

**CHARACTERISTICS OF OUT-MIGRANTS FROM NYERI, MURANG'A AND
KIAMBU COUNTIES IN KENYA**

**BY
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DECLARATION

The below research project is my original work and has not been presented for a degree in any University.

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DEDICATION

This project work is dedicated to my mother who has been a pillar- For her inspiration, unceasing prayers towards the success of my school work. My family who have stood by me through all this time.

My mentors who pushed me and encouraged me through the way and all my friends who supported me along the way.

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ABSTRACT

Internal migration is an important aspect of human mobility which defines the magnitude and dynamics of spatial distribution of population, especially workers, in a country over time. The characteristics and patterns of a country's internal migration are vital indicators of the pace and process of its development. Given that migrants are key agents of change in both their home and host communities, a systematic analysis of their main characteristics is imperative. This study attempted to profile out-migrants characteristics using Kenya Census data from 1999 and 2009 in three counties of Nyeri, Murang'a and Kiambu. The study sought to answer the following research questions.: I) What are the key demographic and socio-economic characteristics of out-migrants from Nyeri, Murang'a and Kiambu counties in 1999. II) What are the key demographic and socio-economic characteristics of out-migrants from Nyeri, Murang'a and Kiambu counties in 2009. A total of 2,814,070 and 3,842,606 records from the 1999 and 2009 census respectively were analyzed. Further, 272,964 and 191,616 was representative of the out-migrants from Nyeri, Murang'a and Kiambu in 1999 and 2009 respectively. In 2009, unlike in 1999 where males held a slight likelihood of out- migration compared to females, females had an approximately 1.2 higher odd of out-migrating than males. In 1999 and 2009 all age groups showed significant likelihoods of out-migrating: those who were 25-35 old had a 0.6 higher odd of out-migrating. Respondents aged between 18-24 and 36-50 years had a 0.4 and 0.5 odd of out-migrating compared to those aged between 51-70 years for 1999 while in 2009 those who were 25-25 years old had a 0.57 higher odd of out-migrating. Respondents between 18-24 years and 36-50 years had a 0.54 and 0.41 higher odd of out-migrating compared to those aged between 51-70 years. For both 1999 and 2009 those who had some form of education showed a higher likelihood to out-migrate. In 1999 the married respondents in monogamous relationships had a 1.74 higher likelihood of out-migrating while widowed respondents had a 1.25 fold higher chance of out-migrating. In addition respondents who had never been married prior to the census are 1.1 times more likely to out-migrate. Similarly in 2009, married respondents in monogamous relationships had a 0.77 higher odd of out-migrating while those in polygamous relationships had a 0.79 odd likelihood of out-migrating. However respondents who had never been married had a 1.0 higher likelihood of out-migrating. For both 1999 and 2009, respondents in paid employment and those in unemployment had a higher odd of out-migrating. The study results show that age, sex, marital status, level of education and occupation are all statistically related to out-migration. More emphasis should be put in engaging out-migrants from Nyeri, Muranga and Kiambu in county based initiatives to control out-migration.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Migration unfolds in time and space (Malmberg,1997) and is therefore defined against thresholds of distance and time (Cwerner, 2001). Migration is defined as the movement of people from one location to another and widely associated with change of permanent place of residence. People migrate based on various predominant conditions for different reasons depending on the situation bringing about the decision. Migration selects individuals or families who possess certain social-economic, educational and demographic characteristics (Adewale, 2005).

The main cause of voluntary movement of populations amid and in national borders in the recent years is imbedded in the initial and growing inconsistency in development between and among different states. This causes and possible consequences of such movement have been seen to have social-economic, political and demographic dimensions (Heisel, 1982).

Internal migration is a key aspect of human movement that describes the extend and dynamics of spatial distribution of population, in a country over time. It is a complex phenomenon that brings about demographic, geographic, economic and sociological dimensions which in hand require a clear and deep understanding of the various issues concerning the mobility of workers from one physical location to another. The tendency to migrate is influenced by some micro variables that define the broad demographic characteristics of the individual migrants. These characteristics differ among individuals, involve a kind of stratification of people and help to explain how they respond to varying opportunities in the source and destination areas or why only some individuals move out while others do not (Mahendra and Rabi, 2013).

The seminal study on internal migration in Kenya by Ominde (1969) analyzed this subject broadly, examining four types of voluntary migration: rural-rural, rural-urban, inter-urban and urban-rural migration. This typology of internal migration types is still valid (Oucho and Gould, 1993: 259).

Ominde (1968c:185) found that in certain areas of out-migration in Kenya "the available land cannot maintain an adequate standard of living or even support improved living conditions" thus

deducing that out-migration resulted from poor agricultural lands or excessive land fragmentation and the resulting inability of available resources to support the growing population.

According to the 1979, 1989, 1999 and 2009 censuses, Nyeri, Murang'a and Kiambu districts have been major sources of out-migration. It could be suggested that the underlying reasons and characteristics of the out-migrants in these districts (now counties) had remained the same during the 1979-89 and 1989-99 intercensal periods (Central Bureau of Statistics, 2004:12-13). In the 2009 census, Central Province (where the now Nyeri, Murang'a and Kiambu counties are largely represented) had the largest proportion of lifetime out-migrants among provinces in Central Province (Kenya National Bureau of Statistics, 2012:71).

Currently, migration in Kenya is addressed through indirect policies and other decentralized funds provided to each county government and as such a more in-depth analysis of the migration factors is vital. One important feature of voluntary internal migration is the selectivity of migrants by demographic and socioeconomic characteristics among the general population with the age, sex, education and occupation being the most discussed differentials (Oucho and Gould, 1993)

1.2 Problem Statement

Migration is not the outcome of any single factor nor is the influence of a factor on migration decision uniform for all individual migrants and migrant households. Personal factors such as a person's educational attainment and skill; his knowledge of a potential destination and the receiving population; family burden, ties, the family size and dependents; economic and spatial characteristics like household income, employment opportunities and wage rates in the areas of origin and destination, ownership of farm land and business motives can be the important motivations or impediments for migration to urban locations (Mahendra and Rabi, 2013).

According to (Stillwell, 2005) the flow of migration, not limited to those of specific age groups, contain individual clusters who are motivated to migrate between regions for different combinations of reasons. Moreover, in some cases, there is little and un-reliable evidence to support the importance of a particular variable in determining a chosen destination and limited research has been undertaken to quantify its influence. These flows are affected by two broad sets of variables: the micro variables or individual characteristics which influence migration, and

macro variables or spatial characteristics of places of origin and destination which influence their relative attractiveness to push out or pull in people. Migration occurs as a result of the interaction of macro and micro-factors (Mahendra & Rabi, 2013).

Initial studies on internal migration in Kenya were heavily geared towards measurement of migration flows (Todaro, Rerapel and Harris, 1970). However, these studies did not provide details on the nature and circumstances of migration (Oucho and Odipo, 2000). Despite the fact that census, survey and registration data can be utilized to provide various insights into migration patterns and settlement, there is a noticeable lack of data directly which can relate migration flows to the pull factors underpinning the movements that take place and this has a limiting effect on explanatory analysis. (Stillwell, 2005)

Given that internal migration is influenced by various descriptive determinants with demographic characteristics such as age and sex being important selective influences. It is essential to bring out the differences between those causative factors that define migration such as marital status or employment opportunities verses factors like age or social class which have a particular selective influence on migration (Stillwell, 2005).

Characteristics of a country's internal migration are priority pointers to the pace and process of its development. Over time, this movement of people across governmental regions within any country has protracted social, economic and political implications, which may be linked to the wider changes within and across regions (Rajan, 2013).

According to the 1979, 1989, 1999 and 2009 censuses, Nyeri, Murang'a and Kiambu districts have been major sources of out-migration. Main characteristics of out-migrants from Nyeri, Murang'a and Kiambu districts are not well understood. This study therefore examined the characteristics of the out-migrants from Nyeri, Murang'a and Kiambu. This study answered the below research questions:

- I. What are the key demographic and socio-economic characteristics of out-migrants from Nyeri, Murang'a and Kiambu counties in 1999?
- II. What are the key demographic and socio-economic characteristics of out-migrants from Nyeri, Murang'a and Kiambu counties in 2009?

1.3 Objectives of the study

The overall objective of the study was to identify out-migrant characteristics from Nyeri, Murang'a and Kiambu counties based on the 1999 and 2009 Kenya Population and Housing Census data. Against this general objective, the study aims to:

1. To determine demographic and socio-economic characteristics of out-migrants from Nyeri, Murang'a and Kiambu counties combined, 1999.
2. To determine demographic and socio-economic characteristics of out-migrants from Nyeri, Murang'a and Kiambu counties combined , 2009

1.4 Justification

Nyeri, Murang'a and Kiambu are three counties located in the defunct¹ Central province. They lie in the same ecological zone, are predominantly agricultural counties and have a rural-based setting due to the district socio economic activities. According to the county fact sheets (Commission on Revenue Allocation, 2013) the three counties have the largest population and annual population rate in Central province. In addition the members of the three counties are predominantly Kikuyu, who according to the 2009 census were considered the largest ethnic group in Kenya.

