,6%) (Figure 28). This pattern is similar in Western Cape, North West, Gauteng, Mpumalanga and Limpopo, where all these provinces have a higher proportion of non-migrant households residing in formal dwellings than migrant households.

Eastern Cape has the highest difference between non-migrant households and migrant households, where there are 16,1% more migrant households living in formal dwellings than non-migrant households.

Eastern Cape, Northern Cape, Free State and KwaZulu-Natal have a higher proportion of migrant households residing in formal dwellings than non-migrant households.



Figure 28: Percentage distribution of migrant and non-migrant households by formal dwellings

### Piped water

Eastern Cape reported the highest percentage of migrant households with no access to piped water (11,3%) while the Western Cape reported the lowest (for both migrant and non-migrant households). Looking at access to piped water inside the dwelling, Western Cape reported the highest percentage of households for both migrant and non-migrant compared to other provinces (although the percentage of migrant households with access to piped water inside the dwelling was lower compared to non-migrant households within the Western Cape). Eastern Cape has the highest difference between non-migrant households and migrant households, where there are 10,3% more migrant households who have access to piped Approximately five per cent of migrant households had no access to piped water, compared to about 9% of non-migrant households (Figure 29). water than non-migrant households.

Figure 29: Percentage distribution of migrant and non-migrant households by access to piped water



According to Figure 30, there are higher proportions of migrant households that have better sanitation compared no non-migrant households (74,6% compared to 61,7%).

This pattern is seen in all provinces except in Gauteng and Western Cape where the disparity between migrant and non-migrant households is not vast.

Limpopo province shows the highest difference between migrant and non-migrant households with regards to flush toilets (49,5% compared to 21,3%).



Figure 30: Percentage distribution of migrant and non-migrant households by access to flush toilets

### 11. Energy for lighting

for non-migrants and 90,7% for migrants followed by Free State (90,3% for migrants and 89,9% for non-migrants. Eastern Cape has the lowest users of electricity (85,0%) for migrants and 74,7% for non-migrants. Eastern Cape is also the province that has the biggest difference between migrant Figure 31 shows that electricity is the most used energy for lighting in the households for all provinces for both migrants and non-migrants followed by candles. The least used energy for lighting is gas for both migrants and non-migrants. Western Cape has the highest users of electricity (93,6%) households and non-migrant households with regards to electricity used for lighting (10,3%)



Figure 31: Percentage distribution of migrant and non-migrant households by energy/fuel used for lighting

### Refuse removal 12.

Western Cape had the highest proportion of households reporting refuse removal at least once a week (88,8% for migrant households and 89,9% for non-migrants households), followed by Gauteng (85,0% for migrant households and 88,7% for non-migrants households). Limpopo had the least proportion of households who reported refuse removal at least once a week (42,5%) for migrant households and 19,9% for non-migrants households). Households in Limpopo reported the highest proportion of use of own refuse dump than all other provinces (44,2%) for migrant households and 67,2% for non-Figure 32 shows that refuse is removed at least once a week for the majority of both migrant and non-migrant households. migrants households.









### **13.** Cellphone ownership

Cell phone ownership in South Africa is high for both migrant and non-migrant households (Figure 33). However, migrant households have a higher proportion of cell phone ownership nationally (92,7%). This pattern is similar across provinces. Gauteng has the largest proportion of cell phone ownership for migrant households (94,3%), whilst Limpopo has the lowest (88,6%).

Northern Cape shows the biggest difference in proportions of cell phone ownership between migrant (90,3%) and non-migrant households (80,3%), a difference of 10,0%.

Despite Limpopo having the lowest proportion of cell phone ownership, the difference between migrant and non-migrant households is less than one per cent.





Note: MH=Migrant household and NMH=Non-migrant household

### 14. Internet usage at home

Access to internet at home is relatively low in South Africa (Figure 34). However, migrant households have a higher proportion of access to internet (12,0%) than non-migrant households (8,3%). This pattern is similar throughout all provinces, except in Gauteng.

Western Cape have the largest proportion of access to internet by migrant households (22,2%), whilst Limpopo has the lowest (6,6%).

The biggest difference in proportions is in Eastern Cape, where the proportion of migrant households who have access to internet at home is 12,9% and non-migrant households who have access to internet at home is 4,7% (difference of 8,2%).

### Figure 34: Percentage distribution of migrant and non-migrant households by internet usage at home



Note: MH=Migrant household and NMH=Non-migrant household

### 15. Conclusion

Migration is an important component for population change and analysis of data from Census 2011 provides an opportunity to contribute to the knowledge of migration in the country. The overall results for individual migration regarding lifetime migration shows that Gauteng and Western Cape had the biggest gains in terms of lifetime migrants compared to the other provinces. Eastern Cape and Limpopo provinces were the biggest losers of lifetime migrants. Results also show that just above half of the people who were enumerated in Gauteng were not born in that province.

The results for period migration show similar patterns to those of lifetime migration (similar provinces showing positive and negative net-migration, with North West showing a positive net migration). Results are consistent with literature regarding migration and young adults and sex. Results show that males migrate more than females across provinces. There seems to be signs of bi-modal peaks in the migrant age structure of the white population. Literature also confirms that educated individuals migrate more than their less educated counterparts.

The purpose of analysing migration and housing was to determine differences in the living conditions between migrant and non-migrant households. The variables used was type of dwelling, access to piped water, flush toilets, electricity for lighting and refuse removal at least once a week.

The study showed that migrant households in Eastern Cape, Northern Cape, Free State, KwaZulu-Natal and Mpumalanga fared better in all variables whilst in Gauteng and Western Cape, nonmigrant households fared better in all variables. North West was the only province where nonmigrant households fared better in two variables (formal dwelling and electricity for lighting) and migrant households fared better in three variables (piped water, flush toilets and refuse removed at least once a week).

Cell phone ownership and access to internet at home was used as a means to determine connectivity experience between migrant and non-migrant households. Migrant households reported higher proportions in both these variables in all provinces. Gauteng was the only province where non-migrant households reported a higher proportion of access to internet at home.

Results in this study indicate that migrant households are better off than non-migrant households in all provinces except Gauteng and Western Cape.

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Province of enumeration	Total population	Non-migrants	Immigrants	In-migrants	Out-migrants	Net migration
Eastern Cape	3 027 631	2 936 046	22 778	91 585	254 920	-163 335
Free State	1 276 305	1 203 855	20 161	72 450	80 213	-7 763
Gauteng	6 035 591	5 230 395	273 325	805 196	223 218	581 978
KwaZulu-Natal	4 800 854	4 647 510	47 427	153 344	166 504	-13 160
Limpopo	2 475 776	2 343 440	63 072	132 336	218 333	-85 997
Mpumalanga	1 941 224	1 791 903	45 531	149 321	95 706	53 615
North West	1 734 536	1 565 779	46 919	168 757	88 502	80 255
Northern Cape	550 878	511 347	5 082	39 531	34 781	4 750
Western Cape	2 759 968	2 511 485	67 249	248 483	72 212	176 271
Total	24 602 763	22 741 760	591 544	1 861 003	1 234 389	0

### **Appendix B: Period migration (males)**

Note: Only household population is used. Unspecified information on period of movement has been excluded.

### **Appendix C: Period migration (females)**

Province of enumeration	Total population	Non-migrants	Immigrants	In-migrants	Out-migrants	Net migration
Eastern Cape	3 413 211	3 337 224	13 013	75 987	234 512	-158 525
Free State	1 389 982	1 328 619	13 596	61 363	74 623	-13 260
Gauteng	5 964 365	5 264 099	208 058	700 266	190 710	509 556
KwaZulu-Natal	5 322 022	5 193 192	26 741	128 830	139 619	-10 789
Limpopo	2 851 521	2 759 221	36 692	92 300	183 020	-90 720
Mpumalanga	2 046 008	1 936 533	26 765	109 475	88 213	21 262
North West	1 707 541	1 585 282	28 637	122 259	83 950	38 309
Northern Cape	572 077	544 042	1 999	28 035	35 268	-7 233
Western Cape	2 878 723	2 663 225	43 246	215 498	67 532	147 966
Total	26 145 450	24 611 437	398 747	1 534 013	1 097 447	0

Note: Only household population is used. Unspecified information on period of movement has been excluded.

	Non-m	igrants	Migr	ants
	Male	Female	Male	Female
0–4	5,7	5,6	2,9	2,8
5–9	4,9	4,8	2,3	2,2
10–14	4,7	4,5	2,0	2,0
15–19	4,9	4,9	3,6	3,7
20–24	4,8	4,9	11,4	9,2
25–29	4,5	4,7	11,7	8,9
30–34	3,7	3,8	7,6	5,4
35–39	3,2	3,4	4,9	3,5
40-44	2,7	3,0	3,0	2,2
45–49	2,3	2,8	1,9	1,5
50-54	2,0	2,4	1,3	1,1
55-59	1,6	2,0	0,9	0,8
60–64	1,2	1,5	0,6	0,6
65–69	0,8	1,1	0,4	0,5
70–74	0,6	0,9	0,3	0,3
75–79	0,3	0,6	0,1	0,2
80-84	0,2	0,4	0,1	0,1
85+	0,1	0,3	0,1	0,1
Total	100,0	100,0	100,0	100,0

### Appendix D: Percentage distribution of migrants and non-migrants by age and sex

### Appendix E: Percentage distribution of migrants by age, population group and sex

	Black A	African	Colo	ured	Indian	/Asian	Wh	ite
	Male	Female	Male	Female	Male	Female	Male	Female
0–4	3,0	3,0	3,2	3,2	2,3	2,4	2,6	2,4
5–9	2,1	2,1	3,7	3,6	2,3	2,2	2,9	2,7
10–14	1,8	1,9	3,6	3,4	2,2	1,9	2,8	2,6
15–19	3,7	3,9	3,8	4,2	2,7	2,4	2,8	2,9
20–24	12,9	10,6	6,4	6,7	9,8	4,8	4,6	5,0
25–29	12,7	9,8	7,1	7,0	14,2	7,5	5,5	5,7
30–34	7,9	5,6	5,8	5,7	10,6	5,6	5,1	4,9
35–39	4,7	3,2	5,0	4,7	6,8	3,9	4,8	4,5
40–44	2,6	1,8	4,0	3,7	4,0	2,5	4,2	3,9
45–49	1,5	1,1	2,9	2,6	2,3	1,7	3,3	3,1
50–54	0,9	0,7	2,0	1,8	1,4	1,2	2,9	2,8
55-59	0,6	0,4	1,2	1,1	0,8	1,0	2,3	2,5
60–64	0,3	0,3	0,7	0,8	0,6	0,8	2,1	2,3
65–69	0,2	0,2	0,4	0,5	0,4	0,5	1,7	1,8
70–74	0,1	0,1	0,2	0,3	0,3	0,3	1,1	1,3
75–79	0,0	0,1	0,1	0,2	0,1	0,2	0,6	0,8
80-84	0,0	0,1	0,0	0,1	0,1	0,1	0,3	0,5
85+	0,0	0,1	0,1	0,1	0,1	0,1	0,2	0,3
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

	EC	FS	GP	KZN	LP	MP	MN	NC	WC
0-4	7,4	5,7	5,9	4,8	6,4	5,5	6,5	4,8	4,7
5-9	6,6	5,2	4,0	4,6	4,6	4,9	4,4	5,0	4,4
10-14	5,5	4,8	3,5	4,4	3,8	4,7	3,9	4,6	4,4
15-19	7,0	7,9	7,1	7,4	7,9	7,3	6,8	6,8	7,3
20-24	14,1	18,3	23,3	19,2	20,0	17,5	18,3	15,9	19,7
25-29	15,4	17,7	22,2	19,6	19,8	19,7	19,7	18,8	19,8
30-34	11,7	12,2	13,4	12,9	13,2	13,2	13,3	13,8	12,6
35-39	8,9	8,4	7,9	8,8	8,5	9,2	9,1	9,1	8,2
40-44	6,1	5,7	4,6	5,6	5,3	6,0	5,9	6,7	5,3
45-49	4,5	4,0	2,8	3,6	3,4	4,0	4,0	4,6	3,5
50-54	3,5	3,0	1,9	2,5	2,3	2,7	2,9	3,5	2,6
55-59	2,9	2,2	1,2	1,9	1,7	1,9	2,0	2,5	2,1
60-64	2,7	1,8	0,8	1,6	1,3	1,3	1,3	1,6	1,9
62-69	1,7	1,3	0,5	1,3	0,8	0,8	0,8	1,1	1,5
70-74	1,0	0,8	0,4	0,9	0,4	0,6	0,5	0,6	1,0
75-79	0,6	0,5	0,3	0,5	0,3	0,3	0,3	0,3	0,6
80-84	0,3	0,3	0,2	0,3	0,1	0,2	0,2	0,2	0,3
85+	0,2	0,2	0,1	0,2	0,1	0,2	0,1	0,2	0,2
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

# Appendix F: Percentage distribution of migrants by age, sex and province of destination

# Appendix G: Distribution of migrants by age, sex and sending province

										Outside
	WC	EC	NC	FS	KZN	NN	GP	MP	Г	SA
0-4	7,2	5,0	5,6	5,4	4,7	5,1	6,2	5,5	5,5	6,3
5-9	6,5	3,9	5,7	5,0	4,3	5,2	6,3	5,3	3,4	3,7
10-14	5,4	4,0	5,6	4,6	4,2	5,0	5,7	5,2	3,3	2,7
15-19	5,9	8,7	8,3	6,3	6,8	7,7	6,4	8,2	7,2	7,0
20-24	11,4	24,0	16,3	17,2	20,4	18,0	11,7	20,2	26,7	23,1
25-29	15,2	21,6	15,6	18,7	20,6	17,8	14,6	17,7	22,4	24,1
30-34	12,6	12,3	11,5	12,9	12,8	12,9	12,2	11,8	12,2	14,7
35-39	6'6	7,3	8,8	8,8	8,3	8,9	9,9	8,1	7,4	8,2
40-44	7,3	4,4	6,5	6,1	5,2	5,9	7,2	5,4	4,4	4,3
45-49	5,2	2,9	4,6	4,4	3,6	4,1	5,1	3,9	2,7	2,3
50-54	3,9	2,0	3,5	3,3	2,7	3,2	4,1	2,7	1,8	1,3
55-59	2,9	1,3	2,5	2,4	2,0	2,2	3,2	2,0	1,1	0,8
60-64	2,4	0,8	2,0	1,7	1,5	1,4	2,8	1,5	0,7	0,5
62-69	1,6	0,6	1,2	1,3	1,1	1,0	2,1	1,1	0,4	0,3
70-74	1,2	0,5	0,9	6'0	0,8	0,7	1,2	0,7	0,3	0,2
75-79	0,7	0,3	0,7	0,5	0,5	0,4	0,7	0,4	0,2	0,1
80-84	0,4	0,2	0,4	0,3	0,3	0,3	0,4	0,2	0,1	0,1
85+	0,3	0,2	0,3	0,2	0,2	0,2	0,2	0,2	0,1	0,1
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

















Appendix L: KwaZulu-Natal – age, sex selectivity





5











## Appendix P: Limpopo – age, sex selectivity



### **Chapter 4: International Migration in South Africa**

### 1. Introduction

Based on theoretical and empirical evidence from the 2011 South Africa Population Census, this chapter provides information about volume, social, economic and demographic characteristics of international migration in South Africa in 2011. The chapter is divided into different sections. The first section provides an overview and implication of international migration globally, in Africa, Southern African Development Community (SADC) region and South Africa. The second section describes the data and limitations of the census, while the third section describes the social, economic and demographic characteristics of international migrants at individual and household levels based on the 2011 South African Census. The last section consists of conclusions and recommendations.

International migration is defined as the movement of persons who leave their country of origin, or their country of habitual residence, to get established either permanently or temporarily in another country (IOM 2011). Prior studies (Crush, Williams & Peberdy 2005) have provided empirical evidence on international migration in South Africa, especially migration within the Southern African Development Community (SADC). As migration is not a static process, it is necessary to update the literature on international migration in South Africa, taking advantage of the Census 2011.

The apartheid government, before its end, promoted racial segregation, restricted and controlled free movement of people within the country and across other countries, and changed the migratory patterns in South Africa. However, the advent of democracy led to new opportunities for international migration, leading to an increase in the number of international migrants from the neighbouring Southern African countries, other African countries and other regions of the world. The reconnection of South Africa with the global economy has contributed greatly to immigration from different regions of the world due to globalisation (Crush et al 2005). Prior to the transition to democracy, international migrants from southern Africa came to South Africa from the traditional labour-supplying countries such as Mozambique, Lesotho, Zimbabwe and Malawi. These labour migrants were employed mainly in the mining sector; the seasonal migrants

were employed in the commercial agricultural sector. This pattern of international migration has changed since the democratic rule. International migrants in South Africa now include highlyskilled and low-skilled immigrants, refugees, asylum seekers, as well as other documented and undocumented migrants.

International migration has continued to be on the increase in South Africa due to available social infrastructure, educational opportunities, medical infrastructure, as well as political unrest in neighbouring countries (Cohen 2008). International migration thus contributes to the development of the country in the form of economic and human resource supply in various sectors. Based on the migration history of South Africa and its position as the economic hub in the SADC, an understanding of the current state of international migration using empirical data from the census is therefore imperative.