This study will make a contribution to body of knowledge by identifying characteristics of out-migrants in Nyeri, Murang'a and Kiambu. The findings will help the counties to plan for social services and designing development plans and involvement of their out- migrants in county and sub-county development. The study will also provide recommendations on how to tackle rapid urban population growth, which is partly fuelled by migration of young people involved in rural-urban migration. The 1999 and 2009 census were selected as they are the most recent censuses conducted and also collected additional information on duration of residence lacking in the previous censuses.

1.5 Scope and Limitations of the Study

This study was undertaken to determine the demographic and socio-economic characteristics of out-migrants coming from Nyeri, Murang'a and Kiambu. Due to time constraints, the study did

¹ The counties were then districts whose boundaries remain the same when they assumed the county status as provided for in the Constitution of Kenya 2010.

not provide an in-depth analysis of areas where they out-migrated into. In addition, while past literature highlights various factors associated with out-migration, the study only focused on those available as provided by the 1999 and 2009 census.

CHAPTER TWO

LITERATURE REVIEW

1.1 Introduction

This chapter provides a detailed review of past attempts to study characteristics of out-migrants

1.2 Migration: Overview

Migration is the movement of a person or group of persons across a border or within a state. It encompasses movement of people regardless of length, structure or reasons.

Various scholars have studied migration for different purposes. While Sociologists have put an emphasis on social-cultural costs of migration, geographers on the other hand have stressed on the interval and its significance of migration and economists underline the financial aspect of migration (Kyaing, 2010). Within and out of the region disparities existing at the macro level coupled with lack of job opportunities resulting to poor living conditions among different individuals at micro level are seen as some reasons for migration.

Over time, migration has been an integral part of the social process of the world (Bilger and Kraler, 2005). With improved transport and tele-communication systems which are further driven by the random shift in economic and social inequalities within the world, individuals are increasingly moving across national borders in an effort to improve their own well-being and that of their family.

The main causes of voluntary movement of populations between and within national borders in recent years are entrenched within the initial and growing development difference between and among states.

According to the Kenya Population Situation Analysis (NCPD, 2013), internal migration is important and increasingly becoming even more dynamic and complex. Nonetheless, informed policy and interest on internal migration have been hampered by lack of adequate, reliable and comprehensive data, such as can be generated by national-level surveys. More research and data on all aspects of internal migration are needed to shape academic debates on the phenomenon and inform policy debates.

1.3 Demographic characteristics of out-migrants

People at the younger age group are more likely to out-migrate (Dubey et al. 2004) than persons in other age classes. Todaro, 1980 noted that out-migrants tend to be young and better educated,

in comparison to the non-migrants. This is because family strategies involve sending them off to the urban sector to harness better employment (Lucas and Stark, 1985). According to Ominde, (1968a) the returning migrants surpasses the number leaving the village past 45 years of age .

Likewise, early studies of migration in Ghana show that migrants tend to be younger, on average, than non-migrants (Caldwell, 1986). One of his studies suggests that majority of the migrants moving from the rural to urban areas are young adults and hypothesized to be between 15 and less than 34 years. Previous research has suggested that out-migrants are positively selected. Migrants are younger, unmarried, male and better educated.

Research done in six case studies in Mali, Nigeria and Tanzania shows that the great upsurge of female out-migration in recent years in Africa is contributed to them seeking job opportunities as home workers within the urban centers or in recently opened tourist hotels. This study further shows that female migration has increasingly been accepted within the society given its contribution to the family's household income through remittances. (Bah et al.,2003). A related study of Nairobi, found that that most of the female out-migrants were involved in moves from working as domestic workers from one home to another (Omogi, 1992).

In Kenya, Ominde, (1968) found migration to be more in the ages 15-44 with a peak in the age bracket 20-24. Rempel (1971) found the peak age of migration to be 20-24 years. A number of other studies confirmed migration based on age in Kenya. Oucho (1981) noted that sex ratio increased with age with a significant increase from age group 25-29 years.

A study done by Francis and Hoddinott (1993) and Francis (1995) in Kisumu district shows that from the 1930s onward, out-migration of male workers, coupled with an increased population pressure and declining yields, caused a downturn in agricultural productivity which deteriorated further due to increased out-migration.

Adieri, (2015) in his study on indirect estimation of inter-censal net migration rates in Kenya found that those regions that border Nairobi the capital city were initially characterized by high youth out-migration in search for jobs and business opportunities in the cities on one hand and movements due to population pressure to resettlement areas particularly in the Rift valley region. He also found that age specific net migration pattern among the male population in Nyeri, Murang'a, Nyandarua and Kirinyaga counties is similar. However, in Kiambu County the age net migration pattern is dissimilar to the rest of the regions which can be plausibly be explained by

its proximity to Nairobi city, thus, being a buffer zone to the city and possibly absorbing some of the immigrants who have moved into Nairobi. The massive out-flow of population aged between 25-69 years reflects the similar migration patterns for Nairobi County.

Due to pressure on land, and the incapacity of the farmland to accommodate the excess labour force, majority of people from Murang'a, Nyeri and Kirinyaga counties out-migrate in search of jobs, educational institutions and also move out to accompany their husbands. According to his study there is a reduction in the inequality between males and females in these counties, due to increase in education enrolments by both sexes, has reduced the imbalance in age-sex migration patterns (Adieri, 2015). Contrary to the findings of earlier studies (Wakajumah, 1986; Odipo, 1994), the females in Central Province were dominant in out-migration than their male counterparts.

The Centre for Domestic Training and Development reported getting female rural out-migrants a large number of them coming from Western Kenya visiting their offices in search of domestic work, (CDTD, 2014). A survey done among domestic workers who live in one of the slums in Nairobi (Mukuru) indicated that they experienced “challenges related to securing work opportunities, poor working conditions, and social problems that affect their right to work and have control over the income they earn from domestic work” (Agaya and Nzunza, 2013:7)

1.4 Socio-economic characteristics of out-migrants

Studies in Africa and Sub Saharan Africa have shown that a close knit exists between migration and education (Gould, 1982). Even in the early years it was seen that education mostly promoted movement from rural to urban areas at a longer term. (Caldwell, 1969:62). During the colonial period majority of the educated males migrated to urban areas, while the uneducated ones settled in regions where they could mine or get work in the farms. It was deduced by Lipton (1980:6) that this migration comprised of those with some form of education moving to the big cities while those without any form of education remaining in the rural areas. In almost all cases, out-migrants have higher educational attainment than non-migrants.

Equally in Ghana where great progress was made in educational development, out-migrants recorded an increased degree of school attainment than non-migrants in the 1960 and 1970 censuses (Zachariah and Cond'e, 1981). This difference is in line with rural areas having poorer prospects because they continue to lose the educated people to the urban areas. In Tanzania it

was found that when there are excessive educated workers in comparison to the available skilled jobs, the wage level declines (Barnum and Sabot, 1976).

Jorge et al. (1996) shows that the most out-migrants have higher education levels than the returning migrants. In addition, out-migration had its roots in recruitment of workers by employers for jobs in agriculture and construction showing a clear co-relation between migration and occupation.

Ravi, (2003) in his study on migration in India shows a drastic upsurge in male out-migrants to the urban areas with a large percentage of them indicating economic and seeking jobs as the key reasons for migration. According to this study most of the out-migrants constituted of employed persons and casual laborers.

In Kenya, substantial expansion of education since independence in 1963 predisposed who moves to urban centres, increasingly people who wish to take advantage of rural schooling opportunities, those seeking higher education opportunities (Oucho and Gould, 1993: 8) or those whose education best positions them to pursue household survival strategies (Findley and Williams, 1991).

Focusing on the economic characteristics of migrants, it could be observed that the poor, landless and unskilled individuals are most dominant of the overall migration streams. In Kericho for instance migrants who are mainly selected against their knowledge to be agricultural workers migrate on the grounds of low income but regular and reliable income and flight from relatively underdeveloped origins (Oucho, 1984). It was however revealed that both very rich (educated) and very poor (illiterate, landless) tend to out-migrate from rural areas (Connell et. al., 1976).

A study by House and Rempel (1980) in Kenya using census data of 1969 found that migration increased with higher level of schooling attained at both the origin and destination. A recent study by Wambugu (2011) indicates that the level of education plays a role in migration decision since it determines the type of work one will get after out-migrating. He notes that high levels of education guarantee better employment opportunities for migrants compared to lower levels of educational attainment. Most of the lower level educated migrants may be prepared to take up any job in order to survive, as per a study done in Kenya for the tea and sugar industries (Oucho, 1985).