This chapter uses the 2011 South African Census to provide an overview of international migration in South Africa. In the absence of a reliable administrative population register, records of those entry and exit of people at the borders, as well nationally representative migration surveys, the census provides the most reliable estimate of the number of international migrants. The 2011 Census specifically shows the patterns and distribution of international migration within the SADC region, as well as other regions of the world. It further shows the social, demographic and economic characteristics of international migrants, and the contribution of migrants to development of South Africa. This chapter also briefly reviews global discourse on international migration and migration in the SADC region.

### 2. Overview of international migration

International migrants can be classified into two categories based on their legal documentation. Migrants who enter a country legally and remain in the country in accordance with their admission criteria are referred to as documented migrants, while undocumented migrants are those who enter or stay in a country without the appropriate documentation and authorisation. This includes those without legal documentation to enter a country but manage to enter clandestinely, those who enter using fraudulent documentation, those who, after entering using legal documentation, have stayed beyond the time authorised or otherwise violated the terms of entry and remained without appropriate documentation or authorisation (IOM 2011).

International migration remains an important issue on the global policy discourse due to its effect on the social and economic characteristics of both the country of destination and country of origin. Lindert et al (2009) projected international migrants to be 230 million in 2050. In 2013, international migrants accounted for 232 million (3,2%) of the world's population (United Nations, 2013), contrary to the projection by Lindert et al (2009). This increase may be due to the unexpected rise in the number of displaced persons as a result of political, economic and religious crises in many countries between 2005 and 2013. Furthermore, the United Nations (2013) indicates that 96 million of international migrants reside in the developing countries, of which 82 million (86%) originated from the global south while 14 million (14%) were born in the global north.

Migration in Africa is both social and historical, characterised by intra-regional movements (Adepoju 2004). A number of studies construe migration as negative; while many others see migration as a positive activity. Some southern African studies view international migration as an activity with undesirable effects due to its link with apartheid (Haan 2000; Kabwe-Segatti & Landau 2008). Similarly, many other studies view migration as problematic – labelling it as a cause or consequence of environmental degradation, brain drain, economic exploitation, increase in crime rates, social or political instability, violence, spread of disease and a myriad of health problems (Diallo 2004; Gagnon et al 2009). In addition, many nationals of the host countries often view immigrants, especially the unskilled and semi-skilled, as economic competitors who usually lower the domestic working conditions and wage rates (Ruark & Graham 2011). Furthermore, recent studies established migration as having a grave influence on the traditional family structure (Hargrove 2008) and that it plays vital roles in the spread of communicable diseases such as tuberculosis and HIV (Coffee et al 2007; Posel 2010). Crush et al (2005) did a detailed review of migration in southern Africa and his review highlighted the importance of migration to the southern African region and further identified national and regional policies which have had an impact on migration as well as some of their limitations.

### 3. Theories of international migration

Different theories can be used to explain international migration in South Africa. Ravenstein (1889) developed the laws of migration based on the push-pull factors. He associated the primary cause of migration to better economic opportunities external to the individual. The neo-classical

economic theory of migration proposes that international migration is related to the global supply and demand for labour. The theory further states that nations with scarce labour supply and high demand for labour will have high wages that pull immigrants in from nations with a surplus of labour but low wages. This theory is applicable in South Africa, a country with a history of reliance on labour migration from neighbouring countries during the apartheid era. In addition, there is a demand for specialised skill labour in South Africa, which acts as a pull factor for skilled migrants from other countries.

The world system theory posits that there exist close ties between past colonial rulers and their former colonies. The ties created under colonial rules create infrastructures that facilitate transportation, communication, linguistic and cultural commonalities between them (Morawska 2007). The world system theory is very applicable to the situation of South Africa, as there are links between South Africa and countries like Lesotho, Swaziland, Namibia, Botswana and Zimbabwe in terms of language and cultural communalities, among others. Cumulative causation theory of migration suggests that once migration flow starts, it will continue to grow (Fussell & Massey 2004). South Africa continues to witness an increased volume in international migration since the end of apartheid, which restricted free movement of people. The institution of regional bodies and regional economic integration through trade and investment within southern Africa, such as the Southern African Development Community (SADC) and Common Market for East and Southern Africa (COMESA), have increased migration flows from East and Southern Africa to South Africa.

Russell (2012) described the systems approach as that which "enables the conceptualisation of migration to move beyond a linear, unidirectional, push-pull movement to an emphasis on migration as circular, multi-causal and interdependent, with the effects of change in one part of the system being traceable through the rest of the system" (Faist 1997a: 193). The system approach involved environmental setting, such as economic conditions, government policy, social and community values, and the availability of transport and communications. It also takes into account the control subsystems which determine who goes and who stays (Mabogunje 1970). In South Africa, the government controls movement of people into the country through the issuing of different types of visas. The borders with its neighbouring countries are porous, which allows movement of undocumented migrants into the country.

### 3.1 International migration in South Africa

Compared with the rest of Africa, evidence shows that South Africa is a significant contributor to the global international migrants' statistics, with an annual net immigration of 247 000 between 2000 and 2010. This includes countries like the United Kingdom, Canada and Australia with 181 000, 228 000 and 181 000 respectively (United Nations 2013). South Africa has continued to host a high volume of young people from the rest of sub-Saharan Africa (Adepoju 2003; UNHCR 2014). South Africa is both a country of destination and country of origin for migrants; attracting a high volume of migrants from the Southern African Development Community (SADC) region, other African countries, as well as from other regions of the world (UN 2013; IOM 2013; Adepoju 2006; GCIM 2005).

South Africa is also an important destination for many people who seek better socio-economic opportunities (UNHCR, 2014). This is due to the relatively stable democratic government, infrastructure, and economic stability (Kabwe-Segatti & Landau 2008). Recent unpleasant occurrences such as political unrests in many African countries, as well as economic crisis and environmental degradation, have also led to an unexpected rise in the number of displaced persons. As a result, the volume of documented and undocumented migrants in South Africa has increased, as in other middle and high-income countries (UNHCR 2014). Adverse situations in countries within and outside the SADC region have also resulted in increased number of immigrants to South Africa.

Furthermore, the number of migrants from the horn of Africa, particularly Ethiopia and Somalia, has been on the increase (IOM 2013b). Statistical release on documented immigrants in South Africa (Statistics South Africa 2014) shows trends in the number of permits issued between 2011 and 2013. The Statistical release on documented immigrants further shows that the temporary residence permit holders are mainly nationals from Zimbabwe (18,5%), Nigeria (10,1%), India (7,7%), China (6,7%) and Pakistan (5,6%) (Statistics South Africa 2013). It is worth noting that 86 902 (85,3%) of temporary residence permit holders were in the economically active age group (15–64 years). In addition, South Africa is one of the countries with the highest number of asylum seekers globally (UNHCR 2013). The number of new asylum applications in South Africa was estimated at 70 000 in 2013; about 12 000 less than applications in 2012 (UNHCR 2013). However, a total of 65 520 refugees were residing in South Africa in August 2014 (UNHCR 2014) and there

was an estimated 230 000 asylum seekers both pending at first instance and pending appeal. The major countries of origin for refugees in South Africa are Somalia, DRC, Angola and Ethiopia.

### 3.2 Pattern of migratory movements to and from South Africa

The South African migratory pattern has been historically shaped by the country's history of apartheid. With the end of the apartheid government in 1994 which had led to abolition of formal restriction on movements, a lot of changes have taken place in the country's migratory patterns. Coupled with this is the deterioration of political and socio-economic conditions of many neighbouring countries in sub-Saharan Africa; which has consequently led to an increase in the volume of immigrants into the liberated and democratic South Africa. In recent times, larger numbers of individuals have continued to migrate into and out of South Africa, with some migrating for a short period and others for a long period of time.

The United Nations (2013) report indicates that Africa is home to the youngest immigrants in the world with the median age of 30 years. South Africa is a major recipient of migrants on the continent, with individuals mainly migrating into the country for diverse reasons – including economic, social or to acquire better education. As noted earlier, the country recorded 101 910 recipients of temporary residence permits and 6 801 permanent residence permits in 2013 (Statistics South Africa 2013). The majority of the documented migrants were from the SADC region, with 54,6% and 46,6% of temporary and permanent resident permits respectively being from the SADC region (Statistics South Africa 2013). Although data on the exact size of undocumented migrants in South Africa are missing, one can deduce from the above that there are a lot of undocumented migrants from the SADC region and elsewhere. Evidence suggests that the number of undocumented migrants from the east and the horn of Africa are engaging in southern African trips, with the intention of coming to South Africa on the increase (IOM, 2014).

On the other hand, the International Migration Report (IMR) puts the annual level of net immigration for South Africa at 96 000 and 247 000 during 1990–2000 and 2000–2010 periods, respectively (UN, 2013). These estimates showed that South Africa moved from being the 8<sup>th</sup> to the 6<sup>th</sup> highest migrant-receiving country between 1990–2000 and 2000–2010 periods, now ahead of countries like Canada, the United Kingdom, Saudi Arabia and Australia. It is important to also note that South Africa is not just a country of destination for migrants, but also migrants' country

of origin. The IMR shows the destination for most emigrants from South Africa to be North America and European countries. While the Republic of South Africa has been a recipient of highly skilled manpower from countries like Zimbabwe, Zambia, Senegal, Ghana, Nigeria, and Uganda (Adepoju 2000; Kabwe-Segatti & Landau 2008), South Africa has also experienced an exodus of skilled health personnel to the United Kingdom and other developed countries which the emigrants perceived as countries with higher wages and greater personal security (Adepoju et al 2010). This indicates that South Africa has suffered some "brain drain", even though the country has benefited from "brain circulation" and "brain gain" (Adepoju et al 2010).

The International Organization for Migration's Health data from the Migration and Health Division (MHD) shows that the number of South Africans migrating outside the country, who did medical examination from IOM, South Africa has steadily increased from 1 375, 2 002 and 2 126 in 2011, 2012 and 2013 respectively; with the majority migrating to Australia, United States and Canada. Evidence from MHD's resettlement data from South Africa also shows that 296 refugees emigrated from South Africa and resettled elsewhere in 2010 alone (IOM, 2013a). In addition, reports on tourism and migration suggest an increase in the volume of South Africans migrating to other countries (Statistics South Africa 2011b). Either immigration or emigration, migration is generally construed as a response to political and socio-economic motivations.

### 3.3 Implications of international migration

International migration has implications for migrants' countries of origin and destination. The remittances to households and countries of origin have been found to lead to increased income, which is directly linked to poverty reduction, improved health and educational outcomes; and resultant promotion of economic development (Ratha et al 2011). In addition, international migration shapes values and attitudes towards gender roles, especially in male-headed households. When the men migrate, the women are more empowered to take a more prominent role in decision-making processes at home and in the communities. Migrants provide needed workforce for countries of destination, although emigration of high-skilled persons results in skill shortages to countries of origin.

International migration also affects the demographic structure of countries of destination. It affects the age structure of countries due to the numerical number of immigrants, especially in urban areas. For example, as the majority of migrants are people in the economically productive age, international migration leads to an increase in the number of people in the economically productive age in a country with a high number of international migrants. In addition, international migration affects the fertility rate of countries of destination. For instance, immigration of women, especially from countries with a higher fertility rate to a country with a low fertility rate, affects the age structure of the population in the host country in the age group 0–14 years; especially if there is a high volume of immigrant women of reproductive age. International migration further tends to change the socio-economic structure of communities in the country of origin through remittances to the family members left behind.

Challenges of international migration include integration of the migrants in countries of destination, health and psychological problems, isolation, separation from families and maladaptation due to environmental, cultural and climatic changes. Other challenges faced by international migrants include linguistic problems, lack of job availability and exploitation by some employers. At the institutional level, economic cost to countries of destination in the provision of social and health services to migrants are challenges that should further be considered. Due to globalisation, improvement in communication, transportation system and infrastructures that characterised the modern time, an increasing number of people are becoming aware of better opportunities in countries other than their countries of birth which has contributed to noted increase in migration volume. For instance, while many developed countries have continued to attract skilled labour such as qualified health personnel, many developing countries have had to contend with a shortage of health workforce, which may contribute to shortage of health workers, particularly in sub-Saharan Africa (OECD 2010).

A plethora of studies have, however, viewed migration as having desirable developmental effects. For instance, evidence suggests that the flows of remittances to the developing countries in 2002 alone were estimated at US\$79 billion which exceeded that year's total official development aid estimated at US\$51 billion (Yang 2008). Return migrants are also seen as agents of development through the acquisition of new skills in the countries of destination, thereby bringing about brain gain and brain circulation. Whether international migration will bring about positive or negative effects depends on a number of factors located at individual and environmental levels. In addition to the social, economic and demographic characteristics of the migrants, other factors such as the context of migration, skills of the migrants, seasonality of movement, migration status, the duration of migration, purpose of migration, the political and legal frameworks in the countries of origins and destinations interact to determine migration outcomes.

To this end, using the 2011 South African Census, this chapter describes the social and demographic characteristics of international migrants in South Africa. It is important to note that the census does not collect information on legal status of the respondent. As a result, this chapter does not distinguish between documented and undocumented migrants in the country.

### 4. Evidence from the South Africa Census 2011

This section utilises data from the 2011 South African population census. Since the attainment of the democratic dispensation 21 years ago, the country conducted regular census exercises – in 1996, 2001 and 2011. Being a country in transition, as the country transited through its second decade of the post-apartheid period, a lot of changes have taken place in the different sectors of the nation's economy. Although various specialised surveys in the country such as Community Surveys contain some information on migration, censuses provide the most reliable and comprehensive information on migration. The Census asked questions on the country of birth, citizenship, the year respondents moved to South Africa, all of which are important questions for identification of international migrants.

This chapter has the following limitations. The census does not differentiate between undocumented and documented migrants, there is the possibility that many undocumented migrants might have been missed or were unaccounted for in the census exercises, leading to undercount of international migrants. This was, however, corrected for using the weighting factor that adjusted for the undercount. The South African Census 2011 is a de facto measure of the population, based on a person's presence on Census night. The census contains information on immigration into the country and not the emigration information. Respondents were not asked about household members that emigrated from the country. This makes it impossible to calculate the net migration of international migrants in South Africa. It is important to note that the socioeconomic and demographic characteristics described in this section were based on the migrants' characteristics in October 2011, during the census, and not what it was prior to the beginning of the migration.
# 5. Social and demographic characteristics of international migrants in South Africa

## 5.1 Region of birth

Overall, results from the analysis of 2011 South Africa Census data revealed that there were 2 173 409 international migrants, accounting for 4,2% of the country's total population of 51 770 560 in 2011 (Statistics South Africa 2012). Figure 35 shows the distribution of international migrants in South Africa by region of birth in 2011. The immigrants originated from the six world regions – Africa (75,3%), Asia (4,7%), Europe (8,2%), Latin America and The Caribbean (0,3%), North America (0,3%) and Oceania (0,2%). Intra-regional migration within the Africa-Africa corridor was the highest. The majority of African migrants originated from countries in the Southern African Development Community (SADC) region, contributing 68,0% of the total international migrants in South Africa in 2011. Immigrants from other African countries outside the SADC constituted only 7,3% of the total number of international migrants in South Africa. Immigrants from the Europe region had the second highest percentage of international migrants in South Africa, after those from the SADC region, a percentage higher than migrants from other African countries outside the SADC. Importantly, and of note is the percentage of immigrants (11,0%) that are classified as "unspecified" in the census. These are people who did not disclose their countries of origin. Many of those in this category could be undocumented migrants, who do not want to provide details of their countries of birth.





The observed high percentage of international migration from SADC is due to the history of labour migration, especially from Mozambique, Lesotho, Malawi, Zimbabwe and Swaziland. Immigrants from Zimbabwe and Mozambique accounted for the majority of international migrants from the SADC region, contributing 46% and 27% of international migrants respectively in 2011. The political unrest and economic instability in Zimbabwe in 2008 led to an influx of Zimbabweans into South Africa. Table 11 shows the distribution of international migrants from the SADC region in 2011.

Table 11: Distribution of international migrants from the SADC region in South Africa (Census2011)

Country in SADC	Number of migrants	%
Angola	10 356	0,7
Botswana	12 316	0,8
DRC	25 630	1,7
Lesotho	160 806	10,9
Madagascar	318	0,0
Malawi	86 606	5,9
Mauritius	2 813	0,2
Mozambique	393 231	26,6
Namibia	40 575	2,7
Seychelles	249	0,0
Swaziland	36 377	2,5
Tanzania	6 887	0,5
Zambia	30 054	2,0
Zimbabwe	672 308	45,5
Total	1 478 526	100,0

## 5.2 Age profile of international migrants in 2011

The highest percentage of immigrants in South Africa were youth between the age group 25–34 years (34,3%) and 15–24 years (18,4%), followed by people in the age group 35–44 years (17,5%). Children under 5 years of age accounted for 3,5% of the total immigrant population, while school-going children aged 5–14 years accounted for 4,8% of the immigrant population in 2011 (Figure 36). The age profile of international migrants in 2011 showed that the majority (85,3%) belonged to economically active age groups. Consequently, age dependency ratio among international migrants in 2011 was 14,70.



Figure 36: Percentage distribution by age group of immigrants in 2011

## 5.3 Age distribution by region of birth

An examination of the age distribution of immigrants by region of birth in 2011 showed that international migrants in the age group 25–34 years were predominantly from African countries outside the SADC (41,8%), SADC (37,5%) and Asia (35,9%). The highest percentage (20,8%) of immigrants aged 15–24 years originated from countries within the SADC region, followed by 19,4% of those from other countries African countries outside the SADC region and 15,0% from the Asia region. It shows that international migration commences at an early age from the SADC region, other African countries, and Asia. This implies that migrants from SADC and other African countries are mainly current migrants. International migrants in the age group 35–44 years were mainly from other African countries outside the SADC (20,6%), Asia (20,6%) and SADC (17,7%). The high percentage of international migrants in the broad age group 15–44 years, especially those from the SADC region and other African countries, is an indication that international migrants are making important contributions to the supply of labour in South Africa.

The immigrant population under 5 years of age were mainly from the SADC region (4,0%), other African region (2,3%) and Asia (2,1%). Among children of school-going age (5–14 years), 4,9% were from SADC, 5,2% from other African countries, 4,4% from Asia, and 2,7% from Europe.

There is a decline in the percentage of immigrants in the older age groups 55–64 years and over 65 years, among immigrants from the SADC region (4,0% and 2,7% respectively) and those from other

African countries 2,6% and 2,0%. This could be due to return migration at older ages among Africans. Return migration has implications for migrants' country of origin, who return at the age group when they are no longer economically productive. In contrast to the experience among Africans, immigrants from Europe in the age group 55–64 years and those above 65 years constituted the highest immigrant population, 21% and 36% respectively in these age groups. This could be as a result of long-time migration, as many Europeans have been in the country long before democratic rule in 1994, and have made South Africa their permanent home. While older African immigrants return home to their country of birth; especially those who have been contributing remittances to their home country during their economically active years. Figure 37 shows the age group of international migrants in South Africa by region of birth.





#### 5.4 Sex profile of international migrants in 2011

The international migrants in South Africa in 2011 comprise of 39,8% females and 60,2% males, accounting for a total number of 865 729 females and 1 307 680 males. Males dominate international migration in South Africa in 2011.

#### 5.5 Sex distribution by region of birth in 2011

Similar to the pattern above, about 40% of international migrants from the SADC region were females. Females from Europe, Latin America and the Caribbean, North America and Oceania accounted for 44%, 48%, 46% and 47% of international migrants from those regions (Figure 38). This is different from the pattern among females from other African countries and Asia, where female constituted 27% of immigrants and 31% from Asia respectively. The observed low percentage of female immigrants from other African countries outside the SADC and Asia may be due to the traditional belief of males migrating while females stay back to care for the family.





#### 5.6 Gender analysis of region of birth in 2011

A closer examination of gender difference in international migration by region of birth revealed that among female immigrants from the SADC region, 22,5% were in the age group 15–24 years compared to 19,6% men in the same age groups, signifying an upsurge in feminisation of migration. This is different from the pattern observed in other age groups among immigrants from the SADC. This observation calls for further research to understand the push and pull factors, especially among youth aged 15–24 years born in the SADC; when the ratio of females to males among all immigrants born in the SADC region was 2:5 in 2011 (Table 12).

There is a marked gender difference between children under five years among migrants from other African countries, with females (4,1%) being more than double the males (1,7%). A similar pattern is observed among children of school-going age from African countries outside the SADC, whereby 9,3% of the population aged 5–14 years were female while 3,6% of that age group were male. Further research is needed to understand the gender selectivity in favour of girls aged 5–14 years among international migrants in South Africa. Among immigrants from other African countries, there was an observed gender difference in the age groups 45-54, 55-64, and 65+ years, with more females in these age groups. A possible reason for this could be that women from other African countries seem to be done with their reproductive roles and are becoming more independent. Some of the women may not want to return to their countries of birth again, as this may entail going back to embrace the gender norms and gender roles which they left since the period of migration. The gender roles and ideology that work in favour of men may, however, be one of the factors pushing the men to want to return to their country of birth. There was no observed gender difference in migration among immigrants from Latin America and the Caribbean, North America and Oceania. This result shows that more women in the economically productive and reproductive age are current migrants, especially those from the SADC, other African and Asian regions. This is evidenced by the high percentage of children in the age groups 0-4 years and 5-14 years from these regions. Table 12 and Table 13 show gender distribution by age group among international migrants by region of birth.

	Region of birth							
Age group	SADC	Other African	Europe	Asia	LAC	North America	Oceania	Unspecified
0-4	5,0	4,1	1,1	3,4	2,9	3,9	4,8	4,1
5–14	6,0	9,3	3,0	6,9	8,0	8,1	9,6	6,2
15–24	22,5	19,6	4,3	12,6	10,1	11,5	7,9	15,2
25-34	35,7	37,5	7,3	27,2	20,7	18,1	14,3	25,9
35–44	15,4	15,2	10,4	19,4	19,8	16,8	16,6	16,3
45-54	7,9	6,5	15,5	12,3	18,2	16,4	14,2	12,3
55–64	4,1	4,1	21,0	8,8	10,3	12,6	12,5	9,1
65+	3,4	3,7	43,6	9,4	9,9	12,7	20,3	10,9
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Table 12: Percentage distribution of age group of females by region of birth in 2011

	Region of birth							
Age group	SADC	Other African	Europe	Asia	LAC	North America	Oceania	Unspecified
0–4	3,4	1,7	0,9	1,5	2,5	3,3	5,4	3,8
5–14	4,1	3,6	2,5	3,4	8,3	9,2	9,7	5,5
15–24	19,6	19,3	3,8	16,1	10,4	11,5	7,4	16,2
25–34	38,7	43,4	8,1	39,8	22,4	14,2	16,1	32,6
35–44	19,3	22,6	12,2	21,1	18,4	16,6	16,0	18,8
45–54	8,7	5,8	16,5	8,7	17,7	17,4	15,5	9,8
55–64	4,0	2,1	20,4	5,0	11,7	14,7	12,8	6,3
65+	2,3	1,4	35,6	4,4	8,5	13,1	17,2	7,0
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

#### Table 13: Percentage distribution of age group of males by region in 2011

### 5.7 Distribution of international migrants by duration of migration

About 47% of international migrants are recent migrants, having moved to South Africa 1–5 years before the census in 2011. About 14% moved to South Africa 6–10 years before the census while 1,6% moved to South Africa between 1994 and 2000. About 21% moved to South Africa predemocracy. The remaining 6,5% did not specify the year they moved to South Africa (Figure 39).



## Figure 39: Migration duration

About 75% of recent immigrants that moved to South Africa 1–5 years before the census are from the SADC region. Regions such as other African countries, Europe and Asia accounted for 9%, 2% and 5% of recent immigrants respectively. Immigrants from Latin America and the Caribbean, North America and Oceania constituted 0,2%, 0,3% and 0,2% of recent international migrants respectively. Among immigrants who moved to South Africa 6–10 years before the census, 71%

are from SADC, 10% from other African countries, 4% from Europe and 5% from Asia. Latin America and the Caribbean, North America and the Oceania regions accounted for 0,2% each to the pool of immigrants into South Africa constituting 6–10 years before the census.

As would be expected during the period of colonial rule under the apartheid government, 53% of immigrants were from SADC, mainly involved in labour migration and seasonal migration in the mines, commercial agriculture sector, and construction. The European region accounted for 26% of the immigrant pool while other African countries accounted for 2%. Latin America and the Caribbean, North America accounted for 0,4% each while Oceania accounted for 0,5%. The end of apartheid, freedom of movement, economic activities and the progressive immigration policy that encouraged integration of migrants, coupled with the demand for labour and scarce skills of professionals have encouraged the influx of different categories of migrants within the SADC and other African countries. Figure 40 shows the period of move to South Africa by region of birth.





## 5.8 Percentage distribution by population group

Concerning the distribution by population group, the majority of international migrants in 2011 were black Africans (71,6%) while whites, Indians/Asians, and coloureds accounted for 17,0% (Figure 41).





In relation to population group by region of birth, as expected, the majority of the black African population group was predominantly from SADC (82,6%) and other African countries (6,9%), while about four out of ten white immigrants originated mainly from Europe (41,6%), SADC (31,7%). Among the Asian/Indian population in South Africa, 74% originated from the Asian region (Figure 42).

## Figure 42: Population distribution by region of birth



Regarding citizenship in South Africa, 26,8% of international migrants reported having acquired South African citizenship. The census does not, however, collect information on immigration status prior to becoming a naturalised South African citizen.

### 5.9 Province of residence of international migrants in 2011

With regard to province of residence in South Africa, an overwhelming majority of international migrants reside in Gauteng (52%). This is followed by Western Cape (12%) and KwaZulu-Natal (8%). Limpopo, North West and Mpumalanga were each provinces of residence to 7% of international migrants while Free State (3%), Eastern Cape (3%) and Northern Cape (1%) had the lowest percentages. As the majority of immigrants are in the economically productive age, Gauteng – the economic hub of the country, with employment opportunities and infrastructure – offers a suitable province. The diversity in culture, coupled with the fact that English is very widely spoken in Gauteng, makes Gauteng a preferred province to immigrants. This is in total contrast to Northern Cape, a province where Afrikaans is the universal language (Figure 43), a language not widely spoken by many migrants.

#### Figure 43: Distribution of immigrants by province of residence

Statistics South Africa





An examination of province of residence by population group revealed that most black Africans (55%) reside in Gauteng. The remaining black African population of immigrants live in Limpopo (9,1%), North West (8,2%), Mpumalanga (7,9%) and Western Cape (7,3%). The white immigrants are concentrated in three provinces: Gauteng (45,7%), Western Cape (24,5%) and KwaZulu-Natal (14,0%). The preference for Limpopo, North West and Mpumalanga by the black African population of immigrants may be as a result of similarity in cultural background, language as well as proximity to country of birth, e.g. Mozambique and Mpumalanga, Zimbabwe and Limpopo. Also, a substantial number of these immigrants in provinces like Limpopo and Mpumalanga are low-skilled and work as farm labourers in commercial farms (Munakamwe and Jinnah 2015). Outside Gauteng, a high percentage of immigrants from Europe (26,1%), North America (30,2%) and Oceania (27,6%) reside in the Western Cape (Figure 44).





## 5.10 Level of education

International migrants according to 2011 Census data, vary in their level of educational attainment. Only 39% completed secondary or higher education. The variations in educational attainment range from higher education (16%), completed secondary school (23%), some secondary (34%), primary education (18,7%), while 7% did not attend any school. Sixty per cent of immigrants in South Africa did not complete secondary school education in 2011.

Regarding level of education by region of birth, the majority of immigrants from North America (62,2%), Latin America and the Caribbean (50,8%) and Europe (41,7%) had higher education. Only about one-quarter of other Africans (25,6%) and Asians (27,9%) had higher education. Regarding Grade 12 completion, 34,9% of immigrants from Asia and 32,6% from other African countries had completed Grade 12, compared to 19,3% of immigrants from the SADC. With regards to primary education, 21,6% had primary education, while 8,7% had no schooling. International migrants from the SADC region were the least educated in 2011 (Figure 45).



Figure 45: Level of education by region

In the SADC region, female immigrants were more educated than their male counterparts. More women (10,7%) from the SADC region had higher education than their male counterparts (9,5%). More females (20,1%) also completed Grade 12 compared to males (18,8%). A similar pattern is observed among immigrants from other African countries, whereby 30,3% females had higher education compared with 23,9% of males from other African countries. This gender difference in education among international migrants from Africa is not observed among immigrants from Europe and North America. In terms of higher education attainment, female immigrants from other African countries were more educated than females from SADC region (32,0% vs 10,7%). The explanation for the observed gender difference in level of education among immigrants from SADC and other African countries needs further research. It is possible that more female migrants from employment opportunities. More males (45,5%) from Europe had higher education than the females (34,9%). There was no marked difference in education by gender among immigrants from North America, LAC and Oceania.

## 5.11 Employment status and employment sector

With regard to employment status, 63,1% of international migrants were employed, 20,3% were not economically active, 13,9% were unemployed while 2,8% were discouraged work-seekers. Regarding the sector where immigrants were employed, 62,6% were employed in the formal sector, 17,2% in the informal sector, and 17,1% in private households while 3,1% did not know their employment sector.

A further investigation of the employment sector by the region of birth shows that 64,9%, 9,8% and 7,3% of all immigrants employed in the formal sector were from SADC, Europe and other African regions respectively, while 5,8% of all immigrants in the formal sector were Asian. Immigrants from the SADC, other African countries and Asia dominate the informal sector, contributing 71,6%, 11,2% and 5,4% respectively. Almost three out of four immigrants working in private houses are from SADC (73,6%) and other African countries (8,1%). Within region investigation of employment sector showed that every four out of five immigrants from Europe (80,6%), North America (80,9%) and Latin America and the Caribbean (80,8%) were employed in the formal sector; while three out of five (59,8%) from SADC were in the formal sector. Interestingly, there was a link between level of education and employment sector, as four out of five (80,3%) immigrants with higher education are employed in the formal sector.

#### 5.12 Immigrant distribution by income

About 23% of immigrants were living within the national income poverty level, which consists of an annual income of R9 600 per annum. Of these, 18% were within the national food poverty category, which includes those without income and those with annual income of between R1–R4 800. The low income earners (earning between R9 601–R38 400) comprise 29% of the immigrant population in 2011. About 35% who earn between R38 401 to R307 200 were classified as middle income earners while the 13,1% who earn between R307 201–R2 457 600 were classified as high income earners. The highest income earners were those with annual income of R2 457 601 and higher (0,7%). An examination of annual income among immigrants in South Africa shows a huge gap between those who have and those who do not have, with very few people in the high and highest income categories (Table 14). This is similar to the pattern in the country, with a Gini coefficient of 0,65 in 2011 (Statistics South Africa 2014).

Category	Number	Percentage (%)
National poverty	464 601	23,0
Low earners	581 498	28,7
Middle income earners	697 124	34,5
High income earners	265 260	13,1
Highest earners	13 825	0,7
Total	2 022 309	100,0

 Table 14: Annual income among international migrants in 2011

#### 5.13 Distribution of immigrants by educational attainment and level of income

A closer examination of the distribution of international migrants' level of income by educational attainment shows that among immigrants without education, 36,4% and 36,1% are in the national poverty and low earners' categories respectively. About 37% of immigrants with some secondary education belong to the low income earners category. In the same vein, about 43% and 25% of immigrants who completed secondary school and higher belong to the middle income and high income categories respectively (Figure 46). The importance of education at matric completion and higher levels among international migrants cannot be over-emphasised. Considering the relationship between education and level of income, it is not surprising that many immigrants from SADC with very low education belong in the low income category. There is need for improved and effective information communication and advocacy to prospective migrants, especially in regions known to be migrant country of origin. Government and non-governmental organisations should educate prospective migrants on the importance of education at matric level and higher, to prevent poverty and associated poor health, so as to make migration beneficial to the migrants.





#### 5.14 Relationship with head of household

About 50% of the international migrants at the time of the census were heads of households. It is important to note that 27,3% of household heads were female and 65,7% were male. An examination of annual income by the head of household shows that 31,8% of females heading households were in the national poverty category (without income or income less than R9 601 per annum) compared to 23,3% males heading households in 2011 (Figure 47). The percentages of male household heads in the mid-income and high income categories were higher than the females. This shows that female heads of households bear the brunt of poverty among international migrants in 2011.





A closer look at the region of birth and annual income reveals that immigrants with national income poverty level and those who are low earners originated predominantly from the SADC (26,0% and 33,9%) and other African countries (20,9 and 21,7%) respectively (Figure 48). The observed level of poverty among some immigrants, especially those from SADC and other African countries begs the question of the advantage of international migration, especially for economic migrants. It is important for governments of migrant-sending countries to educate their citizens on the reality of poverty in South Africa, especially among those without secondary school completion. While South Africa may bring good opportunities to immigrants with higher education, the same could not be said about those who have no education and do not have secondary school completion.



Figure 48: Annual income by region of origin

## 5.15 Household characteristics of international migrants in 2011

International migrants lived in a total of 2 143 625 households in 2011. Knowing that housing characteristics and conditions are social determinants of health, questions regarding housing conditions and characteristics were asked in the census. These questions included access to water, sanitation, and type of energy for cooking, heating, lighting, as well as waste disposal. The majority of international migrants had regional or local water scheme as the source of their household water (85,5%). Other sources include boreholes (5,9%), dams, pools, stagnant water or other sources (3,5%), water tanks/vendors/rain water (3,8%) while 1,3% had their water sources from rivers, streams or springs. With respect to access to piped tap water, 4,4% did not have access to piped tap water at all, 54,2% had piped water inside the dwelling, and 29,4% had piped water in the yard, while 11,5% reported having tap water on communal stands outside the yard, with distance from dwelling ranging from 200 m outside to over one kilometre.