The study by Agesa and Agesa (1999) on Kenya disputed that in the rural areas there are fewer educated women with some form of education. Due to this understanding of being less educated than the men they are then less likely to find any formal employment in the urban areas. This further makes them shy away from migrating and rather opt to remain in the rural areas. Macharia, (1997) however argues that migrants in 1990 from rural Kenya migrated to towns not so much to get official employment but to move into urban informal economy.

Ram, (2009) states that out-migrants have a higher education level than non-migrants with men having a higher level compared to women. According to the migration in Kenya migration country profile (2015), the nursing sector in Kenya has been a major source of out-migration, with a significant percentage of this nurses opting to move in search of better livelihoods.

Neo-classical economic theory views migration as a part of a cost-benefit analysis in which prospective migrants calculate their potential earnings against the costs of migrating (Sjastaad 1962; Todaro 1969). According to this perspective, out-migrants are more skilled, advantaged, and able, and are therefore positively selected with respect to attributes that improve their ability to maximize lifetime earnings should they choose to move. These characteristics include such things as education, work experience and age (Taylor and Martin 2001).

1.5 Future out-migration trends in Kenya

Migration patterns have changed of late. This may have been brought about by factors ranging from an increase in desertification, economic- globalization or augmented pauperization, with the emergence of world markets stimulating demand for both cheap and highly skilled labour (Diatta and Mbow, 1999).

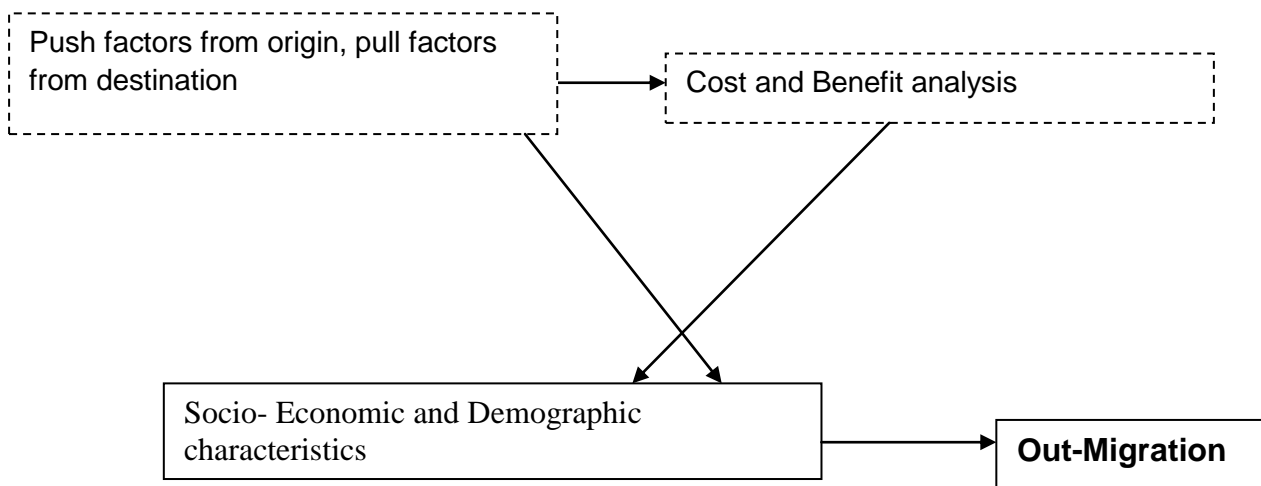
With increased literature on internal and international migration both tending to reach a common ground that financial benefits are of paramount importance in the decision to migrate it could rightly be perceived that migration acts as a reaction to financial incentives arising largely from in-balances between and within sectors of the economy, countries and regions (Adepoju, 1998).

Studies focusing on social capital and network migration help explore the reasons why some people within a country or region out-migrate while others do not (de Haas, 2008).

1.6 Conceptual and Operational Frameworks

Figure 2.1: Conceptual Framework

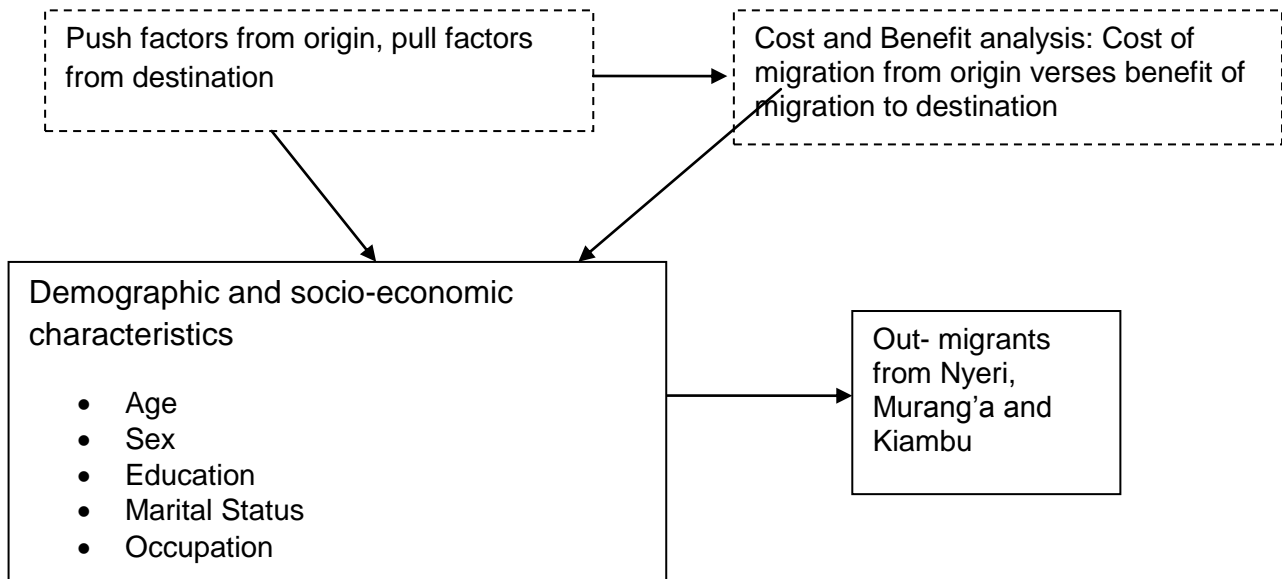
According to Todaro's (1980) individual cost-benefit model, migration is the outcome of a rational evaluation of costs and benefits of movement either at individual, household or community level. Demographic and Socio-economic characteristic such as age, marital status, sex, and occupation and education level drive a migrant's decision to out-migrate. The microeconomic models of migration assume that an individual moves with an expectation of being better off elsewhere. Hence push factors at the region of origin might influence an individual, his/her family and friends into making the decision to out-migrate. This factors can be economic which include search for higher employment, better services and education in the point of destination and non- economic which include family reunification, marriage, cultural, religious, war, natural calamities.



Source: (Adapted from Lee, (1966) and Todaro, (1980))

Figure 2.2: Operational Framework

Migrant characteristics can be divided into demographic and socio-economic. Demographic characteristics include age and sex, while socio-economic characteristics include education, occupation and marital status. This study will focus on the characteristics of out-migrants from Nyeri, Murang’a and Kiambu counties.



Source: ((Adapted from Lee, (1966))

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter outlines the source of data for the study, design, data collection method and the methods of analysis used.

3.2 Source of data

The study used 10% sample of 1999 and 2009 census data. This is the standard dataset provided by the Kenya National Bureau of Statistics (KNBS) for any individual-related study request. The overall objectives of the 1999 and 2009 population census was to collect demographic and socio-economic data for decision-making and policy formulation specifically to ascertain: (a) Population size, composition, spatial distribution; (b) Population dynamics; (c) Social, economic and other characteristics and (d) Housing conditions and amenities. The main census questions were: (a) Administrative, political, informal units; (b) Disability; (c) Maternal deaths; (d) Employment sector (formal, informal); (e) Livestock census (stock, variety); (f) Emigrants (characteristics, remittances). The 2009 census also included a section on use of information and technology (computer/internet, mobile phones). For purpose of this study, a total of 2,814,070 and 3,842,606 records were provided from the 1999 and 2009 census respectively. From the dataset 272,964 and 191,616 people were out-migrants from Nyeri, Murang'a and Kiambu in 1999 and 2009 respectively and were analyzed in this study.

3.3 Variables for the study

Age: Case range for the study was from 18-70 years. The lower limit of 18 years was used as this is the national age that individuals are considered adults and can make migratory decisions. Individuals under 18 years could not make migratory decisions and or could have to travel with their parents or guardians and there was no or minimal migration after 70+ years. This was then categorized into four groups: 18-24 years, 25-35 years, 36-50 years and 51+years. This age groups are more customized to the Kenyan context as individuals at age 18-24 years is period

when youth leave homes for college/ seek informal employment, 25-35 years are those who have finished school/could be working, looking for a job, settled/ planning to settle, 36-50 have settled and may be planning for early retirement, 51+years those who are or have retired.

Sex: Categories were male and female as obtained from the census data

Education Level: Case categories are no education, primary, secondary, college and university. All individuals who had started class one and or completed up to class eight were grouped under primary, all individuals who had joined form one and or completed form four were considered secondary and those who had completed secondary were considered college/ university. Those who had no form of education were categorized as no education.

Marital Status: Case categories were never married, married monogamous, married polygamous, widowed, divorced and separated as provided in the census data.

Occupation: Case categories are paid employment, self-employment, unemployed, student and retired.

3.3.2 Key migration variables

Key migration variables were place of birth, previous residence, duration of residence and place of enumeration and are described as follows:

P -18: Place of birth- Where were they born?; P-19: Previous residence – Where was the person living (One year before the census); P-20: Duration of residence (When did they move to the current district) and Place of enumeration.

The migration status was determined using the data on the birth place, previous and duration of residence. A cross–classification of birth place and previous residence and duration of residence was used to determine individuals who had or had not migrated. If the birth place and previous residence were similar and the individual had lived for twelve or more months in the current

residence, they were considered migrant, but those reported staying for less than twelve months were not. The variable was recoded into out-migrants and non-migrants. Migration was the dependent variable and age, sex, education, marital status and occupation were the independent variables.

3.4 Data analysis

Univariate, bivariate and multivariate analysis was undertaken as described below:

2) Univariate (Descriptive) analysis

A basic frequency description of all the variables was provided during analysis and where applicable presented in simple data summaries and frequency distributions. For this study, they have been used to describe socioeconomic and demographic characteristics of the out-migrants from Nyeri, Murang'a and Kiambu. Pie charts and bar graphs were used to present data.

3) Bivariate Analysis

Bivariate analysis using Chi-Square tests were done to determine if there existed significant associations between demographic and socio-economic characteristics and out-migration.

In addition they have been used to test for independence in contingency tables and test for goodness of fit of distributional estimates used in the study. The confidence intervals were used to determine the standard errors whereby the lower the confidence interval the less the standard errors. In this case a 95% confidence interval deduces that the model has less standard errors compared to if we had a 99% confidence interval.

4) Multivariate Analysis

Multivariate statistical analysis refers to an analysis that examines relationships among/ within multiple variables simultaneously. Multivariate procedures are used in studies that involve more than one outcome/dependent variable (in this case whether the respondent was an out-migrant or

not), more than one independent variable (in this case the variables at the bivariate level that were significantly associated with the outcome i.e. Age, sex, marital status, education and occupation). The study used logistic tests to obtain causal relationships within variables that were statistically associated at the bivariate level. Binary logistic regression was used in this study to measure the relationship between the dependent and independent variable using a logistics functions. The response variable is the probability of an individual either being an out-migrant or not. (P1: Estimated probability of out-migrating and P2: Estimated probability of not out-migrating).

CHAPTER FOUR: CHARACTERISTICS OF OUT- MIGRANTS FROM NYERI, MURANGA AND KIAMBU COUNTIES

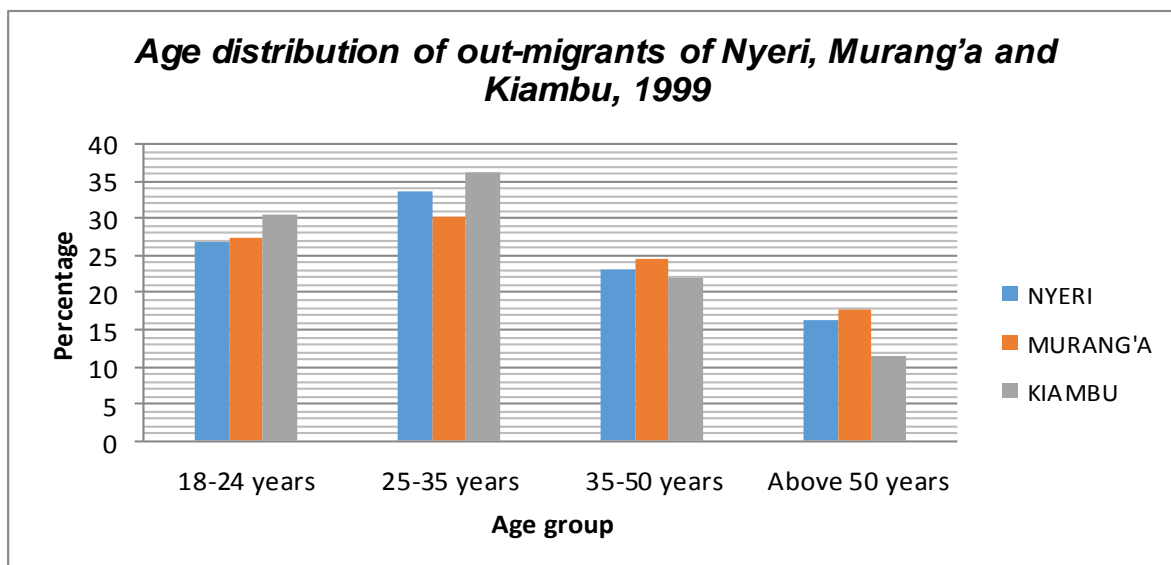
5.1 Introduction: 1999 Census Analysis

Data from 1999 census, as provided by KNBS was used. KNBS gave 10% of the total 1999 national data – 2,814,070. From this data, 272,964 individuals were out-migrants aged 18-70 years from the three counties under study: Nyeri, Murang'a and Kiambu.

5.1.1 Univariate analysis: 1999

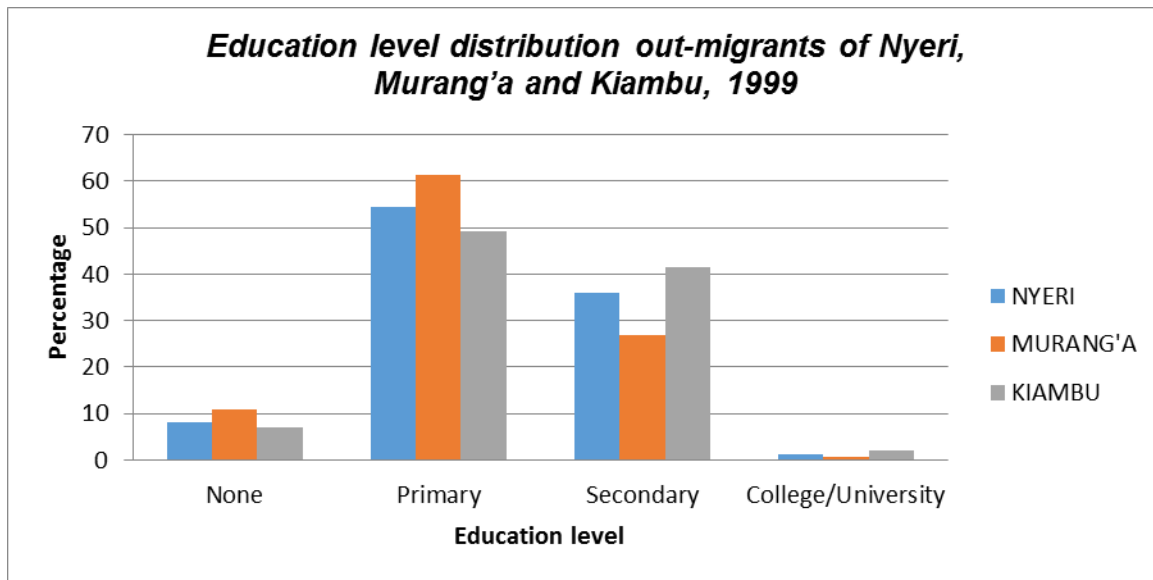
Out of the 272,964 individuals analyzed, 131,023 (48%) were male and 141,941 (52%) female. Majority of these migrants for the three counties are at the age of 25-35 years. The age distribution of the census respondents was: 29% between 18-24 years, 34% between 25-35 years, 23% between 36-50 years and 14% for 51 years or older with a median age of 34 years (inter quartile range [IQR] 23-42 years).