Regarding sanitation, a total of 74,6% of immigrants had access to flush toilets either connected to sewerage, or flush toilet with septic tanks. Over one out of five households had latrines (21,2%) ranging from pit latrines with ventilation, pit latrines without ventilation, and bucket toilets, while 3,7% of households reported lack of toilet facilities in the household. An examination of sanitation and enumeration area type reveals that 23% of those residing in enumeration area types classified as informal settings and 25% of those in farms did not have sanitation in 2011. The percentage of

people that reported lack of any form of sanitation is a public health concern, as human faeces could contaminate water, leading to outbreaks of communicable diseases such as typhoid fever, cholera and other diarrhoeic illnesses in the communities where this happened. The fact that about a quarter of migrants live in poor housing conditions such as houses without flush toilets, does not only give a concern for the health of the migrants, but also contributes to the evidence of migration being a social determinant of health.

With respect to use of energy for cooking, the majority of immigrants (83%) depended on electricity or gas, 10,3% used paraffin, and 5,1% depended on wood, while 1,6% used other energy sources such as animal dung, coal, or solar. The remaining 0,2% did not have any source of energy for cooking. Regarding source of energy for heating, 13,7% of households had no source of energy for heating while 70,4% depended on electricity and gas, paraffin (6,2%) and wood (7,3%). The percentage of households using wood and paraffin calls for concern, as this increases the amount of indoor air pollution, causing respiratory diseases such as asthma and rhinitis in young children and women who spend long hours indoors. Other sources of energy for heating (2,5%) included coal, solar, and animal dung. Similar to the above, 85,6% and 10,4% used electricity and candles respectively for lighting. Other sources of energy for lighting includes paraffin (2,6%), gas, and solar. The remaining immigrants did not use any energy for lighting (0,3%). The percentage of international migrants that used candles and paraffin for lighting calls for safety and health concern among the immigrants, not only due to indoor air pollution as discussed above, but also the risk of fire accidents, leading to loss of live and property.

The majority of immigrants (77,9%) reported that removal of refuse was carried out by local authorities once a week or less frequently, others used a dump (17,0%) while others reported other types of refuse disposal (1,4%). About 3,7%, however, reported that they had no form of refuse disposal.

## 6. Conclusion and recommendation

This chapter described the demographic and socio-economic characteristics of immigrants in South Africa. Using the 2011 South African Census data, it established some findings that are noteworthy. Current analysis suggests that South Africa has continued to host many immigrants from various parts of the world – from the Southern African Development Community (SADC), the

rest of Africa, Europe, Asia, America and the rest of the world. The chapter further shows that migrants of SADC origin constituted the majority of the country's immigrants – as high as seven in ten migrants in South Africa are of SADC origin, with Zimbabwe constituting the bulk of South African immigrants. The reason for the volume of immigrants of SADC origin in South Africa is due to the history of labour migration which dates back to more than a century (Hargrove 2008). The trade agreements of SADC countries have contributed to an increase in the number of international migrants from SADC to SA.

In particular, the results of the analysis established that there were 2 173 409 international migrants, accounting for 4,2% of the country's total population of 51 770 560 in 2011. Almost half (47%) are recent migrants, having immigrated to South Africa since 2006, and have spent five years or less in the country before the census in 2011. About 14% of the international migrants had spent 6–10 years in South Africa before the census, 11,6% were in South Africa since 1994 while 21,3% have been in the country before 1994. The international migrants originated from the six world regions, with the vast majority (68,0%) being from the SADC region. Immigrants from Zimbabwe constituted 45,5% of the total number of immigrants from the SADC region, followed by those from Mozambique (26,6%). Males dominate international migration in South Africa, with about 40% of the international migrants being females while males were about 60%. Over one-third (34,3%) of international migrants were in the age group 25–34 years while 52% of all international migrants reside in Gauteng.

This report shows that international migrants from regions other than SADC are more educated than their counterparts from SADC. Previous studies established that migrants have been part of the nation building of the democratic and liberated South Africa (Adepoju 2003; Vale 2002). Results from this chapter corroborate this argument by establishing that over three out of five international migrants (63,1%) were employed in the country. The findings further showed that among the employed migrants, over 60% were employed in the formal sector of the country's economy, and 17,2% in the informal sector, while 17% are employed in private households. The age dependency ratio among international migrants in 2011 was 14,7. This shows that international migrants are contributing significantly to the country's economy and socio-economic development, rather than the widely held view that international migrants come to South Africa to benefit or depend on the social welfare system. The number of female-headed households among international migrants is also on the rise, with 27,3% females being heads of households in 2011.

This chapter thus corroborates the results of previous studies on feminisation of migration, which established an increase in the proportion of female migrants who embark on international migration to fulfil their economic desires (Yinger 2011). The result further shows an increase in the number of female immigrants since 2006, and more educated women immigrating to South Africa.

Over half of international migrants in 2011 are poor, either being low income earners or living within the national income poverty level. Over a quarter (27%) of households were headed by females in 2011. Female heads of households, however, bear the brunt of poverty among international migrants, as almost one-third of female-headed households were in the national poverty category. This result thus suggests there is a feminisation of poverty among immigrants, similar to the general population in South Africa.

Many international migrants move to the country without adequate information on the actual situation of employment in the country. There is a need for government and international organisations from migrants' countries of origin to provide necessary information and education on the economic situation in South Africa, and advise their citizens on preparedness for migration including skills that are sought after in South Africa. South Africa's immigration laws had been reviewed several times with a view to tightening up the immigration statutes.

Results show that children under 14 years contributed about 9% of the total population of international migrants in 2011. It is important for those children to have access to school facilities as well as basic primary health care services. Some of these children may have accompanied their parents to South Africa, and with the current tight immigration laws, the children of undocumented migrants cannot be allowed in schools. This leads to generation of uneducated children, and procreation of poverty. A review of immigration laws that prohibits children of undocumented migrants from going to school should be addressed.

As the population census cannot ask questions on migration experiences of adults and children before the commencement of migration, it is important to have a migration survey that applies both qualitative and quantitative analytical approaches, which can provide a clear picture on the reasons for migration, migration status, and access to services, among others. The migration survey will provide information on conditions prior to move, remittances and will also help in providing exact reasons for migration as well as type of migration. The result of this analysis shows that the age dependency ratio among international migrants is 14,7, compared to the age dependency ratio of the total population at 53,01 in 2011. This shows that migrants are contributing to high economic productivity in the country, rather than the misconstrued notion that migrants are exerting undue pressure on the social services in the country.

Considering the provincial distributions of the country's immigrants, this study established that Gauteng was home to half of international migrants in South Africa. The fact that Gauteng – which is the economic hub of South Africa – is home to majority of the country's migrants, is an indication that most international migratory movements into South Africa are economic-driven. To lend credence to this point, and as established in the migration literature that migration is highly selective in terms of age, findings of this chapter revealed that an overwhelmingly high proportion of immigrants in South Africa were within the economically active age category of 15–64 years. As previously established by Haan (2000), this finding attests to the fact that most immigrants in the country are rational economic agents, who have appraised the differences in socio-economic prospects between their countries of origin and their current destination. Results from this chapter indicate that South Africa is a major destination for people looking for better social and economic opportunities.

Besides, access to better basic infrastructures, compared to what is available in many sub-Saharan African countries, is possibly another important factor that made South Africa a destination of choice for many people seeking basic social services like healthcare facilities, schools, good roads, portable water and electricity. Findings from this study showed that the majority of migrants reported having access to electricity for cooking, lighting and heating; as well as access to water supply through a government authority.

In addition, the chapter further established that about one in six immigrants in South Africa attained higher education. This suggests that the country has been able to attract a sizeable proportion of educated and skilled personnel. This result supports previous findings that highly skilled personnel migrated from Ghana, Nigeria and other countries to work in the different sectors in South Africa (Statistics South Africa 2014).

Sub-regionally, the Republic of South Africa is a major player in the socio-economic, security and political matters within the SADC region. Although migrants have historically migrated under varying conditions in South Africa, results from 2011 Census data clearly established that international migration is an important feature of the contemporary South African society. As a country with a history of international migration, there is a need to ensure that migration is integrated into the pro-poor, labour, social and economic policies in South Africa. Evidence from the population census has shown educated skilled international migrants to be very resourceful in South Africa, contributing to the social and economic development of the country. It also shows that migrants who belong to the very poor socio-economic status, as well as low skilled and unskilled migrants, especially migrants born in the SADC region and other Africa regions, may be seen as exerting pressure on the social, economic and environmental resources in the country. This often leads to competition for already scarce resources and xenophobia in a country with already a high percentage of youth unemployment of 65,8% among those aged 15-24 years and 25–34 years. African states need to place migration at the top of their political agenda and plan ways that migration within the Africa-Africa corridors can be beneficial to migrants, countries of origin and countries of destination.

Looking ahead, some issues that could receive attention by the authorities to improve the life conditions of migrants as well as means of integrating migrants into local communities could include the integration of children of undocumented migrants into educational institutions. This will increase their opportunity for improved socio-economic status and acquisition of skills to be self-employed and create jobs.

It would be beneficial if the provision of adequate information, education and communication to prospective migrants by government, international and non-governmental organisations from migrants' countries of origin on the economic situation in South Africa was given. These institutions need to advise their citizens on adequate preparation for migration including skills that are sought after in South Africa as well as on the socio-political climate towards migrants in the country.

A means of addressing the causes of xenophobia could be to create a space for migrants in the informal sector to contribute to the economy in a regulated structure which would result in them contributing to the payment of tax and other economic development activities.

One of the limitations of the census is the lack of emigration data as well as knowledge of the living conditions of migrants at their place of origin, including remittances. These type of data items could be covered in a migration survey or a module in one of the existing surveys. The establishment of a system migrant specific administrative data could also be of benefit in this regard. This will also help in providing exact reasons for migration as well as the development of a typology of migration which would ultimately lead to the development of programmes and interventions to reduce undocumented migration in South Africa.

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# Chapter 5: Migration and settlement change: Triangulating Census 2011 with Longitudinal Health and Demographic Surveillance System Data

## 1. Introduction

The 2011 Population Census allows for a re-examination of internal migration and settlement patterns in South Africa twenty years following the country's transition to democracy. Prior to 1994, the study of migration in South Africa was limited as a result of an absence of suitable data. The first population census to explore internal mobility dynamics inclusively, was the Census of 1996, and these data provided a baseline from which to begin to explore the geographical distribution of South Africa's population, and associated processes of urbanisation (Kok et al, 2003). Census 2001 was a well-utilised data source which provided the foundation for the cross-examination of migration patterns within the country, and initiated a discourse around the methodologies and concepts relating to the study of migration in South Africa (see Kok et al, 2003). Migration patterns and dynamics have since been well researched both by South African scholars and by researchers and population scientists from further afield. As a result, the understanding of dynamics relating to the distribution and redistribution of South Africa's population scientists from further afield. As a result, the understanding of dynamics relating to the distribution and redistribution of South Africa's population has been greatly enhanced.

Census 2001 revealed that contemporary patterns of migration within South Africa were unique in the region, and continued to reflect dynamics that had arisen in the country during the colonial period, and prevailed into the apartheid era. Urbanisation was underway but was characterised by marked variations across origin areas and between population groups (Kok et al, 2003). Circular mobility persisted amongst labour migrants, who maintained their connections with rural homes while away, working in the larger cities (Posel and Casale 2003). The most recent population census data allows us the opportunity to revisit patterns of migration and settlement change in contemporary South Africa.

The study of migration requires an empirical foundation that may change over time. This foundation includes the identification of an appropriate settlement typology. Conventionally, flows of movement within the country have been examined across provincial boundaries. However, as highlighted in the report of the Integrated Planning, Development and Modelling (IPDM) Project, the issues of "spatial fragmentation" and the need for an "improved

understanding of spatial trends" is important for development, policy formation and planning (Cross et al, 2013). Approaching settlement transitions using a more refined typology that will represent the continuum of urban-rural space at the municipal level is employed in this chapter. The chapter presents an analysis of migration flows between five municipal settlement types categorised as metro core, secondary city, large town, small town and mostly rural in a settlement type transition matrix incorporating each migration registered in the national census. The census measures a move with reference to a *de facto* household definition (the household comprises all resident members at the time of the census). A migration is recorded if there has been a change in a person's usual place of residence between two time points.

In order to gain a more precise, substantive understanding of migration and settlement change, the chapter further analyses sub-district data produced prospectively in the Agincourt Health and socio-Demographic Surveillance System (HDSS) in the Bushbuckridge District Ehlanzeni Local Municipality, Mpumalanga. The HDSS employs a *de jure* definition of a household which allows for the inclusion of individuals who are absent but still considered household members (often by virtue of their contribution to the household through remittances). Migration may be classified as permanent or temporary based on a member's movement intentions and periods of absence from the household. The HDSS analysis therefore provides a useful perspective on temporary migration trends that would not be attainable using the national-level data. The triangulation of national Census 2011 migration flows and the sub-district level data produces a comprehensive picture of internal migration within the country. Through this comparison, it is possible to establish not only how levels of urbanisation are changing within South Africa, but also how South Africa's urban transition is characterised.

Twenty years following democracy, issues of transformation remain pertinent to South Africa. Economic disparities, inequality and unemployment persist and inadequate living conditions may further impact on quality of life for many (Mayosi and Benatar 2014). Migration, particularly to urban areas, provides an avenue that people may employ to alleviate poverty and gain access to employment opportunities (Venter and Badenhorst 2014). However, movement to urban areas may expose migrants to a range of adverse conditions such as inadequate housing and sanitation, crime and violence and/or difficulties accessing services (Turok 2012). In response to some of these issues, South Africa's National Development Plan (NDP) has emphasised spatial transformation and integration, and suggested interventions going forward as part of a vision for

South Africa for 2030 (National Planning Commission 2011). The NDP emphasises the interdependencies between rural and urban areas, and the need for collaborative and integrated planning between municipalities and provinces (National Planning Commission 2011). The NDP further highlights the need for data and analysis that can support a better understanding of these dynamics. This chapter aims to make a contribution by proving insights into contemporary dynamics of internal migration and settlement change in the country.

The chapter begins with a brief literature review with an emphasis on contemporary patterns of urbanisation in Southern Africa, and an overview of the South African context of migration and urban transition. The chapter goes on to present the findings from an analysis of how settlement types across the country are changing as a result of migration, using data from Census 2011. This analysis employs a 5-year window to examine migration, which is anchored to an initial and current place of residence between 2006 and 2011. Having presented evidence of internal-migration dynamics across different settlement types in South Africa, the chapter goes on to analyse more fine-tuned dynamics of temporary and permanent migration using prospective data from the (HDSS) located in the country's north-east. The HDSS provides a ground-level perspective of the geographical distribution of migration trends within the same time frame, 2006–2011. The triangulation of these two data sources are then reflected upon and the chapter concludes with a discussion of how the process of urbanisation is unfolding in South Africa.

## 2. Literature review

Across the African continent, a number of significant transitions are underway (UN-Habitat 2014). Notably, the continent is experiencing concurrent demographic, economic and urban transitions, which influence the process of socio-economic development. Rapid growth in urban populations has been projected for the continent going forward, and levels of urbanisation are expected to increase from a current level of 40% to 50% by the year 2035 (UN-Habitat 2014; United Nations 2014a). Within the Southern African region, it is estimated that 62% of the population presently resides in urban areas, and this proportion is projected to increase to 68% by the year 2030 (United Nations 2014b). These trends highlight the importance of understanding population dynamics, processes and implications in countries across the African continent.

The level of urbanisation denotes the proportion of a nation's population concentrated in cities or towns, as opposed to rural areas. Thus increases in levels of urbanisation occur where the population growth in urban areas exceeds national growth rates (UN-Habitat 2014). This can be the result of natural urban population growth, net in-migration to urban areas or reclassification of areas or settlement types as "urban" (National Research Council 2003). In Southern Africa, where urban fertility rates are relatively high, a major contribution to urban growth arises from natural population growth (Potts 2008). Albeit at a lower level, migration has also been identified as a contributor to urban growth within the region (Chen, Valente, and Zlotnik 1998).

In Southern Africa, populations are dynamic and population mobility high, thus a number of more recent studies have sought to explain the lesser impact of migration on urban growth (Bocquier and Mukandila 2011; Potts 2009). This has been attributed to the more temporary nature of urban settlement for many (Potts 2009). The trend towards circular and temporary migration has been documented across the Southern African region (White and Lindstrom 2005; White, Mberu, and Collinson 2008). In many settings, migration is employed as a livelihood strategy to improve the socio-economic position of rural sending households through migrant remittances. The migrants return to rural origin areas periodically; and ultimately at retirement, or because of ill health (Clark et al, 2007; Collinson 2009). The relationship between migration and urbanisation is therefore fluid and trends may be obscured by these more temporary urban stays.