Figure 4.1: Age distribution of out-migrants of Nyeri, Murang'a and Kiambu, 1999



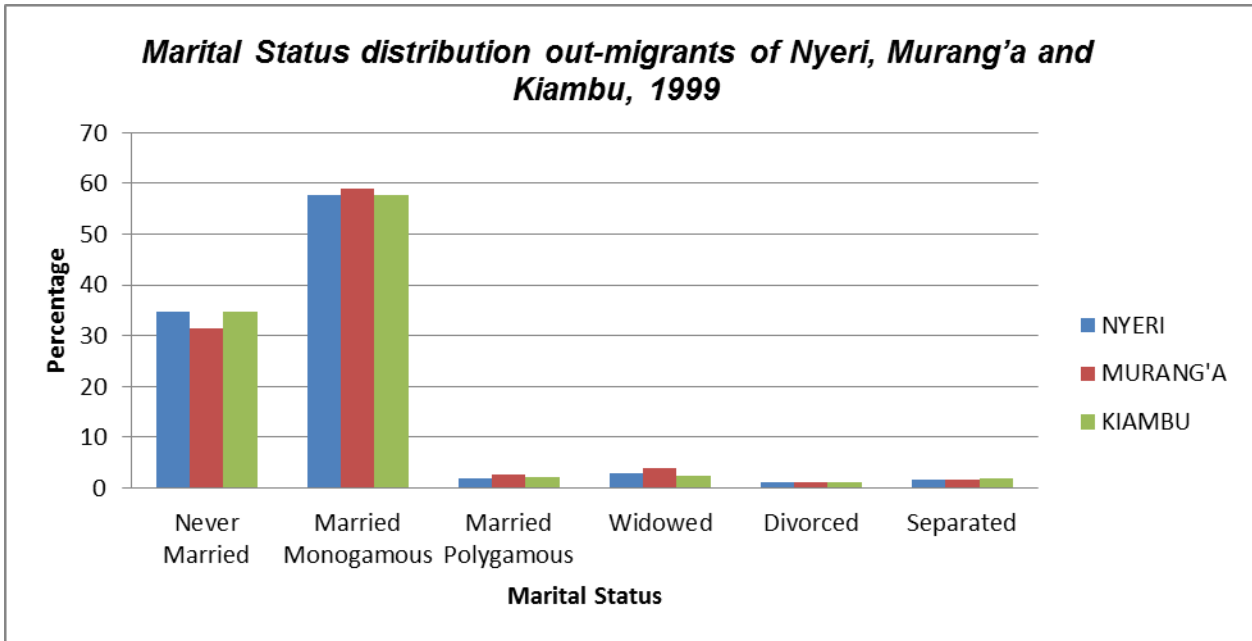
Majority of the migrants reported having some form of education having either completed primary or secondary education. At the time of the census, 8% of the respondents said that they did not have any form of education, 54% and 36% said they had some form of or had completed primary and secondary education respectively and 2% were either still pursuing or had completed college or university education.

Figure 4.2: Education level distribution of out-migrants of Nyeri, Murang'a and Kiambu, 1999



A majority of the respondents were in monogamous marriage with the next majority having never been married by the time of the census. There was a low count of those in polygamous marriages, widowed, divorced and separated from their previous unions. Of the total respondents, three out of every ten (30%) were in paid employment, just over half (53%) were in self-employment (including family held businesses), 12% were unemployed while 4% and 1% were students and in retirement respectively.

Figure 4.3 : Marital Status distribution of out-migrants of Nyeri, Murang'a and Kiambu, 1999



5.1.2 Bivariate analysis: 1999

Table 4.1 below presents the bivariate analysis of the out-migrants of Nyeri, Murang'a and Kiambu. There was statistical association between sex and out-migration ($\chi^2= 3.72$, d.f =1, $p=0.030$). There also existed a statistically significance association between a respondent's age and out-migration ($\chi^2= 154.1$, d.f =3, $p<0.001$). Similarly, respondent's education level was significantly associated with likelihood of out-migration ($\chi^2= 15.39$, d.f =3, $p=0.001$). The results also show that a respondents' marital status and their occupation were significantly related to their likelihood of out-migrating ($\chi^2= 100.5$, d.f =5, $p<0.001$ and $\chi^2= 67.78$, d.f =4, $p<0.001$) respectively.

Table 4.1: Bivariate analysis on characteristics of out-migrants of Nyeri, Murang'a and Kiambu, 1999

Variables	Out-migrant? Frequency (%)		D.F	Chi-Square.	P-values (95% CI).
	Yes	No			
A. Sex of respondents					
Male	16422 (24)	51601 (76)	1	3.72	0.030
Female	17411 (24)	56211 (76)			
B. Age of respondents					
18-24 years	8787 (22)	31842 (78)	3	154.1	<0.001
25-35 years	13758 (29)	34224 (71)			
36-50 years	8137 (25)	24473 (75)			
51-70 years	3151 (15)	17273 (85)			
C. Education level of respondents					
None	2453 (20)	9644 (80)	3	15.39	0.001
Primary	16274 (21)	60239 (79)			
Secondary	14017 (28)	36807 (72)			
College/University	1089 (49)	1122 (51)			
D. Marital status of respondents					
Never married	9318 (19)	38638 (81)	5	100.5	<0.001
Married monogamous	22003 (27)	60289 (73)			
Married polygamous	843 (27)	2252 (73)			
Widowed	762 (18)	3506 (82)			
Divorced	379 (24)	1183 (76)			
Separated	528 (21)	1944 (79)			
E. Occupation					
Paid employment	15568 (37)	26741 (63)	4	67.78	<0.001
Self-employment	12085 (16)	63237 (84)			
Unemployed	4900 (29)	1210 (71)			
Student	1120 (18)	5086 (82)			
Retired	160 (20)	648 (80)			

5.1.3 Multivariate Analysis: 1999

From the results presented in Table 4.2 below, analysis results show that males held a slight, albeit significant, higher chance of out-migrating compared to females. While holding the 51-70 years' age bracket as the reference group, individuals who were 25-35 years old had 0.6 higher odd of out-migration. Respondents aged between 18-24 years and 36-50 years had a 0.4 and 0.5 odd of moving respectively compared those aged between 51-70 years. While there was a

significant relationship between education level and out-migration, logistic regression analysis show that in actual sense, the lesser the education the respondents had, the lower the likelihood of out-migration. When compared to individuals who were or had completed college/university education, those who had attained some form of or completed primary education had a 3.8 higher odd of out-migrating .College/University individuals were used as reference as few respondents had these levels of education. Lastly, while testing for which marital status was most associated with out-migration, results show that married monogamous individuals had a 1.74 likelihood of out-migrating while widowed respondents had a 1.25 fold higher chance of out-migrating .In addition respondents who had never been married prior to the census were 1.1 times more likely to migrate the divorced had an 0.8 lower chance of out-migrating. The “separated” marital status category was used as reference due to the low number of respondents. Self-employed individuals had a 1.2 fold higher chance of out-migrating compared to retired respondents. Respondents in paid employment and those who were unemployed had a 0.42 and 0.61 odd of out-migrating; there wasn't any statistical association between students and out-migration.

Table 4.2: Multivariate analysis on characteristics of out-migrants of Nyeri, Murang'a and Kiambu, 1999

Variable	Levels	OR	95% CI Odd Ratio (OR)		P-value
			Lower	Upper	
Sex	Males	1.027	1.003	1.053	0.02
	Females	Ref	-	-	-
Age					
	18-24 years	0.454	0.435	0.474	0.010
	25-35 years	0.661	0.632	0.691	<0.001
	36-50 years	0.549	0.524	0.574	<0.001
	51-70 years	Ref	-	-	-
Education level					
	None	3.816	3.472	4.194	0.002
	Primary	3.593	3.299	3.912	0.001
	Secondary	2.549	2.340	2.776	<0.001
	College/University	Ref	-	-	-
Marital status					
	Never married	1.126	1.020	1.243	0.018
	Married monogamous	1.744	0.675	0.820	<0.001
	Married polygamous	0.726	0.641	0.822	<0.001
	Widowed	1.250	1.104	1.415	<0.001
	Divorced	0.848	0.729	0.985	0.031
	Separated	Ref	-	-	-
Occupation					
	Paid employment	0.424	0.356	0.505	<0.001
	Self-employment	1.292	1.086	1.538	0.004
	Unemployed	0.61	0.511	0.727	<0.001
	Student	1.121	0.932	1.349	0.225
	Retired	Ref	-	-	-

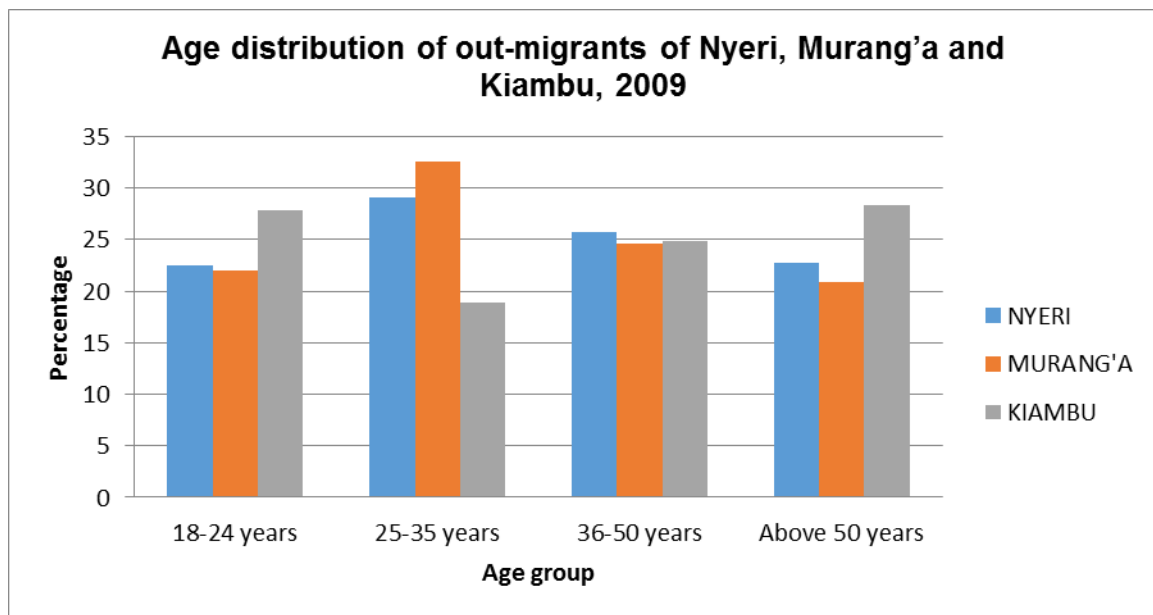
5.2 Introduction: 2009 Census Analysis

A total of 3,842,606 records (representing 10% of the total 2009 census data as provided by KNBS) were used for analysis in this section. From this data, 191,616 individuals were from the 3 counties of Nyeri, Murang'a and Kiambu.

4.2.2 Univariate analysis: 2009

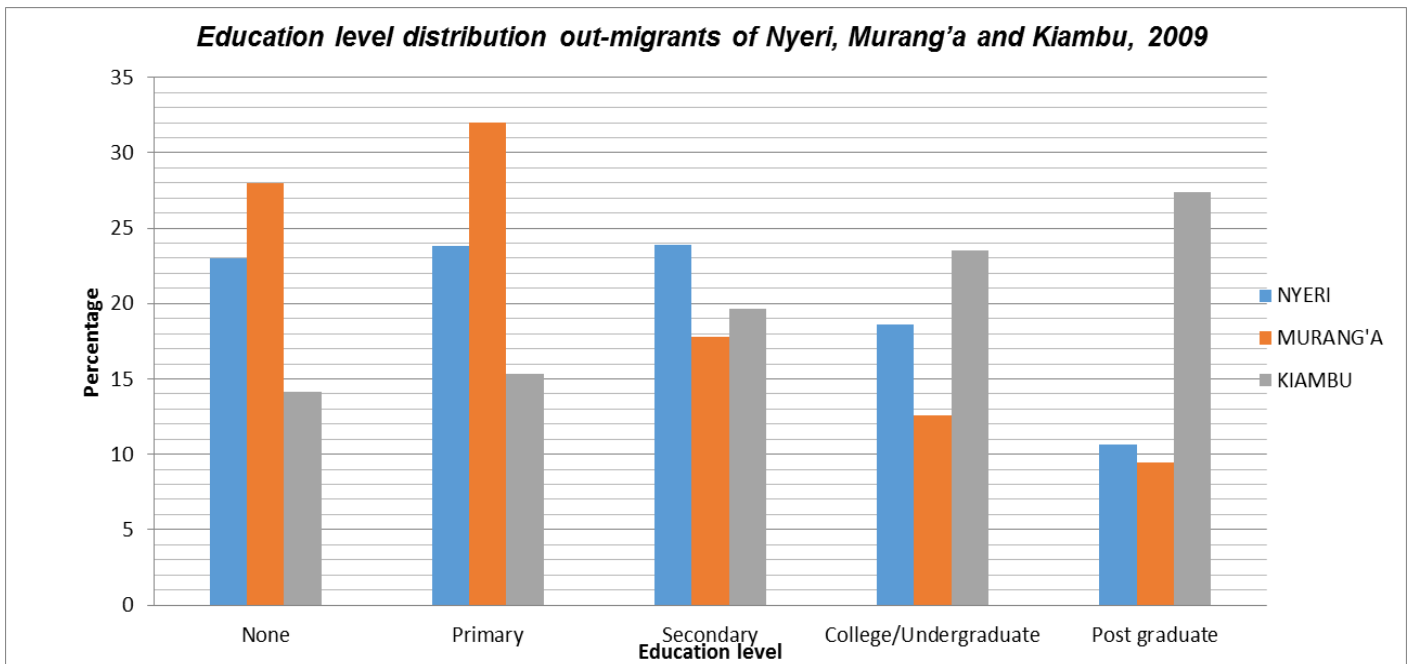
The sex segregation of respondents was: 92424 (48%) males and 99192 (52%) females. Similar to 1999, there was a high count of respondents between the ages of 25-35 years. The age distribution of respondents was: 26% between 18-24 years, 28% between 25-35 years, 26% between 36-50 years and 20% for 51 years or older. The mean age was 38 years (standard deviation [SD] 16 years).

Figure 4.4: Age distribution of out-migrants of Nyeri, Murang'a and Kiambu, 2009



Similarly to 1999, most of the respondents reported having some form of education either having completed primary or secondary level education. At the time of data collection, 7% of the respondents said that they did not have any form of education, 47% reported having some form of or had completed primary while 37% had secondary education. 9% and 0.3% of all respondents either had college/undergraduate and post graduate qualifications respectively. There is also a sign of progression in 2009 with the post-graduate option that was not available in 1999

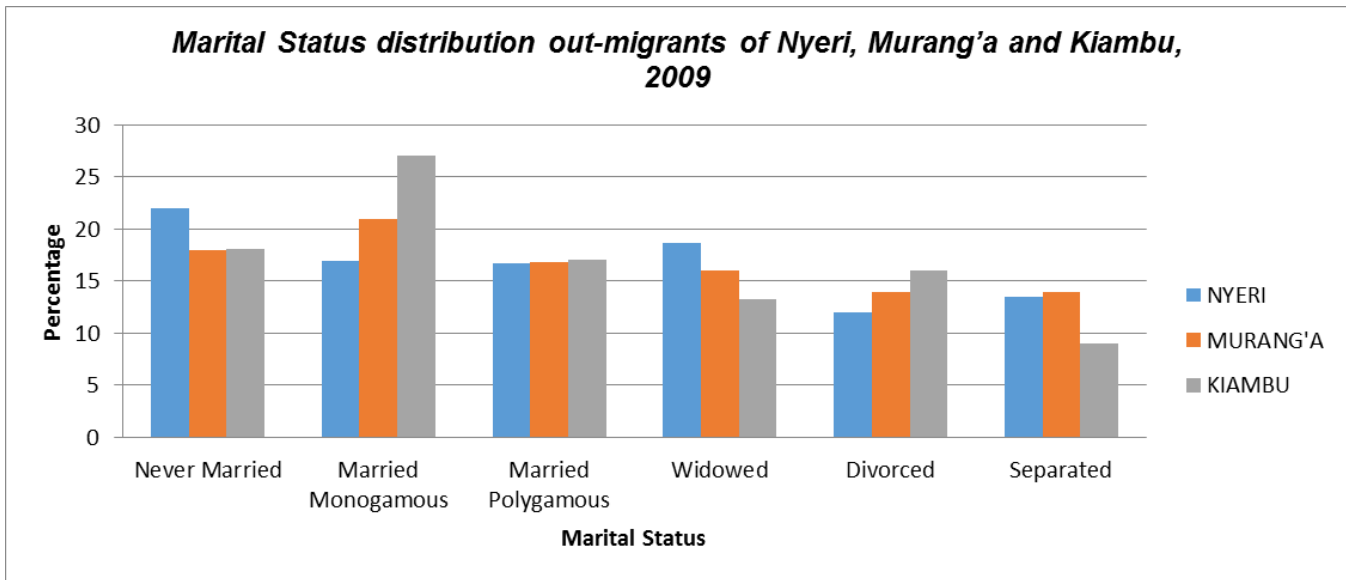
Figure 4.5: Education level distribution of by county out-migrants of Nyeri, Murang'a and Kiambu, 2009



Just like in 1999, a majority of the respondents (59%) were in monogamous marriage, 30% had never been married at the time of data collection, 2% were in polygamous marriages, 5% were widowed, 1% were divorced while 3% were separated from their previous unions as shown in figure 4.6. Self-employment was cited by 44% of all respondents as their main occupation, 32%

reported being in paid employment, 16% were unemployed at the time of the census, 6% were students while 1% were retired and individuals doing internship/apprenticeship respectively.