Movement to urban areas is understood to be a response to a nation's changing economic and social context. Employment opportunities in urban areas and the promise of improved livelihoods draw people from rural areas to the cities. Correspondingly, disadvantageous situations in rural areas may motivate such relocation (Lee 1966). Economic theories of migration are the most prolific and have explained movement behaviour in terms of rational decision making processes undertaken by individuals and households (Massey et al, 1993; Todaro, 1997). The New Economics of Labour Migration theory proposes an extension to economic models of migration by describing the role of migrants' families or social units in migration decision making (Stark and Bloom 1985). Economically driven migration is viewed as a collective, strategic decision that serves to benefit both the migrant and the origin household through remittances (Stark and Bloom 1985). Migration is therefore a means of diversifying risk within a family, within a framework of "mutual interdependence" (Stark and Bloom 1985). However, it is argued that movement behaviour is not an exclusively economic decision. A body of literature has highlighted and emphasised the social

processes and events along the life course that may prompt relocation (Kulu and Milewski, 2007). These include marriage, child bearing and family or social networks. Furthermore, migrants have been found to differ systematically from non-migrants in a particular population and this theory of migrant selectivity has been the subject of numerous studies (Lee, 1966). These works have characterised migrants according a number of determinants such as age, sex, levels of skill and occupational and socioeconomic status (Brockerhoff 1990; Collinson 2009; Rogers 1988). These determinants and processes assist in characterising the shape and structure of migration streams (White and Lindstrom, 2005) and as such they contribute to understanding the process of urbanisation.

The correlation between urbanisation and economic growth has been frequently discussed in the literature. Urbanisation has been positively associated with GDP (United Nations Population Fund 2007) and may be both a consequence and a cause of economic growth (Turok and McGranahan, 2013). However, in the African context, the atypical nature of African urbanisation has frequently been alluded to (Mabogunje, 2007). This has prompted concerns that urbanisation within the region is occurring in the absence of (or at a disproportional rate to) economic growth (Kessides 2006; White, Mberu, and Collinson 2008).

It is argued that while urbanisation occurring in the context of economic development is likely to improve standards of living and well-being, in the absence of such growth, urbanisation will likely exacerbate urban poverty (Mabogunje, 2007). In the Southern African case, urban expansion has been associated with escalating unemployment, inadequate social services, deprivation and violence (Mabogunje 2007; World Bank 2009). Furthermore, while urban population growth is documented as taking place within the major cities, a substantial proportion of growth relates to towns or secondary cities (National Research Council 2003). The urban-ward shift has also led to the establishment of new towns, cities and informal settlements or urban slum areas on the peripheries of larger urban centres (UN-Habitat 2014). These are expected to multiply in coming decades and present further infrastructural and planning challenges (Kessides 2006; UN-Habitat 2014).

Rapid urban growth has therefore raised numerous policy concerns as evolving environments require appropriate spatial, infrastructural, economic and social policy and planning responses (Todaro, 1997). These have been insufficient in many settings, and in some instances have resulted

in restrictive policies being implemented to try to curb urban-ward movement (World Bank 2009). This view has been challenged by a number of scholars and development agencies who have argued in favour of the positive contribution that migration and urbanisation can make to development and poverty reduction (Kessides 2006; World Bank 2009). In a recent report on the state of African cities, the United Nations has recommended that national urban development policies be reframed in order to "strengthen the positive impacts of Africa's current multiple transitions and to improve urban living and working conditions" (UN-Habitat 2014). Urban development strategies should focus on building more "connective infrastructure", enhancing services and developing "spatially targeted" interventions (World Bank 2009). The need to make positive advances on poverty reduction and promote equitable economic growth are priority areas outlined in the post-2015 development agenda (United Nations Economic Comission for Africa 2013).

Within the Southern African region, South Africa's urban transition and corresponding patterns of migration have been shaped by the apartheid system and the colonial periods preceding it. Controls on movement originated during the colonial period as a mechanism to curb permanent urban settlement of the black population who were recruited to work in the cities (Zlotnik 2006). Apartheid formalised this system with the introduction of laws governing patterns of settlement that restricted the black population from taking up permanent residence in urban areas (Wentzel and Tlabela 2006). This resulted in a prevalence of oscillatory labour migration with male workers having to move between urban places of employment and rural homes (Gelderblom and Kok 1994). Thus by the end of the apartheid era, only 42% of black South Africans were documented as residing in urban areas (Anderson 2006), a figure that increased to an estimated 48% following the 2001 Population Census (Kok and Collinson 2006). To date, levels of urbanisation within South Africa's urban population will reach 77% by 2050 (United Nations 2014a). This trend underlines the importance of understanding and documenting patterns of migration to and within the country.

South Africa's process of urbanisation is driven largely by economic and employment opportunities (Cross 2006; Turok 2012). Of the nine provinces, the Gauteng province (comprising the Johannesburg, Tshwane and Ekurhuleni metropolitan areas) makes the highest contribution to national economic output (approximately 32%) (Turok 2012). The Cape Town and eThekwini

municipalities follow with collective contributions of approximately 20% of national output (South African Cities Network 2011; Turok 2012). Accordingly, employment opportunities and earnings are also concentrated in the country's more economically productive metropolitan areas (South African Cities Network 2011), making them the most attractive destinations for internal migrants.

The dominant flows in the country are in the direction of the large metros in particular to those in the Gauteng province and to a lesser degree, the Western Cape (Statistics South Africa 2012). Nevertheless, the National Development Plan (NDP) indicated that approximately 78% of migration from rural areas and smaller towns was directed towards similar settlement types (National Planning Commission 2011). Furthermore, there is evidence that patterns of temporary migration have persisted beyond apartheid and migrants often maintain connections to their rural origin areas and continue to send remittance income following a move to the city (Casale and Posel 2006; Collinson, Tollman, and Kahn 2007; Hosegood, Benzler, and Solarsh 2005). Within South Africa, females are increasingly participating in migration and moving to access employment opportunities in urban and surrounding areas (Collinson, Kok, and Garenne 2006; Posel and Casale 2003). Thus contemporary patterns of movement within South Africa are diverse and dynamic. In order to achieve the vision for South Africa presented in the NDP around economic development and spatial transformation and integration, (National Planning Commission 2011), an informed picture of South Africa's current population trends and settlement patterns is imperative.

The study of migration and urbanisation is made difficult by a range of methodological issues. Estimates of urbanisation are based on criteria that seek to distinguish between rural and urban spaces, but in reality there may be difficulties in classifying settlement types into a simplified urban-rural dichotomy (Kok and Collinson 2006). Furthermore, comparisons across countries or regions may be hampered by a lack of consistency on the ways in which urban spaces are defined (National Research Council 2003). Definitions of migration further require specifications of the spatial boundaries that constitute a move, as well as time thresholds that identify migration events. The way in which a household is defined is also important in relation to the measurement of migration. These definitions are often derived in relation to a specific study or context.

In addition to these methodological considerations, analyses of migration are hampered by a lack of suitable and available data. Population censuses are important sources of national-level demographic data. They have the strong advantage of representativity and inclusivity, and censuses therefore provide a comprehensive picture of a population's composition and characteristics at a point in time. However, censuses are conducted infrequently and due to their cross-sectional nature, census data may not be appropriate in studying change over time. Crosssectional surveys such as the Demographic and Health Surveys or Statistics South Africa's Community and Labour Force Surveys are potential sources of data on population mobility or related dynamics. However, such cross-sectional, retrospective surveys have limitations when applied to analyses of migration because of the repeatable nature of movement over time. These instruments fail to capture temporary, circular or return migrations and often overlook the interactive nature of families across rural and urban spaces.

Longitudinal data collection methodologies are particularly valuable for studies of migration and related dynamics as they are able to generate prospective measures on repeated events (such as migration) over time. Health and Demographic Surveillance Systems (HDSS) accumulate longitudinal health and demographic data for the total population of a defined geographical area, which are used to monitor population dynamics, analyse trends and investigate outcomes (INDEPTH Network 2002). HDSS data are able to discriminate between permanent and temporary migration, and can reveal the more nuanced links between rural and urban spaces. By integrating the national perspective provided by the census with the more detailed sub-district level perspective of the HDSS, the current understanding of contemporary migration and settlement change in South Africa will be greatly enhanced.

It is against this background that the following research questions may be posed:

- 1) What are the contemporary patterns of migration and settlement changes in South Africa?
- 2) What is the role of temporary migration in relation to these trends?
- 3) Using a triangulated approach, what can be concluded about the process of urbanisation underway in South Africa?

This chapter seeks to address these questions using an analysis of migration across five municipal settlement types and two data sources: the Census 2011 and longitudinal data from the Agincourt HDSS, a sub-district of South Africa.

## 3. Methods

The study catalogues and monitors migration and changing settlement patterns in national and sub-district settings, using the Census 2011 for national level data and the Agincourt health and socio-demographic surveillance system for a fine-grained measurement at a sub-district level.

## 4. Census 2011 – changing settlement types

## 4.1 Census definitions

In the census, migration information is recorded by enquiring whether each individual in a household had moved since 2001. A migration is captured if a change in an individual's usual place of residence over the period had been recorded. For the purposes of the present analysis, the time was narrowed to a 5-year period in order to minimise recall bias. The national census defines a household to include those individuals who are present in the household at the time of the census interview. This is referred to as the *de facto* household membership. The analysis of Census 2011 data employs the following definitions:

### Household definition:

All persons staying and eating together, at the particular residence, for four out of the last seven nights.

### Migration definition:

A person who moved into the household in the five-year period preceding the census (i.e. 2006–2011).

### 4.2 Derivation of settlement categories

The household and migration definitions above refer to a place where the census interview was conducted, and a previous place, which was the household that the person left behind when they moved into the current household. These two residences, present and previous place, are located in local municipalities which are categorised into one of five settlement types. We use the

settlement type categorisation devised by Graeme Gotz, of the Gauteng City Regional Observatory, published in "Differentiated urbanization – analysis of urban/rural settlement dynamics" (Gotz 2014), which classifies each municipality by the size of the conglomeration comprising the municipal populations. We categorise local municipalities in a hierarchy of settlement types which the South African population describe as present and previous places of residence in the 2011 Census. Local municipalities frequently include both rural and urban areas, so at this level of aggregation we may not get a clear separation of urban versus rural populations. There are some rural census enumerator areas within urban municipalities. In Table 15 it is

evident that within 'large town' municipalities, as much as 40% of the population is rural.

#### **Table 15: The settlement categories**

Metro core municipalities	More than 1 000 000 urban
Secondary city municipalities	200 000–999 999 urban
Large town municipalities	50 000–199 999 urban
Small town municipalities	20 000–49 999 urban
Rural municipalities	Fewer than 20 000 urban

The most urbanised settlement types are the metro core municipalities, which have a population size of more than a million people. There are the six Metropolitan municipalities in this most urban category (Johannesburg, Tshwane, eThekwini, Cape Town, Bloemfontein, Nelson Mandela Bay), which vary by area size, population size and density. The smallest metropolitan municipality is Johannesburg at 1 645 km<sup>2</sup>, and the largest is Tshwane measuring 6 345 km<sup>2</sup>. Population size ranges from Nelson Mandela Bay with a population of 1 152 115 persons, to Johannesburg with a population of 4 434 827 persons. Population density ranges from the least dense, Tshwane which comprises 460 persons per km<sup>2</sup> to Johannesburg which comprises 2 696 persons per km<sup>2</sup>.

In Table 16, examples of each settlement classification category are given. Kimberly is a secondary city, Oudtshoorn a large town, Giyani a small town and Port St Johns a rural municipality.

Category	Total rural population in category	Total urban population in category	% urban	Example	Number of municipalities in category
Metro core municipalities More than 1 000 000 urban	742 874	18 126 409	96,1	Example: Johannesburg, Cape Town, Ethekwini	6
Secondary city municipalities 200 000–999 999 urban	1 442 504	6 117 637	80,9	Example: Mangaung, Buffalo City, Rustenburg, Newcastle, Kimberley	16
Large town municipalities 50 000–199 999 urban	4 034 661	6 133 173	60,3	Example: George, Stellenbosch, Mafikeng, Knysna, Oudtshoorn, Kokstad	67
Small town municipalities 20 000–49 999 urban	5 072 480	2 366 782	31,8	Example: Musina, Tzaneen, Giyani, Ulundi	68
Mostly rural municipalities Fewer than 20 000 urban	6 999 666	734 376	9,5	Example: Port St Johns, Nkandla, Prince Albert	77

## Table 16: Typoplogy by Graeme Gotz: from "Differentiated urbanization – analysis of urban/rural settlement dynamics"

#### 4.3 Settlement transition matrix

Using the residential information from the 2011 national census, we are able to generate migration flows within the country for the five-year period 2006–2011. These migration flows may occur between or within the five municipal settlement types: 'metro core', 'secondary city', 'large town', 'small town', 'mostly rural'. Each migrant leaves from a place in one of these settlement types and is interviewed in a place located in one of these settlement types. These migration links or "transitions" are represented in the settlement type transition matrix in Tables 17–28.

The settlement transition matrix aggregates each migration between the present place or "destination local municipality type", and the previous place or "origin local municipality type", over the period 2006–2011. The cells on the diagonal of the transition matrix represent migrations that are within the same settlement type. The triangle of cells that lies above and to the right of the diagonal represents reverse-urbanising transitions, from more urban to less urban local municipalities. The triangle of cells below and to the left of the diagonal represents settlement transitions that constitute urbanisation, i.e. migration from a less urban to a more urban place.

## 5. Triangulating with the Agincourt Health and Socio-Demographic Surveillance System (HDSS)

The surveillance system is based in the semi-arid low-veld savanna where the northern escarpment faces eastwards towards the Kruger National Park. The average annual rainfall ranges
from 700 mm near the escarpment and drops to 550 mm in the eastern part, with some eighty per cent falling in the summer months of November to March. Seasonal rainfall patterns are variable and the area is vulnerable to drought. The area experiences hot summer and mild winter months, with temperature range of 12–40 °C in summer and 5–27 °C in winter (Collinson et al. 2002; Kahn et al. 2012).

The Agincourt sub-district of the Bushbuckridge, Mpumalanga Province, is about 500 kilometres north-east of Johannesburg and lies adjacent to South Africa's north-eastern boundary with Mozambique. The field-site was selected with specific aims in view, namely, to study health status and its determinants in an area typical of South African rural society (some distance from a tar road or township settlement), and to address issues of decentralised health systems development, particularly at health centre, clinic and community levels (Tollman 1999).

The sub-district has been the site for over twenty years of health and socio-demographic surveillance which began in 1992. Initially the field-site contained twenty-one village communities and measured 400 km<sup>2</sup>. The total surveillance population is 70 000 people living in some 11 500 households, with a population density of 175 persons per square kilometre. The Agincourt HDSS gives an ideal perspective for triangulating the census-based settlement transitions matrices, especially in showing how the rural municipalities are linked to the rest of the settlement system through migration. The experience from this research infrastructure and long-term relationship with the communities from which the information is collected is advantageous in terms of data quality.

The HDSS comprises a registration system of all demographic events that bring people into, and out of the sub-district. The demographic equation of births, deaths, in- and out-migration must be balanced and the exact population size can be known if all the in and out events are exhaustively captured. The surveillance operation uses the *de jure* household definition to include a tracking of temporary migrants that are linked to the rural household, but not present at the time of the interview. This enables us to report findings for permanent and temporary migrants. The difference between permanent and temporary migration is as follows. Permanent migration adds to or subtracts from a rural household making it larger or smaller in size. The temporary migrants remain household members while they are away for the purpose of employment or education. The temporary migration rate is the prevalence rate of temporary migration in any given year,

whereas the permanent migration rate is the incidence rate of new in- or out-migration events bringing people into or out of the population within a year.

The information presented from the HDSS on permanent migration is obtained from in- or outmigration records of people moving into or out of the surveillance population. Information is recorded on the geography of rural and urban places of origin or destination, and the reasons for the migration are recorded. To obtain more detail on the temporary migrants, a periodic survey is conducted in five-yearly intervals, of every temporary migrant in the *de jure* population. The present analyses used data from the 2007 and 2012 surveys of temporary migrants. These HDSS census modules were used to compile the tables on temporary migration geography of destinations, reasons for the migration and key aspects of remittance behaviour.

### 6. Household definition

The HDSS employs a *de jure* household definition, which incorporates a significant absent household member who should be resident at the time of the census interview but is away at work or at an educational institution, and usually remits something back to the household. Absent temporary migrants remain significant members of the household while they are away. The HDSS household definition therefore includes the people co-residing in the household at the time of the interview, as well as any absent household member(s).

### 7. Definition of a temporary migrant

A temporary migrant is a household member who is away the majority of time, but retains a significant link to their base household. In analyses, a six month per year cut-off point is chosen to differentiate 'temporary migrants' from 'local residents'. Thus, people referred to as temporary migrants are those who were absent from the household for more than six months of the year preceding observation, but who nevertheless consider the index household to be their home base.

### 8. Definition of a permanent migrant

The Agincourt definition of a permanent migrant is a person who enters or leaves a household with a permanent intention. This definition closely follows the classic definition that migrants are people who experience a change in residence (Bilsborrow 1993). This includes people who leave the index household and establish a household or join a household elsewhere. A key feature is that the destination household becomes the new home base for the migrant. The main reasons given in the HDSS for permanent migration are: "union formation or dissolution"; "to live with another" and "new dwelling for household".