Figure 4.6 : Marital Status distribution of out-migrants of Nyeri, Murang'a and Kiambu, 2009



4.2.2 Bivariate Analysis

Table 4.3 presents the bivariate analysis of the out-migrants of Nyeri, Murang'a and Kiambu in 2009. There existed a significant relationship between respondent sex and out-migration ($\chi^2=28.99$, d.f=1, $p<0.001$). Similarly, a strong statistical association between a respondent's age and out-migrating was also noted ($\chi^2=363.5$, d.f =3, $p<0.001$). Chi-Square tests also show significant relationship between a respondent's education level and the likelihood of out-migration ($\chi^2=5.066$, d.f =3, $p=0.001$). Marital status was also significantly related to out-migration ($\chi^2=13.03$, d.f =5, $p<0.001$ and $\chi^2=75.64$, d.f =3, $p<0.001$) respectively. Occupation was also associated with out-migration ($\chi^2=78.31$, d.f =5, $p<0.001$).

Table 4.3: Bivariate analysis on characteristics of out-migrants of Nyeri, Murang'a and Kiambu, 2009

Variable	Out-migrant? Frequency (%)		D.F	Chi-Square.	P-values (95% CI).
	Yes	No			
A. Sex of respondents					
Male	31139 (34)	61285 (66)	1	28.99	<0.001
Female	37117 (37)	62075 (63)			
B. Age of respondents					
18-24 years	17935 (36)	32586 (64)	3	363.5	<0.001
25-35 years	23288 (43)	30707 (57)			
36-50 years	17920 (37)	31041 (63)			
51-70 years	9113 (24)	29026 (76)			
C. Education level					
None	3738 (27)	9909 (73)	4	5.066	0.001
Primary	27023 (30)	62363 (70)			
Secondary	27418 (39)	42730 (61)			
College/Undergraduate	9509 (55)	7909 (45)			
Post graduate	438 (77)	128 (23)			
D. Marital status					
Never married	17959 (31)	39675 (69)	5	13.03	<0.001
Married monogamous	44033 (39)	68933 (61)			
Married polygamous	1328 (38)	2181 (62)			
Widowed	2492 (27)	6802 (73)			
Divorced	755 (35)	1393 (65)			
Separated	1689 (33)	3476 (67)			
E. Occupation					
Paid employment	29824 (48)	31865 (52)	5	78.31	<0.001
Self-employment	22444 (26)	62913 (74)			
Internship/apprenticeship	631 (37)	1085 (63)			
Unemployed	11531 (38)	18737 (62)			
Student	3342 (30)	7787 (70)			
Retired	484 (33)	973 (67)			

4.2.3 Multivariate Analysis

Regression outputs show that in 2009, unlike in 1999 where males held a slight likelihood of out-migration compared to females, females had an approximately 1.2 times higher likelihood of out-migrating than males. Similar patterns to results obtained in 1999 were observed in the 2009 causal analysis between age and out-migration. With the 51-70 years' age bracket as the

reference group, all age groups showed significantly higher likelihoods of out-migrating: those who were 25-35 years old had a 0.57 odd of out-migrating. Respondents aged between 18-24 years and 36-50 years had a 0.54 and 0.41 odd of moving respectively compared to those aged between 51-70 years. Multinomial logistic regression of level of education and out-migration show an ordinal linear pattern. Similar to 1999 results, those who had some form of education had a higher likelihood of out-migration. In 2009, an education category of post graduate was added to those previously collected in 1999. Primary school respondents were 9 times more likely to out-migrate while the secondary school level respondents were 7 times likely to out-migrate in comparison to their post graduate counterparts respectively. Married individuals in monogamous relationships had 0.77 higher odd of out-migrating while those in polygamous relationships had a 0.79 odd likelihood of out-migrating. However, respondents who had never been married had a 1.0 higher likelihood of out-migrating. Individuals in paid employment had a 1.5 higher odd of out-migrating, those in unemployment had 0.80 higher odd of out-migration and students had a 1.1 higher odd of out-migrating. Those in self-employment had a 0.3 lower odd of out-migrating.

Table 4.4 : Multivariate analysis on characteristics of out-migrants of Nyeri, Murang'a and Kiambu, 2009

Variable	Levels	OR	95% CI Odd Ratio (OR)		P-value
			Lower	Upper	
Sex	Males	Ref	-	-	-
	Females	1.177	1.155	1.199	<0.001
Age					
	18-24 years	0.544	0.528	0.56	<0.001
	25-35 years	0.570	0.554	0.588	<0.001
	36-50 years	0.414	0.402	0.426	0.001
	51-70 years	Ref	-	-	-
Education level					
	None	6.897	6.482	9.621	<0.001
	Primary	9.071	7.423	11.085	<0.001
	Secondary	7.333	4.377	6.497	<0.001
	College/Undergraduate	2.846	2.332	2.473	<0.001
	Post graduate	Ref	-	-	-
Marital status					
	Never married	1.073	1.01	1.141	0.022
	Married monogamous	0.771	0.726	0.818	<0.001
	Married polygamous	0.798	0.73	0.873	<0.001
	Widowed	1.326	1.232	1.428	<0.001
	Divorced	0.897	0.806	0.997	0.043
	Separated	Ref	-	-	-
Occupation					
	Paid employment	1.531	0.476	0.593	<0.001
	Self-employment	0.394	1.249	1.557	<0.001
	Internship/apprenticeship	0.355	0.739	0.99	0.037
	Unemployed	0.808	0.723	0.904	<0.001
	Student	1.159	1.032	1.302	0.013
	Retired	Ref	-	-	-

CHAPTER FIVE: DISCUSSION OF RESULTS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter is divided into 3 sections. The first section discusses the study findings. The second section draws conclusions from key findings and the last section provides recommendations for both policy and research that can be drawn from the findings of the research.

5.2 Discussion of results

5.2.1 Out-migration and age

This study found that age is associated with out-migration in Nyeri, Murang'a and Kiambu; younger individuals are more likely to out-migrate than older people with high rates within the age of 25-35 with a peak at age 25 which is consistent with various past studies. In the current study for both 1999 and 2009, the out-migrants are between the ages of 25-35 years followed by those of age 36-50 noting an increase of the proportions from 1999 to 2009. A majority of studies showed that young adults were more likely to out-migrate than older people (Long 1988; Ammassari and Black, 2001). An Italian interregional migration rates study done in 2002 showed that migration rates are relatively high for children less than four years old, people who are between 20 and 34 years, while the people who migrate more are 25-29 years. The Kenya Population Situation Analysis (NCPD, 2013:205) for the 2009 census states that most migrants are young (peak of 25 years) which clearly suggests that this movement is highly likely motivated by their pursuit of employment prospects. A survey done in 10 villages in Bangladesh, (1997) shows that migration rate was found to be significantly higher for the people between ages 20-29 followed by age group (30-34) years and very minimal (<1%) for the age group (0-14) and 40 years and above. In his review of interprovincial migration that involved change in

place of residence within Canada in 2011/2012, Willbond (2014), discusses how there is age-consistent movement patterns across all provinces and territories with very few exceptions. His findings show higher out-migration among ages 20-24 years postulating socio-economic activity ventures and higher in migration between the ages 50-70 years depicting settling back due to retirement. These findings are similar to that of the current study. We can therefore conclude from this and past studies that out-migration is rampant within the age of 25-35 with a peak at age 25.

At early age's migration decisions are done at household level, unlike for young ages whereby they are perceived to be old enough to make their own decisions. For early ages, migration is dependent on the parent as they would most likely migrate with their parent and the costs are also borne by the parent /guardian. In a study for Tanzania it was noted that majority of the out-migrants moving from the rural to urban areas were below 25 years of age (Sabot, 1979). The present study does not support this position and does not consider the age of 0-18, as evidence shows that there is minimal migration at this age(s), it is involuntary, decisions are made by the parents/ guardians and or migration is with this parent or guardian.

5.2.2 Out-migration and sex

This study, similar to past studies showed that universal sex differentials were not obviously clear for Nyeri, Murang'a and Kiambu counties. In 1999 the sexes of the migrants were equally distributed and in 2009 the proportions of males insignificantly higher than the females. It is believed that males are more selective than females because males bear lower risks of vulnerability than women when out-migrating. Thomas (1938) observes that men are usually more migratory than women over long distances. According to the Uganda Population and

Housing Census (2002) the sexes of the out-migrants are equally distributed (Uganda Bureau of Statistics, 2006:16).