### 9. Findings from Census 2011

### 9.1 Migration status and settlement transitions

Migration is a well-known experience and there can be a range of reasons underpinning it. The national census has captured migrations that preceded the census data collection in 2011. The household definition seeks to capture the spatial distribution of the population at a point when people are at their usual place of residence. The migrations represent changes in the usual place of residence.

Table 17 shows how the full South African population is distributed by settlement type. In each settlement type the proportion of non-migrants, migrants, or migration-status unspecified is given. The 'total' column, on the right, shows that of the whole population (50 961 448 people), 5,3% experienced an internal migration in the five years preceding the census, 1,5% had migrated from outside of the country, 91,7% had not migrated in the same period and 1,6% had migration status unspecified. Core metropolitan municipalities accommodate 36,3% of the overall population, and about 6,2% of those resident in core-metros (2,3% of the whole population) are internal migrants. Metropolitan municipalities are the most likely type of settlement to have received a migrant prior to the census.

The second most common type of settlement in which South Africans live are the "large town" municipalities (19,5% of the South African population resides in these settlement types). These are also the second most likely types of settlement to receive a migrant (1,2% of the full population indicated a migration to this settlement type, and 6,0% of people living in this settlement type

were internal migrants). The rest of the population is fairly equally distributed between the three other settlement types: 14,5% residing in secondary cities, 14,4% in small towns and 15% in mostly rural areas. The percentage of internal migrants in the settlement type is the lowest for 'mostly rural' municipalities (0,4% of the whole population and 2,8% of people living in this settlement type).

Table 18 shows the settlement type transition matrix for internal migrants, male and female of all population groups. Percentages given represent the likelihood that a migrant moved from one settlement type to another. Cells located on the matrix diagonal show migration within the same settlement type. The most likely type of migration is from a 'core metro' municipality to 'core-metro' municipality (15,6% of internal migrations). The per cent moving within the 'large town' category is 3,8% of migrations and within secondary cities 2,9% of migrations. Each other cell represents migration that connects one type of settlement with another, which results in settlement change. The largest values can be seen in the first column, which represents migrants moving to a core-metropolitan municipality. 7,5% of internal migrants moved from a secondary city to a metropolitan municipality, 8,9% from a large town to a metropolitan municipality, 5,6% of migrations are from a small town to a metropolitan municipality: In total 42,8% of migrations are into or within a core metro municipality.

Evidence of counter flows can be seen by observing the triangle of cells in the matrix above and to the right of the diagonal. The first row represents migrations from a core-metro municipality. 5,6% of migrations are from a core-metro to a secondary city, 7,5% of migrations are from a core-metro to a large town, 2,9% of migrations are from a core metro to a small town, and 2,2% from a core-metro municipality to a mostly rural municipality. Cells in the settlement type transition matrix can be paired as flows in opposite directions, i.e. 8,9% of flows are from large towns to metros and 7,5% are in the reverse direction from core metros to large towns. This is a strong flow and counter-flow between core metros and large towns, with a small net gain for core metros municipalities of 1,4% of migrants (35 968 people) and a net loss for large town municipalities of the same number.

The pattern repeats itself and urban-ward flows tend to have counter-flows in the opposite direction, but at a smaller magnitude. The more urban municipality gains at the expense of the less-urban municipality, but substantial flows exist in both directions. The only exception is the link

between large town and secondary city municipalities which shows that 4,2% of migrations are from secondary cities to large towns and 3,4% of migrations are from large towns to secondary cities. For this case, the more urban municipality has a net loss compared to the less urban municipality, although there are also substantial flows in both directions.

The three key findings of Table 18 are as follows: (1) there is a high prevalence of migrations from a core metro municipality to a core metro municipality; (2) there is a net shift to core metro municipalities from all other settlement types; and (3) flows and counter flows exist between all settlement types. These transitions give the result that the urban municipality gains at the expense of the less urban municipality. This can be summarised as a metropolitan shift in population distribution, with large towns being the second most expanding and developing settlement types.

In subsequent tables we explore migration status and settlement transition patterns by sex and also provide a focus on the black African population. The focus on the black population is to enable a triangulation with more fine-grained migration data from a former homeland sub-district, namely, the Agincourt sub-district in rural northeast Mpumalanga.

Tables 19 and 21 provide a breakdown of internal migrant status by settlement type for males and females in the whole national population. Interestingly, the population distribution is similar for each sex with the male pattern quite comparable to the female pattern. The pattern described above for the whole population (the sexes combined), applies to the population stratified by sex. The core metropolitan municipalities accommodate by far the largest share of the males (37,2%) and females (35,5%) in the population, as compared with other settlement types. The least urban settlement types, namely the 'mostly rural' municipalities, comprise a slightly higher proportion of total females (15,7%) compared with total males (14,4%). The other settlement types show an almost equal proportion of males and females. In sum, there is a slightly higher proportion of males in the core metropolitan areas and slightly higher proportion of females in the mostly rural areas.

Tables 20 and 22 provide a breakdown by sex of the settlement type transition matrices. The patterns are not markedly different from those observed for the full population. A slight difference is that females (16,1% of female migrations) are more likely than males (15,1% of male migrations) to migrate within the core-metro settlement type.

The following six tables (Tables 23–28) represent migrant status and settlement transition for the Black population as a whole, and for both sexes. Since the Black population make up 79% of the whole population, there is not a vast difference between this and the whole population distribution. Where differences exist, it shows that the White, Coloured and Asian populations differ quite markedly from the Black population distribution.

The main difference in the population distribution of Black people compared to the whole population is that a somewhat lower proportion of the Black population (31% compared to 36,3% for the whole population) resides in core-metro areas; whereas the proportion residing in the mostly-rural settlement type is lower for the whole population (15%) and higher for the Black population (18,2%). See the breakdown by sex in Tables 25 and 27, which shows that 5,2% of Black males were internal migrants in the five years preceding the national census, and 4,4% of Black females were internal migrants in the same period.

When comparing the sex differences in settlement types for the Black population group, the Black male population is more likely to reside in a core-metro municipality (32,1%) or a secondary city (15,3%) as compared to the Black female population (30% reside in a core-metro and 14,8% in a secondary city). The propensity is reversed for the less urban settlement types with Black females more likely to reside in a small town (16,4%) or mostly rural municipality (18,9%), compared to Black males (15,4% reside in small towns and 17,4% in mostly rural municipalities).

These population group differences carry over into the migrant's settlement type transition matrix (Table 18). Migration within the core-metros shows a lower percentage of the Black population (12,2%) compared to the whole population (15,6%). However the population group differences of movement into the core-metros varies by origin place. Black males and females are more likely than the whole population to move into a core metro municipality from a small town (6,9% vs. 5,6%) and from a mostly rural municipality (6,4% vs. 5,3%). Another difference is that migration flows from the core-metro to a large town municipality is less likely for the Black population group (6,1%) compared to all population groups (7,5%). Aside from these modest differences, the Black population has a similar settlement type transition profile to the whole population.

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	Core-	Metro	Second	ary city	Large	town	Small to	uw	Mostly	rural	Unkr	uwou	Tot	al
		% of total		% of total		% of total		% of total		% of total		% of total		% of total
	z	population	z	population	z	population	а  Z	opulation	z	population	z	population	z	population
Internal migrants	1 150 327	2,26	452 812	0,89	591 009	1,16	279 666	0,55	216 682	0,43			2 690 495	5,28
Immigrants	416 859	0,82	103 264	0,20	112 312	0,22	81 059	0,16	26 529	0,05		-	740 023	1,45
Total migrants	1 567 186	3,08	556 076	1,09	703 320	1,38	360 725	0,71	243 211	0,48		-	3 430 518	6,73
Non-migrant	16 546 394	32,47	6 725 989	13,20	9 117 552	17,89	6 925 877	13,59	7 389 657	14,50	'	-	46 705 469	91,65
Unspecified	396 621	0,78	108 433	0,21	100 588	0,20	46 478	60'0	31 482	0,06	141 859	0,28	825 461	1,62
Total population	18 510 201	36,32	7 390 499	14,50	9 921 461	19,47	7 333 079	14,39	7 664 350	15,04	141 859	0,28	50 961 448	100,00

Table 18: Municipal settlement type migrants transition matrix: Males and females, all population groups

					Destinat	tion local mu	nicipality typ	ie - 2011				
	Core-	Metro	Second	ary city	Large	town	Small	town	Mostly	/ rural	Tot	al
Origin local municipality type - from 2006	z	% of total internal migrants	z	% of total internal migrants	z	% of total internal migrants	z	% of total internal migrants	z	% of total internal migrants	z	% of total internal migrants
Core-Metro	418 520	15,56	151 269	5,62	202 756	7,54	77 051	2,86	60 356	2,24	909 952	33,82
Secondary city	200 502	7,45	77 933	2,90	114 110	4,24	62 431	2,32	35 502	1,32	490 478	18,23
Large town	238 724	8,87	92 045	3,42	101 742	3,78	57 053	2,12	41 245	1,53	530 810	19,73
Small town	151 451	5,63	83 5 1 9	3,10	93 407	3,47	49 765	1,85	38 967	1,45	417 109	15,50
Mostly rural	141 129	5,25	48 045	1,79	78 994	2,94	33 367	1,24	40 612	1,51	342 147	12,72
Total internal migrants	1 150 327	42,76	452 812	16,83	591 009	21,97	279 666	10,39	216 682	8,05	2 690 495	100,00

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						Destinat	ion local muni	icipality type	- 2011					
	Core-I	Metro	Secondary	city	Large 1	town	Small t	iown	Mostly	rural	hnu	uwou	Tot	al
-		% of total	~	s of total		% of total	·	% of total	·	% of total		% of total		% of total
	z	population	N	pulation	z	population	z	population	z	population	z	population	z	population
Internal migrants	585 380	2,37	238 384	0,96	309 579	1,25	150 930	0,61	108 432	0,44	'	1	1 392 706	5,64
Immigrants	235 843	0,95	62 039	0,25	69 560	0,28	50 286	0,20	18 315	0,07			436 042	1,76
Total migrants	821 223	3,32	300 423	1,22	379 139	1,53	201 216	0,81	126 747	0,51	'		1 828 748	7,40
Non-migrants	8 167 766	33,05	3 278 586	13,27	4 377 402	17,71	3 237 720	13,10	3 411 786	13,81	'	-	22 473 259	90,94
Unspecified	193 823	0,78	54 141	0,22	49 627	0,20	22 776	0,09	14 978	0,06	73 870	0,30	409 214	1,66
Total population	9 182 812	37,16	3 633 151	14,70	4 806 167	19,45	3 461 711	14,01	3 553 511	14,38	73 870	0,30	24 711 222	100,00

Table 20: Municipal settlement type migrants transition matrix: Males, all population groups

					Destinat	tion local mu	nicipality typ	ie - 2011				
	Core-I	Metro	Second	ary city	Large	town	Small	town	Mostl	y rural	Tot	le
Origin local municipality		% of total internal		% of total internal		% of total internal		% of total internal		% of total internal		% of total internal
type - from 2006	Z	migrants	z	migrants	z	migrants	z	migrants	z	migrants	z	migrants
Core-Metro	210 159	15,09	79 049	5,68	105 538	7,58	41 423	2,97	30 666	2,20	466 834	33,52
Secondary city	100 309	7,20	40 9 10	2,94	59 817	4,30	33 158	2,38	17 909	1,29	252 103	18,10
Large town	121 060	8,69	48 583	3,49	54 087	3,88	31 347	2,25	21 089	1,51	276 167	19,83
Small town	78 770	5,66	43 895	3,15	49 125	3,53	27 399	1,97	19 345	1,39	218 534	15,69
Mostly rural	75 082	5,39	25 948	1,86	41 011	2,94	17 603	1,26	19 424	1,39	179 069	12,86
Total internal migrants	585 380	42,03	238 384	17,12	309 579	22,23	150 930	10,84	108 432	7,79	1 392 706	100,00

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						Destinat	ion local mun	icipality type	- 2011					
	Core-I	Metro	Secondary	city	Large	town	Small	town	Mostly	rural	Unk	uwou	Tot	al
		% of total	~	6 of total		% of total		% of total		% of total		% of total		% of total
	z	population	N	pulation	z	population	z	population	z	population	z	population	z	population
Internal migrants	564 947	2,15	214 428	0,82	281 430	1,07	128 736	0,49	108 249	0,41	'	1	1 297 789	4,94
Immigrants	181 016	0,69	41 225	0,16	42 752	0,16	30 773	0,12	8 215	0,03		-	303 981	1,16
Total migrants	745 963	2,84	255 653	0,97	324 181	1,23	159 509	0,61	116 464	0,44	'		1 601 770	6,10
Non-migrants	8 378 628	31,92	3 447 403	13,13	4 740 151	18,06	3 688 158	14,05	3 977 871	15,15	,	I	24 232 210	92,31
Unspecified	202 798	0,77	54 292	0,21	50 962	0,19	23 702	60'0	16 504	0,06	67 989	0,26	416 247	1,59
Total population	9 327 389	35,53	3 757 348	14,31	5 115 294	19,49	3 871 368	14,75	4 110 839	15,66	67 989	0,26	26 250 227	100,00

Table 22: Municipal settlement type migrants transition matrix: Females, all population groups

					Destinat	tion local mu	nicipality typ	e - 2011				
	Core-	Metro	Second	ary city	Large	town	Small	town	Mostl	y rural	Tot	al
Origin local municipality	Z	% of total internal	2	% of total internal	z	% of total internal	2	% of total internal	2	% of total internal migrants	2	% of total internal migrants
Core-Metro	208 361	16,06	72 220	5,56	97 218	7,49	35 628	2,75	29 690	2,29	443 118	34,14
Secondary city	100 194	7,72	37 023	2,85	54 293	4,18	29 273	2,26	17 592	1,36	238 375	18,37
Large town	117 664	9,07	43 463	3,35	47 655	3,67	25 706	1,98	20 156	1,55	254 643	19,62
Small town	72 681	5,60	39 624	3,05	44 282	3,41	22 365	1,72	19 622	1,51	198 575	15,30
Mostly rural	66 047	5,09	22 098	1,70	37 983	2,93	15 763	1,21	21 188	1,63	163 079	12,57
Total internal migrants	564 947	43,53	214 428	16,52	281 430	21,69	128 736	9,92	108 249	8,34	1 297 789	100,00

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						Destinat	ion local mun	icipality type	- 2011					
	Core-N	Aetro	Second	ary city	Large	town	Small	town	Mostly	rural	Unk	uwou	Tot	le
		% of total		% of total		% of total		% of total		% of total		% of total		% of total
	Z	population	z	population	Z	population	Z	population	Z	population	z	population	Z	population
Internal migrants	806 696	2,00	326 746	0,81	404 999	1,00	203 538	0,50	186 878	0,46	'	1	1 928 857	4,77
Immigrants	327 544	0,81	86 536	0,21	88 920	0,22	69 839	0,17	20 841	0,05		I	593 681	1,47
Total migrants	1 134 241	2,81	413 282	1,02	493 919	1,22	273 377	0,68	207 719	0,51	'	'	2 522 538	6,24
Non-migrants	11 171 650	27,64	5 587 047	13,82	7 365 591	18,23	6 123 286	15,15	7 108 204	17,59	'		37 355 778	92,43
Unspecified	238 544	0,59	76 523	0,19	66 914	0,17	35 095	0,09	28 164	0,07	89 854	0,22	535 094	1,32
Total population	12 544 434	31,04	6 076 852	15,04	7 926 425	19,61	6 431 758	15,91	7 344 087	18,17	89 854	0,22	40 413 410	100,00

Table 24: Municipal settlement type migrants transition matrix: Black males and females

					Destinat	tion local mu	nicipality typ	e - 2011				
	Core-I	Metro	Second	ary city	Large	town	Small	town	Mostl	y rural	Tot	le
Origin local municipality		% of total internal		% of total internal	• • • • • •	% of total internal		% of total internal		% of total internal		% of total internal
type - from 2006	z	migrants	z	migrants	z	migrants	z	migrants	z	migrants	z	migrants
Core-Metro	234 873	12,18	97 136	5,04	117 427	6,09	50 142	2,60	50 7 25	2,63	550 302	28,53
Secondary city	148 869	7,72	52 812	2,74	76 641	3,97	46 895	2,43	29 543	1,53	354 760	18,39
Large town	166 522	8,63	65 272	3,38	65 658	3,40	40 556	2,10	35 533	1,84	373 542	19,37
Small town	132 427	6,87	69 091	3,58	75 535	3,92	38 782	2,01	33 389	1,73	349 224	18,11
Mostly rural	124 006	6,43	42 435	2,20	69 739	3,62	27 162	1,41	37 688	1,95	301 029	15,61
Total internal migrants	806 696	41,82	326 746	16,94	404 999	21,00	203 538	10,55	186 878	9,69	1 928 857	100,00

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						Destinat	tion local mur	icipality type	- 2011					
	Core-l	Metro	Second	ary city	Large	town	Small	town	Mostly	rural	Nn	uwou	To	al
		% of total		% of total		% of total		% of total		% of total		% of total		% of total
	Z	population	z	population	Z	population	Z	population	z	population	Z	population	Z	population
Internal migrants	414 464	2,12	175 303	0,90	216 088	1,11	110 707	0,57	92 309	0,47	'	I	1 008 870	5,16
Immigrants	182 395	0,93	50 248	0,26	53 427	0,27	41 820	0,21	13 752	0,07	'	ı	341 642	1,75
Total migrants	596 859	3,05	225 551	1,15	269 515	1,38	152 527	0,78	106 061	0,54	'		1 350 512	6,91
Non-migrants	5 568 481	28,48	2 722 408	13,93	3 525 177	18,03	2 843 860	14,55	3 272 021	16,74	'		17 931 948	91,73
Unspecified	117 050	0,60	38 481	0,20	33 237	0,17	16 988	0,09	13 259	0,07	47 447	0,24	266 461	1,36
Total population	6 282 389	32,14	2 986 440	15,28	3 827 929	19,58	3 013 375	15,41	3 391 341	17,35	47 447	0,24	19 548 921	100,00

## Table 26: Municipal settlement type migrants transition matrix: Black males

					Destinat	ion local mu	nicipality typ	e - 2011				
	Core-N	Metro	Second	ary city	Large	town	Small	town	Mostly	' rural	Tot	al
		% of total	'	% of total		% of total	'	% of total		% of total		% of total
<b>Origin local municipality</b>		internal		internal		internal		internal		internal		internal
type - from 2006	z	migrants	z	migrants	z	migrants	z	migrants	z	migrants	z	migrants
Core-Metro	119 685	11,86	51 929	5,15	63 001	6,24	27 449	2,72	25 542	2,53	287 606	28,51
Secondary city	74 892	7,42	28 594	2,83	41 191	4,08	25 132	2,49	14 868	1,47	184 676	18,31
Large town	85 003	8,43	35 166	3,49	35 778	3,55	22 582	2,24	17 967	1,78	196 495	19,48
Small town	68 927	6,83	36 657	3,63	39 904	3,96	21 452	2,13	16 176	1,60	183 116	18,15
Mostly rural	65 957	6,54	22 958	2,28	36 213	3,59	14 093	1,40	17 755	1,76	156 975	15,56
Total internal migrants	414 464	41,08	175 303	17,38	216 088	21,42	110 707	10,97	92 309	9,15	1 008 870	100,00

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						Destinat	ion local mur	icipality type	2011					
	Core-I	Metro	Secondary	city	Large	town	Small	town	Mostly	rural	Unkno	wn	Tot	al
		% of total	~	6 of total		% of total		% of total		% of total		% of total		% of total
	z	population	N	pulation	z	population	z	population	z	population	z	opulation	z	population
Internal migrants	392 233	1,88	151 443	0,73	188 911	0,91	92 831	0,44	94 569	0,45			919 987	4,41
Immigrants	145 150	0,70	36 288	0,17	35 493	0,17	28 019	0,13	7 089	0,03		I	252 039	1,21
Total migrants	537 382	2,58	187 731	0,90	224 404	1,08	120 850	0,58	101 658	0,49		I	1 172 026	5,62
Non-migrants	5 603 169	26,86	2 864 639	13,73	3 840 414	18,41	3 279 426	15,72	3 836 182	18,39		ı	19 423 830	93,10
Unspecified	121 494	0,58	38 042	0,18	33 677	0,16	18 107	60'0	14 905	0,07	42 407	0,20	268 633	1,29
Total population	6 262 045	30,01	3 090 413	14,81	4 098 495	19,64	3 418 383	16,38	3 952 746	18,94	42 407	0,20	20 864 489	100,00

# Table 28: Municipal settlement type migrants transition matrix: Black females

					Destina	tion local mur	nicipality typ	e - 2011				
	Core-I	Metro	Second	ary city	Large	town	Small	town	Mostly	y rural	Tot	le
		% of total		% of total		% of total		% of total		% of total		% of total
Urigin local municipality type - from 2006	z	internal migrants	z	internal migrants	z	internal migrants	z	internal migrants	z	internal migrants	z	Internal migrants
Core-Metro	115 187	12,52	45 207	4,91	54 425	5,92	22 693	2,47	25 183	2,74	262 696	28,55
Secondary city	73 977	8,04	24 219	2,63	35 450	3,85	21 763	2,37	14 675	1,60	170 084	18,49
Large town	81 520	8,86	30 106	3,27	29 880	3,25	17 975	1,95	17 566	1,91	177 046	19,24
Small town	63 500	6,90	32 434	3,53	35 631	3,87	17 330	1,88	17 213	1,87	166 107	18,06
Mostly rural	58 049	6,31	19 477	2,12	33 526	3,64	13 069	1,42	19 933	2,17	144 054	15,66
Total internal migrants	392 233	42,63	151 443	16,46	188 911	20,53	92 831	10,09	94 569	10,28	919 987	100,00

### 10. Findings from the Health and Demographic Surveillance System

This section aims to describe and classify migration using the HDSS to differentiate a diversity of migration types, in particular, permanent migration and temporary circular (mostly labour) migration. The HDSS adds perspective because it records the temporal dynamics of migration and household membership. The migrations recorded in the HDSS can be compared to the cells in the migrant's settlement type transition matrixes that represent migration between 'mostly rural' municipalities and another settlement type, and also movements within and between 'mostly rural' municipalities.

Temporary migration, usually for work purposes, is too dynamic for cross-sectional datasets to discriminate. Yet, the temporary nature of the migration can have an influence on household structure and the relationship between migration, socio-economic status and health. A contribution of the HDSS data is that it uses a *de jure* household definition, which from an analytic perspective, adds the temporary migrants to the rural household roster. This means the HDSS sheds light on how the rural population is linked to other settlement types, which refines the understanding of the national census that was collected using a *de facto* household definition.

Permanent migrations are less common, but are also very important, especially for short distances. These are migrants who permanently cross the sub-district boundary, or move within the study site. Permanent migration has a different geography and purpose than temporary migration, as will be seen below.

### 10.1 Temporary migrants

Temporary migration profiles are given by age, sex, and over time, followed by an analysis of the geographical spread, the reasons for migration, patterns of return and remittance behaviour. A large proportion of migration in contemporary South Africa is temporary, which implies that a large proportion of the Black male population and increasingly female population are temporary migrants and physically absent from the rural household for the majority of the year. The temporary migrants return periodically, especially at month-ends, or with an irregular pattern, i.e. when it can be afforded. The temporary migrants remain connected to the rural household, but reside in urban places or farms where they can be employed. The rural household contains a

spouse or partner of the migrant, children and/or parents and grandparents. The rural household is also located where the traditional cultural milieu is maintained.

The age-sex profiles of temporary migrants are presented in Figures 49 and 50. Temporary migration is a highly prevalent activity for males and increasingly prevalent for young adult females. Figure 49 shows the male temporary migration profiles. The proportion of male temporary migration is very high: 60% of 30–49 year-olds, and 50% of males aged 20–29 or 50–59. Of the males aged 60–69 years, 27% (or one-in-four men in their 60s) are temporary migrants. This trend is stable over time. The lowest proportion of temporary migrant males is the 10–19 year-olds (8%), who are more residentially stable due to the need to attend school. Around 10% of male children aged 0–9 years are temporary migrants, most of whom accompany a parent, especially a mother, in the moves.

The profiles of female temporary migration are presented in Figure 50. The profiles show a high likelihood of female adults being temporary migrants, especially in the age group 20–59, and most prominently in the young adult age group of 20–39. In 2006/7 about 27% of 20–39 year old women were temporary migrants and in 2010/11 about 33% of 20–39 year old women were temporary migrants. Of females aged 0–19 years, about 10% are temporary migrants and these young people mostly migrate with their mothers. Older adult females are much less likely than males of the same age to be temporary migrants. Only 5% of females in their 60s are temporary migrants, compared to 27% of males in this age group; and in the older-than-70 age group women are even less likely than males to migrate, with 2% of females in this age group compared with 8% of males being classified as temporary migrants.

Table 29 shows the geographical distribution of migrants from the Agincourt sub-district. Temporary migrants tend to go much further than permanent migrants, which is true both for men and women, with almost half of temporary migrants taking the long journey to Gauteng (500 km away). Conversely, very local places are much less likely destinations for temporary migrants, because migrants are less likely to find employment in these areas. Nevertheless, 10% of temporary migrant women circulate to, and from local towns that are not far away, i.e. around 30 kilometres. An important set of destinations for temporary migrants, especially for active males, are towns in the same province (but not too close to the sub-district) i.e. Mpumalanga, and game farms in the same province and in Limpopo (the adjacent province). There are also important

destinations for within-province temporary migrants in the industrial centres along the N4 road ('same province, industrial towns'), which is an industrial development corridor that links Johannesburg with the port city of Maputo in Mozambique.

Table 30 gives reasons for temporary migration in 2007 and 2012. To improve data quality, the reasons for migration were piloted before the questionnaires were finalised, to ensure that the answer categories were relevant. An 'other, specify' option was provided in the survey to record the specifications of the reasons for migration, which was subsequently coded after the data collection. The categories are hierarchically mutually exclusive, meaning that if an activity was given as a reason for the migration then this was recorded as the main reason and other reasons were not recorded, i.e. there is one response per migrant.

The reasons provided for temporary migration are mainly for employment. Three-quarters of men migrate for work and half of female temporary migrants can be called labour migrants. These percentages stay stable over time. On average 8% of male and female migrants are circulating as temporary migrants to look for work, and this reason for migration is increasing over time for both sexes. Migrating for school or college is another increasing trend, with almost 10% of male migrants and 19% of female migrants in this category. The per cent of migrants opting to stay with another family member is low for men (4%) and higher for women (15%). A downward trend observed in female migrants is that fewer are migrating to stay with another family member. Over the decade of observation this almost halved from 19% to 12% of female migrants. As explained in the methodology section, the main reason is given for each migration; and therefore the number of reasons in the table matches the number of migrations.

Table 31 gives the annual return pattern for temporary migrants. The annual return pattern is a strong reflection of the linked character of temporary migration and provides a means to measure the strength of the links between the rural household and the temporary migrant. For both male and female temporary migrants, a frequent pattern of home return is for month-ends and holiday (with 36% of male migrants and 31% of female migrants recording this pattern); and an irregular pattern of home return (37% of male and female migrants respectively). Another quite prominent pattern of home return for the temporary migrant is to return for one main annual holiday (15% of male temporary migrants and 14% of female temporary migrants). The trend suggests that migrants' visits to rural households are becoming less regular over time. For both sexes of

migrants, an irregular pattern of home return increased in likelihood between 2007 and 2012. The pattern observed is associated with constraints in work contracts, and returns often follow traditional patterns. Key times for home visits are the year-end holidays and closure periods for companies/ places of employment (Christmas and New Year) and the Easter holidays. Migrants that are formally employed return at the end of the month to bring home the monthly income.

Table 32 provides another insight into the nature and strength of ties between temporary migrants and their origin households. Temporary migration is often a means of accessing a distant labour market and we can measure whether remittances are received by the rural household. Under the term remittance we mean cash, food, clothes or furniture. All of these items are remitted but the vast majority of remittances are in the form of cash income, with food being the next most common form. There are fewer female temporary migrants that are employed compared to men, but, conditional on employment, female migrants are slightly more likely than their male employed labour migrant counterparts to remit something back to the rural household, (with 66% of employed male migrants having remitted something compared to 70% of employed female migrants remitted something). The proportion of migrants that remitted increased slightly from 2007 to 2012.



Figure 49: Per cent male temporary migrants, Agincourt, 2006–2011



### Figure 50: Per cent female temporary migrants, Agincourt, 2006–2011

Table 29: Geographical distributior	of Agincourt	: temporary migrant	destinations, 2	007 and 2012
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Male	2007		20	12	Total		
Destination	N	%	Ν	%	N	%	
Nearby village	139	2,0	139	1,0	278	1,0	
Nearby town	597	7,0	524	5,0	1 121	6,0	
Adjacent province	560	6,0	582	6,0	1 142	6,0	
Same province	1 682	19,0	1 786	18,0	3 468	18,0	
Industrial towns same	1 207	13,0	1 632	17,0	2 839	15,0	
Main metropolis	4 273	47,0	4 398	45,0	8 671	46,0	
Other provinces	600	7,0	706	7,0	1 306	7,0	
Other country	18	0,0	14	0,0	32	0,0	
Total	9 076	100,0	9 781	100,0	18 857	100,0	
Female	20	07	20	12	Total		
Destination	N	%	Ν	%	N	%	
Nearby village	137	3,0	169	3,0	306	3,0	
Nearby town	475	10,0	536	10,0	1 011	10,0	
Adjacent province	304	6,0	353	6,0	657	6,0	
Same province	963	20,0	919	17,0	1 882	18,0	
Industrial towns same	556	12,0	808	15,0	1 364	13,0	
Main metropolis	2 206	46,0	2 509	45,0	4 715	45,0	
Other provinces	186	4,0	250	5,0	436	4,0	
Other country	6	0,0	5	0,0	11	0,0	
Total	4 833	100,0	5 549	100,0	10 382	100,0	

Male	2007		2012		Total		
Reason Category	N	%	Ν	%	Ν	%	
Looking for work	560	6,0	1 029	11,0	1 589	8,0	
Employed	7 042	78,0	7 106	73,0	14 148	75,0	
School/student	795	9,0	1 047	11,0	1 842	10,0	
Live with another family member	364	4,0	389	4,0	753	4,0	
Visit family	138	2,0	59	1,0	197	1,0	
Other reason	178	2,0	154	2,0	332	2,0	
Total	9 077	100,0	9 784	100,0	18 861	100,0	
Female	20	07	20	12	Tot	Total	
Reason Category	N	%	Ν	%	Ν	%	
looking for work	235	5,0	706	13,0	941	9,0	
Employed	2 532	52,0	2 745	49,0	5 277	51,0	
School/student	836	17,0	1 170	21,0	2 006	19,0	
Live with another family member	895	19,0	672	12,0	1 567	15,0	
Visit family	190	4,0	91	2,0	281	3,0	
Other reason	145	3,0	166	3,0	311	3,0	
Total	4 833	100,0	5 550	100,0	10 383	100,0	

### Table 30: Reasons given for Agincourt temporary migration, 2007 and 2012

### Table 31: Annual return pattern for Agincourt temporary migrants, 2007 and 2012

Male	2007		20	12	Total		
Return Pattern	N	%	N	%	N	%	
Most weekends	379	4,0	245	3,0	624	3,0	
Month end and holiday	3 144	35,0	3 638	38,0	6 782	36,0	
Main annual holiday	1 636	18,0	1 222	13,0	2 858	15,0	
Two or more school holidays	617	7,0	779	8,0	1 396	8,0	
Irregular	3 143	35,0	3 780	39,0	6 923	37,0	
Total	8 919	100,0	9 664	100,0	18 583	100,0	
Female	20	07	20	12	Total		
Return Pattern	N	%	N	%	N	%	
Most weekends	242	5,0	178	3,0	420	4,0	
Month end and holiday	1 453	31,0	1 726	32,0	3 179	31,0	
Main annual holiday	826	17,0	631	12,0	1 457	14,0	
Two or more school holidays	569	12,0	815	15,0	1 384	14,0	
Irregular	1 638	35,0	2 104	39,0	3 742	37,0	
Total	4 728	100,0	5 454	100,0	10 182	100,0	

Male	20	007 2012		12	Tot	al
Migrant remitted cash or commodity	N	%	N	%	N	%
Yes	4 523	51,0	4 955	51,0	9 478	51,0
No	4 389	49,0	4 787	49,0	9 176	49,0
Total	8 912	100,0	9 742	100,0	18 654	100,0
Female	20	07	20	12	Tot	al
Migrant remitted cash or commodity	n	%	n	%	n	%
Yes	1 741	37,0	2 143	39,0	3 884	38,0
No	3 004	63,0	3 380	61,0	6 384	62,0
Total	4 745	100,0	5 523	100,0	10 268	100,0
Male	20	07	20	12	Tot	al
Employed migrant remitted cash or commodity	N	%	N	%	N	%
Yes	4 437	64,0	4 815	68,0	9 252	66,0
No	2 498	36,0	2 254	32,0	4 752	34,0
Total	6 935	100,0	7 069	100,0	14 004	100,0
	1				[	
Female	2007		2012		Tot	al
Employed migrant remitted cash or commodity	N	%	N	%	N	%
Yes	1 653	66,0	1 994	73,0	3 647	70,0
No	833	34,0	740	27,0	1 573	30,0
Total	2 486	100,0	2 734	100,0	5 220	100,0

Table 32: Temporary migrant remittance behaviour for migrants and for employed migrants, b	y
sex	

### **10.2** Permanent migrants

Permanent migration changes one's place of permanent residence and thereby changes the structure and composition of the co-residential household. A permanent out-migration by an individual reduces the household size by one member and an in-migration increases the size of the household by the number of in-migrants that moved in.