The current study collaborates with the above two findings, noting that in 1999 the sexes of the migrants were equally distributed and that in 2009 the proportions of males insignificantly higher than the females. The Ethiopia Population and Housing Census (2007), however found that female out-migration was slightly heavier than the male migration, 57% and 49% respectively. This could however be attributed to some internal and political issues in the country being around the time after the country's restructuring. The 1984-1989 census for Vietnam, shows a trend of male migrants outnumbering the female migrants with a reverse of this trend according to the 1999 Population and Housing Census (Fukase,2013). Closer home, the Kenya Population Situation Analysis (NCPD, 2013:204) states that though insignificant (<1), women were the majority life-time out-migrants who moved from Nairobi, Central and Rift valley provinces in 2009 census. While this study shows an insignificant higher number of males to females, we can attribute that to the smaller proportion of data provided and assume that this would be the case if 100% of the census data was used. We can thus agree that universal sex differentials are not obviously clear as noted in past studies (Oucho, 1981; Ominde, 1968).

5.2.3 *Out-migration and education level*

This study found that education is associated with out-migration in Nyeri, Murang'a and Kiambu; with those with some form of education more likely to out-migrate than those with no-form of education. Shen, 2007 in his study stated that education and migration are closely intertwined that it is close to impossible to separate them from each other anymore. Independent studies done by Barnum and Sabot, 1975; Ducoff, 1963 focusing on migrants from San Salvador

and Connell et.al., 1976 revealed that a large number of out-migrants had either little or no education or high levels of education. The present study supports this position. In 1999 and 2009, the greater proportion of the out-migrants was those some form of education (Primary level and above)

A majority of studies, one such one being a study done by Singh and Yadava, 1981b; Singh, 1985 showed that migrants have attained a higher education level than non-migrants. Thus, an increased rate of migration was found with the increased level of education. In a study by Ham (2011) the effect is negatively significant for those with lower education (here: high-school dropouts) but positively significant for the highly educated. Literature done on the Bulgarian migrants (2007) show that individuals who have finished secondary education are more likely to educate and a similar study for the same sample done in 2003 and 2001 showed that the intensity of migration was higher for the most educated. While the positive association between educational attainment and migration has been well conceived in the literature some cases of negative and weak association between the two have also been reported. This is well evidenced in the current study seeing the dropping proportions of the more educated and rising proportions of the less educated probably attributed to the desire of the highly educated to take up jobs in the newly created county governments.

A study by House and Rempel (1980) in Kenya using census data of 1969 noted that migration increased with advanced education level attained at both the origin and destination. A recent study by Wambugu (2011) indicates that the level of education plays a role in migration decision which further determines the type of work one will get after migrating. He noted that high levels of education guaranteed better employment opportunities for migrants compared to lower levels

of educational attainment. These findings are concordant with those of the current study which show higher out-migration rates among individuals with higher levels of education.

5.2.4 Out-migration and marital status

This study found that marital status is associated with out-migration in Nyeri, Murang'a and Kiambu; with those individuals who are single or mono-married likely to out-migrate than those who are married- polygamous. In conclusion, it generally is believed that the greater the number of dependents one has, the less likely one is to migrate (Ladinsky, 1967). Long (1972) found that married persons with children are less migratory than married persons without children. According to Harris and Todaro, 1970 the single are more likely to out-migrate than the married. Ladinsky, (1967) also observed that the greater the dependents one has the less likely one is to migrate. For the mono-married decisions must be made at the family level, having considerations for the spouse and children thus the reason for less migration. Another scenario for the mono-married or married however is split migration whereby one spouse migrates and the other follows later (de Laat (2005). This study agrees with this position. Most of the out- migrants are mono or poly married and split migration would explain this scenario.

According to Ammassari and Black, 2001, migration is often seen as an occurrence mainly undertaken by male's considerably single men. They however stated that for women the migration decision is in response to opportunities and constraints which is evidence in the study with the high number of women migrating. It was seen that migrant women moved primarily for family reasons particularly to join her spouse or families that may have earlier moved to the urban areas and were therefore classified as dependent on their spouses or families notwithstanding if they were financial independent or not (Yinger, 2006). In this case this would

explain the present study whereby there is an almost equal proportion of male and female migration. This would be that women are accompanying or joining their husbands.

Even if a large proportion of female migrants also pointed to migrating for economic reasons the qualitative data shows that at migration the older migrants women were mostly supplementary earners of income, following to help their husbands or to assist their families in times of trouble. Kanaiaupuni (2000:1315) notes a similar trend in Mexico by noting that ‘women sometimes migrate to generate an income but as secondary earners, they may work only in times of family hardships, providing a shock absorber effect compelled by high male unemployment and financial strain’. This could explain the present study findings of significant number of separated and divorced individuals out-migrating.

5.2.5 Out-migration and Occupation

This study found that occupation is associated with out-migration in Nyeri, Murang’a and Kiambu; showing a vertical positive correlation trend between occupation and out-migration-with those in formal employment more likely to out-migrate than the unemployed or those engaged in self or family-run businesses.

Hatton and Williamson (2003), noted that the current forces driving out-migration in sub-Saharan Africa were similar to those that drove European emigration in the late 19th century resulting in huge wage gaps between sending and receiving regions and demographic booms in the low-wage sending regions. The results of the current study suggest that rapid growth in the young age out-migrants are driven by economic growth or lack of it and population pressure on the resource base hence driving up the cost of living. In his study on young adults in Sweden, Switek (2012) showed that there was a high migration rate among the working group and points

a positive association between migration and income. Findings of the current study concur with Switek's findings.

In their study of the impact of out-migration between 1999 to 2007 on the nursing workforce in Kenya, Gross *et al*, (2011) noted that a total of 41, nurses had applied to out-migrate with 80% of the applicants holding registered diploma or nursing degrees. The current study also shows a vertical positive correlation trend between occupation and out-migration-with those in formal employment more likely to out-migrate than the unemployed or those engaged in self or family-run businesses. Macharia (2003) also showed that out-migrants from rural to urban areas continued to do even when it was known to them that they did not meet certain thresholds for formal employment.

With this in mind, it can be concluded that migration is more for economic reasons, seeing in this current study the high proportions of employed and unemployed individuals migrating out. It can thus be concluded that most migrants move out in search of better or and opportunities in the case of the unemployed. The lower migration number of the self-employed could firm up the argument that migration is for economic reasons for the fact that they are already have an economic return.

5.3 Conclusions

The study set to profile the out-migrants characteristics of Nyeri, Murang'a and Kiambu and bring our comparisons of the 1999 and 2009 census. Based on this objective, it can be noted that males although with a small statistically significant proportion are more migratory than women. Sex migration is not obviously clear, which means that we cannot establish universal sex differentials for the three counties as noted in other studies (Oucho, 1981; Ominde, 1968).

Analysis from this study uncovers a consistent pattern of age out-migrants especially between ages 25-35. This is in line with past studies by Ravenstein (1885) and Lee (1966), who also concluded that migration is age selective and that young people are more migratory.

The study findings show that age, sex, education level, marital status and occupation are all significantly related to out-migration. The results from this study have also been collaborated by several other studies conducted in similar (sub-Saharan) and non-similar settings. Migration is most with the monogamously married, a phenomenon suggestive of their disposition to shoulder family responsibilities expected of them by their spouses and children. Lastly this study also explored any similarities and differences in the out-migration patterns between 1999 and 2009. The study has clearly shown that apart from level of education which showed a significant difference in out-migration pattern, age, sex, marital status and occupation remained consistent. The notable difference in level of education between 1999 and 2009 was the decline of the proportion of out-migrating individuals with college or university declined by 25%.

5.4 Recommendations for Policy

The study findings show that age, sex, education level, marital status and occupation are all significantly related to out-migration. Most of these out-migrants from these counties are young, educated and active- human capital that are instrumental in the growth of these respective counties. Given the importance to maintain this human capital in the counties it would be important therefore for Nyeri, Murang'a and Kiambu counties to develop a migration policy to control out-migration. More emphasis should be put in engaging migrants from Nyeri, Murang'a and Kiambu in county based initiatives based on carefully crafted strategies and policies for economic development and general improvement of livelihoods.

5.5 Recommendations for Further Research

This study only analysed the out-migrant characteristics of Nyeri, Murang'a and Kiambu counties. Further research exploring other characteristics of out-migrants based on factors other than age, sex, education, marital status and occupation should be conducted. An in-depth study on the characteristics of the in-migrants to Nyeri, Murang'a and Kiambu would be important to understand how this corresponds to the characteristics of the non-migrants. In addition, a comparative study with that of other counties that lie within a different ecological zone would be useful to bring out the characteristics and any differentials with this study. Sampling few out-migrants to have face to face interviews on any other factors that may have prompted their movement to further strengthen the results would add a critical set of information to the already statistically significant factors relating to out-migration.

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