Migration is fundamentally tied to the core processes of social, reproductive and economic life. Migration within the research population represents local mobility, which changes residence within the same village or a nearby village. This sort of migration would correspond to the cell on the diagonal of the migrants' settlement transition matrix to a migration from a 'mostly rural' to another 'mostly rural' place. Within-site migrations tend to be for a short distance and represent households and people coming together and then moving apart. Figures 51 and 52 present the age-sex profiles of within-site migration. The key social and demographic category for local mobility is young women and children. For males, the most important age group is young children (3,4% of the population per year), which represents children migrating with their mothers, and sometimes without them. Females aged 20–29 years are the most mobile (around 7% of the female population per year), while their (female) children aged 0–9 have relatively high rates of mobility (5,6% of the population per year). Other mobile age groups include females of 30–39 years (5% of the female population per year) and females of 10–19 years (5% per year). Young adult women and children are the most likely sub-group of the population to migrate within the field-site, but the trend seems to be declining over time. This could be the result of the rising prevalence of labour migration for women, which seems to be increasing in the same age groups. Local mobility represents a large proportion of couples that come together to start a family, out-migrating from their parent's home; but it also reflects the converse, dissolution of marriages and households, which result in subsequent out-migrations.

Figures 53 and 54 show the age-sex profiles of external in-migrants, which are people moving into the sub-district. These migrants have a similar structure to the profiles of permanent migrants seen above. Young adult women and children are the main social and demographic sub-groups moving into a household in the rural sub-district. The most mobile category of persons moving into the sub-district are young adult women aged 20–29 (4%), followed by male and female children aged 0–9 (approximately 3%) followed by female migrants aged 10–19 (2,5%) and 30–39 (2,5%). The migration streams coming into the field-site have a lower volume compared to within-site migration, but the age-sex structure is very similar and shows the prominence of women and children among the migrants, especially young adult women, aged 20–29, and children under age 10.

Figures 55 and 56 present the age-sex profiles of permanent out-migrants. The migration rates are lower than the rates measured for within-site and in-migration streams, but the age-sex pattern is much the same in that it shows young women and young children are the most likely to outmigrate. As with the other forms of permanent migration, rates of permanent out-migration are declining over time, which implies that women may be transitioning from permanent to temporary migration over the course of the six years of observation. Table 33 shows the geographical distribution of permanent migrants over the period 2007 to 2011. Each row represents a category of origin place for in-migration and destination place for out-migration.

The dispersion of origin and destination places for people coming into and leaving the sub-district on a more permanent basis is different from the pattern of destinations for temporary migrants. Three-quarters (75%) of male and female in-migrants come from nearby villages. There is reasonable flow of permanent in-migrants from the main metropolis back to the rural sub-district, 15% of male in-migrants and 12% of female in-migrants. On balance, there is an increasing trend of male and female migrants coming from the main metropolis and a decreasing trend of inmigrants coming from nearby towns and villages. There is a small, but increasing, flow of people migrating into the sub-district from other countries, especially Zimbabwe.

Table 34 summarises reasons given for permanent migration into the Agincourt sub-district. Permanent migrants move for a different set of reasons compared to temporary migrants. For both sexes, this type of move is mainly to live with another family member. The percentage of female in-migrants moving to start a union was stable at 30%, and moving after ending a union decreased from 7% to 6%, which does not occur in the male reasons for migration. The main reasons for females to move permanently are to live with another family member or start a union, and for males the majority of reasons for moving were to live with another family member.

### Within-site migration



### Figure 51: Per cent female permanent within-site migrants, Agincourt, 2006–2011





Figure 53: Per cent female permanent external in-migrants, Agincourt, 2006–2011







### Figure 54: Per cent male permanent external in-migrants, Agincourt, 2006–2011

Figure 55: Per cent female permanent external out-migrants, Agincourt, 2006–2011





### Figure 56: Percent male permanent external out-migrants, Agincourt, 2006–2011

## Table 33: Geographical distribution of Agincourt permanent migrants' origins/destinations,2007–2011

Origin/Destination category	Out	%	In	%	Sum	Net	Ratio Net to Out
Nearby village	21 082	76,4	21 223	75,1	42 305	141	1,0
Nearby town	2 797	10,1	2 107	7,5	4 904	-690	-25,0
Adjacent province	644	2,3	702	2,5	1 346	58	9,0
Same province	946	3,4	1 058	3,7	2 004	112	12,0
Industrial towns same province	733	2,7	746	2,6	1 479	13	2,0
Main metropolis	900	3,3	1 350	4,8	2 250	450	50,0
Other provinces	174	0,6	304	1,1	478	130	75,0
Other country	285	1,0	761	2,7	1 046	476	167,0
Unknown	29	0,1	18	0,1	47	-11	-38,0
Total	27 590	100,0	28 269	100,0	55 859	679	2,0

Male	20	07	20	011	Total		
Reason	n	%	n	%	n	%	
Looking for work	0	0,0	3	1,0	3	0,0	
Employed	24	5,0	35	6,0	59	6,0	
School/Student	5	1,0	3	1,0	8	1,0	
Live with another family member	433	87,0	480	85,0	913	86,0	
Visit family	6	1,0	0	0,0	6	1,0	
Start union	8	2,0	20	4,0	28	3,0	
End union	3	1,0	0	0,0	3	0,0	
Refugee	16	3,0	24	4,0	40	4,0	
Total	495	100,0	565	100,0	1 060	100,0	
Female	20	07	2011		Тс	otal	
Reason	n	%	n	%	n	%	
Looking for work	0	0,0	0	0,0	0	0,0	
Employed	11	1,0	7	1,0	18	1,0	
School/Student	3	0,0	6	1,0	9	1,0	
Live with another family member	478	57,0	546	59,0	1 024	58,0	
Visit family	6	1,0	1	0,0	7	0,0	
Start union	254	30,0	281	30,0	535	30,0	
End union	58	7,0	56	6,0	114	6,0	
Refugee	35	4,0	28	3,0	63	4,0	
Total	845	100,0	925	100,0	1 770	100,0	

### Table 34: Reasons given for Agincourt permanent migration, 2007 and 2011

### 11. Discussion

Keeping track of migration and household membership in space and time is a complex undertaking, but an attempt is made in this chapter, taking advantage of the triangulated research platform, to measure migration in the population at three different levels, namely, national (through the census), sub-district (through the HDSS) and temporary migration (through the HDSS). It is harder to allocate temporary migrants to a place or settlement category because, by leading this type of life, migrants traverse different settlement types. A common pairing of places traversed by temporary migrants is between a 'mostly rural' place (i.e. a rural or semi-urban household), and a metropolitan place, often to access employment. Each of the three levels, national, sub-district and temporary migrant offers a unique and valid perspective. Each offers a different frequency and scale of migration. It is worthwhile studying the three perspectives and then integrating them to get a holistic and grounded picture of what is happening with internal migration in the country.

### 11.1 National census data

In the national census each person is located at a place which falls within one of the 234 local municipalities. In a population of 51 million people there were 2,7 million who migrated internally, which makes up 5,3% of the population. The migrations in the national census represent a mix of permanent and temporary migrations, which can't easily be differentiated. The huge value of the national census is its coverage and scale. Every place in the country contributed migrants to the census database as represented in the transition matrices.

Each settlement type is shown to be important in South Africa. Metropolitan areas are the most populated but large towns are also important settlement types for a large proportion of the South African population. Core-metropolitan municipalities are the most important destinations and origin settlement type. The imbalance between the metropolitan municipality in-flows and outflows seem to imply a rapid Metropolitanisation. However, the triangulation with the sub-district data suggests that rural/ metropolitan migration flows are by and large temporary, and that large proportions of the migrant population employed in the cities have a rural base where the rest of the family lives. Metropolitan areas and the rural areas. These links are highly significant in understanding the key resource flows for poorer, rural-based households.

Upon initial inspection, the national data makes it look like there has been an explosion of the metropolitan areas, but a deeper look shows that Metropolitanisation is only part of the settlement transition dynamics taking place. Each type of settlement has flows and counter-flows between itself and other settlement types, but the more urban settlement type gains population through net-migration and the less urban settlement type loses population. Notably, there is a large imbalance between the core metros and rural settlements, with 5,3% of internal migrations taking place from rural areas to core metros and 2,2% of migrations from core metro to mostly rural settlements.

### 11.2 Temporary migration data

In the HDSS, with its *de jure* household definition, the household roster includes the temporary migrant who remains a household member while away. The temporary migrant retains a strong

link with the rural household. There are even some that don't visit often while they are working, but in the end return back to the rural area after the end of the period of employment. In this way the rural settlements retain a vital form of human, social and welfare capital and remain populated. When the out-migrant leaves the household he/she is not leaving for good. While the migrant is away he or she is still regarded as a member of the rural household in the emotional sense and family ties.

*De jure* versus *de facto* household definitions provide different perspectives on the household. The *de facto* household definition is used in the national census and the *de jure* household definition is used in the HDSS. These different perspectives are important for this analysis because they allow us to define temporary migrants and better understand the dynamic connections between rural and urban areas. Temporary migration is represented through the HDSS which has a research infrastructure in place to monitor labour migration.

Some households are linked to the city through temporary migration, mostly labour related. In the study of the population in 2011 there were 15 330 temporary migrants in a population of 90 000 people. These are the currently circulating temporary migrants. The HDSS also keeps track of the returning migrants, individuals who had previously been migrants; with the returned migrant having stopped oscillating and has now settled down back in the rural area. Through monitoring the whole population, the HDSS is also keeping track of the future migrants. Each of these temporary migration states, especially 'currently circulating', and 'return migrant' status, has a major impact on the life of the migrant and their household.

The data on remittances show that male and female temporary migrants are both quite likely to remit something back to the rural household; 51% of male temporary migrants remitted something, while 38% of female temporary migrants remitted. But fewer female temporary migrants are employed. Female temporary migration can also be for reasons relating to education or to live with another person. About a half of female temporary migrations were for reasons of employment, compared to 75% of male migrants being motivated by employment. If we take as denominator the populations of employed male and female temporary migrants, then female and male labour migrants are equally likely to remit. This recognition of the value of remittances from female temporary migrants has an important consequence for poorer households. The poorer households in a rural community are often female-headed and due to poverty women can be

forced to migrate to obtain income for the household. Remittances from female temporary migrants may not be large financially, but in the circumstance of the poverty the poorer households that transition out of poverty are the ones with a female temporary migrant linked to the household.

### 11.3 Permanent migration data

New households forming and others splitting up are a key part of on-going human production and reproduction processes. People move between households especially to start new households or join existing households or for purposes of giving support to a family member or, in the case of children, moving to better oversight and care.

For permanent migrants 27 580 out-migrations and incidents of local mobility occurred over the period 2007–2011. These were primarily women who married or entered into an informal union and moved in or out, with or without children, i.e. some young adult female migration is accompanied by children and some is not. An intriguing finding is that in relation to internal migration 5,2 % of girl children make a local move in a year, compared to 2,8% of boy children who move locally within a year.

It is possible that the levels of permanent migration are declining over time, which may be explained by a shift towards temporary migration as labour market aspirations grow for young women who increasingly become labour migrants instead of remaining home developers.

### 11.4 Public service planning shortfall in rural municipalities

Public sector services should plan in such a way that the high level of rural-urban interconnection through temporary migration is recognised. This means ensuring access to care for migrants in the destination place and in the origin population, the services should anticipate the sick labour migrants, who weren't counted by the national census in their rural household, but who will come home for care and treatment. If levels of temporary migration are known, then services in communities with a higher prevalence of temporary migration can expect the return of older, sick and sometimes dying returning migrants. Research shows that circular labour migrants of prime working age are becoming ill in the urban areas where they work and coming home to be cared for

and eventually to die in the rural areas where their families and other support structure live. This shifts the health care burden of caring for them to their families and the rural health care system, and presents significant consequences for the allocation of health care resources. An example of an intervention would be for temporary migrants to have access to an eHealth application so that their health records can be known when they consult the rural health system, back in the rural municipality where they are likely to return when they are sick and in need of care.

More broadly, the research findings outlined in this chapter further substantiate the interdependent nature of rural and urban areas across South Africa, as highlighted in the National Development Plan. These observations support the need for an integrated approach to spatial and infrastructural planning and service provision that takes account of prevailing population dynamics and trends.

### 12. Conclusions

The metropolitan areas, with their higher levels of economic productivity are the locations where employment is most likely to be found. As such they are attractive destinations for migrants. The second most attractive settlement type for migrants is 'large town' municipalities followed by secondary cities, small towns and rural areas. The 'mostly rural' municipalities include settlement types that are tribally held, i.e. former homeland areas, commercial agricultural areas and game farms.

The national pattern of settlement transition includes flows and counter-flows between settlement types. There is evidence of migration counter-flows that tend to replenish the less-urban population, although not completely. For any migration there is a place of origin and destination linking two municipalities, of the same or of different urban levels. The migration tends to result in population gain in the more urban place and loss in the less urban place. Counter-flows bring the migrants back so that although the urban place grows by net-migration, there is a circulation of people between the settlement types.

Each settlement level seems to be valued by the population, because there are various mechanisms that are keeping the population stable over time at all these levels. The metropolitan level has by far the largest share of the population and this is not surprising when you consider

how opportunities for employment are most likely found in the metropolitan areas. It also makes sense that at the time of the census, people are at their resident workplaces. The national census includes workplace migrants who were residing far from home in a large town or metropolitan area. These have been identified as temporary migrants and are described in the triangulation with sub-district data from the rural northeast.

The clearest finding in the study is the growing importance of the metropolitan municipalities; with an added presence of temporary migration that connects urban workers with rural households. The rural household remains connected to the temporary migrant and sometimes helps to get the migration going in the first place. In many situations, the household comes together to send a migrant and arranges to cope with their absence. The rural household can support the migrant and through networks of former migrants, access to employment is improved, for example, in construction, mining, factory work, domestic work, trading, etc. In return, the migrant, if they can, will transfer a remittance back to the rural household. This link between the origin household and the temporary migrant is well described in the New Economic of Labour Migration (Stark and Bloom 1985). These rural-urban connections are missed if we take no notice of the temporary nature of the rural-urban migrations.

Knowing the migration is temporary has an impact on how to think about, and plan for, South Africa in urban transition. In the urban setting we can expect the temporary migrant to reside in the cheapest accommodation available as close as possible to their workplace or to public transportation. Migrants tend to live on as little as possible to enable a remittance of income back to the rural household. In the rural municipalities, planning public services, especially health services, need to anticipate the needs of sick returning migrants.

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### **Chapter 6: Conclusion**

The findings of chapter 2 show that the seven major migration corridors in South Africa identified accommodated 63,76% of all the inter-provincial migratory moves taking place in the country during the 10-year period 2001–2011. The significance of these corridors, each accounting for more than five per cent of all such moves, for planning and policy purposes is therefore indisputable. The profiles of migrants within the ten main inter-provincial migration streams in the country indicate that females are dominant in most of these streams. Black African migrants are more dominant in most of the reported streams, yet the dominance of white migrants in the Western Cape to Gauteng stream is particularly conspicuous. Migrants in the Western Cape to Gauteng to have post-matric qualifications. It was also found that only in the case of the Western Cape to Gauteng stream the migrants were less likely to have no income at the destination than inter-provincial migrants elsewhere.

Migration is an important and complex component of population change. Analysis of data from Census 2011 in chapter 3 provided an opportunity to contribute to the knowledge of migration in the country. The overall results for individual migration regarding lifetime migration shows that Gauteng and Western Cape had the biggest gains in terms of lifetime migrants compared to the other provinces. Eastern Cape and Limpopo provinces were the biggest losers of lifetime migrants. Results also show that just above half of the people who were enumerated in Gauteng were not born in that province. The results for period migration show similar patterns to those of lifetime migration (similar provinces showing positive and negative net-migration, with North West showing a positive net migration). Results show that males migrate more than females across provinces. There seems to be signs of bi-modal peaks in the migrant age structure of the white population. Results in this study indicate that migrant households are better off than non-migrant households in all provinces except Gauteng and Western Cape.

Chapter 4 discussed international migration in South Africa, using theoretical and empirical evidence from the South African Census 2011. The chapter has shown that South Africa continues to host international migrants from various parts of the world, with migrants of the SADC countries' origin constituting the majority of the country's immigrants. There were 2 173 409 international migrants, accounting for 4,2% of the country's total population in 2011. Immigrants from Zimbabwe constituted the largest number of immigrants in the country. The mean age of
international migrants is 33,9 years, and the majority of the international migrants are in the age group 25–34 years. Males dominate international migration in 2011 (60%).

Chapter 5 used national census data to analyse migration flows between five municipal settlement types categorised as metro core, secondary city, large town, small town and mostly rural over the 5 years between 2006 and 2011. A further analysis was conducted using longitudinal data on permanent and temporary migration from the Agincourt HDSS, a rural sub-district located in Bushbuckridge, Mpumalanga. The analysis of settlement change using Census 2011 revealed that each settlement in the typology was important, with metropolitan areas being the most populated and the most significant origin and destination locations of internal migrants. However, the migration trends evident from the national census data present a combination of permanent and temporary moves. The Agincourt HDSS analysis reveals that a large proportion of migration in contemporary South Africa is temporary. There remain strong interdependencies between rural and urban areas, which should be taken into consideration in public service and spatial planning.