

**PARENTAL CHARACTERISTICS INFLUENCING
INDIVIDUAL EDUCATIONAL ATTAINMENT IN NAIROBI**

BY

MUTUA, NZISA. S.

UNIVERSITY OF NAIROBI

**Research Thesis submitted in Partial Fulfilment of the Degree of Master of
Arts in Sociology**

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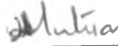
March 2004

DEDICATION

To all those who dare to dream

DECLARATION

I declare that this is my original work and has not been submitted for a degree in any other university.



Mutua, N.S

This thesis has been submitted for examination with my approval as the university supervisor.



Dr. Preston Chitere

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ABSTRACT

In recent times education has been given a priority role in its ability to offer or withhold the chance of one rising in the socio-economic hierarchy. This can be seen by the efforts the Government of Kenya makes in trying to make education available for all Kenyans.

As at independence in 1963, the government of the day endeavoured to have Africans running all the major operations of the country and thus the major emphasis in education. However in recent times there has been a steady decline in the standards of education, particularly access to secondary school education. Moreover, evidence indicates a significant relationship between family structure during childhood and their outcomes later in life. However this relationship may vary from society to society. The purpose of the study was to assess the parental characteristics in influencing the risk of one reaching secondary school in Nairobi.

A history of formal education in Kenya was reviewed that was used as a backdrop of recent events in the education sector. Various scholars' works were also analysed with several asserting that indeed there was an empirical association between children's educational attainment and family background. However these studies were conducted in rural areas thus prompting the researcher to undertake a similar study in an urban area. The study employed three theoretical perspectives that is; Socialisation theory, Modernisation theory and the Achievement Motive theory.

The study was based on biographical data obtained from Nairobi Urban Integration Project. A sample of 1065 males and females from across three generations were analysed. These were all resident in Nairobi at the time of the survey. Survival Analysis or Event History analysis where the main interest is measuring time until an event occurs (reaching secondary school) was employed for this study. Using Cox Proportional Hazards model, we estimated the effect of parents'

characteristics such as religion, parental education in the chance of one entering secondary school.

The study established that there were no differentials in the risk of entering secondary school for different ethnic groups, different migration status, sex and religion. However the findings revealed that the educational level of parents was found to significantly increase the chance of one reaching secondary school. Moreover, the generations showed differentials in the likelihood of one entering secondary school.

Given the findings of this study it is clear that the cost of education should be subsidized so as to cater for the needs of the poor. This is because in view of Structural Adjustment Policies it is increasingly difficult for parents to shoulder the burden of educating their children. Given the limitation of the data, more conclusive evidence must await a more appropriately designed study on the factors that may influence the risk of reaching secondary school.

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CHAPTER ONE

GENERAL INTRODUCTION

1.1 INTRODUCTION

The most comprehensive treatment of social mobility presents evidence that education is the critical variable in intergenerational transmission. It has been seen as one of the easiest ways to climb the social ladder. Education is one of the most important bases of social life and contributes to the individual and the society (Gakuru 1998). In recent times education is assigned a priority role for its ability to transform people as individuals and groups and to promote equality (Zamberia 1996). Evidence suggests that education's importance lies in its ability to offer or withhold the chance for one to rise in the socio-economic hierarchy. Entry into well-paid jobs in Kenya is largely on the basis of educational attainment (Gakuru 1979; Opolot et al 1987). The first government of independent Kenya's pre occupation was with the production of middle and high level manpower and to minimise the incidence of disease, poverty and ignorance. According to the World Bank (1995) Kenya spent 17.4% of its GDP on education alone. This is also manifested in the amount of money from the budget allocated to the cause of education. There is the argument that one socio-economic outcome of importance is educational attainment as it has been shown as a predictor of persistent poverty.

Since education also serves as a mechanism for selection and allocation of positions in the occupational structure, the equalisation of educational opportunities therefore contributes to the establishment of a just society (Kinyanjui 1979). Due to the steep educational pyramid and high standards of advancement, the disturbing reality is that not all those who enter the education system continue to the last stage. This is true for both rural and urban populations. In primary education level barely 47% of the students complete primary education (GoK 1997-2001)

In the city, population migration increases urban demands for educational facilities. Sociologists and

economists support the view that city life is conducive to the formation of ideas necessary for economic growth and overall development (Bradshaw 1997). This suggests that education levels are higher in the city than in the rural areas, but this is not the case all the time. Owuor (1968) contends that the early migrants to cities in Africa did not face the same situation as is today. The colonial administration argued that urban living was unsuitable for Africans. In contrast, today the situation has changed and a larger population has access to education than before. Further, early migrants to Nairobi had a lot of cultural imprints and were likely to view education in a different manner than their counterparts living in Nairobi today. This could have been brought about by the attainment of independence that increased the need to have skilled workers in order to man the new country.

Owuor (1968) holds that recent migrants to town begin to encounter urban institutions that exert pressure on them to act urban. This may entail getting an education for themselves and also aiming for higher education levels for their own children. However, evidence shows that rural forms still survive in the city meaning that people who may be modern yet still very traditional (Matsuda 1995). Mbunda(1983) asserts that the increasing demand for education and the efforts people make both individually and collectively in order to obtain education is due to the widely held belief that in education as the keystone to development. The major implication is that there could be diverging views as to the benefits of education.

The task of educating an individual lies not only with the government and the school but also should be based on the support from the family (Muthungu 1986). There is the argument that educating individuals should be seen as a two way process. In this regard, the importance of parents in determining the education of their children should be underscored. Indeed, Murenga (1998) argues that the schooling system in Kenya operates under some basic socio-cultural realities, which have a direct bearing on the education of both men and women. Evidence also suggests that the influence of parents on educational aspirations and ultimately attainment is about twice as that of teachers (Sewell 1971) It is against this

background that the study intended to explore the extent to which parental characteristics influence individual educational attainment and how this relationship has weakened or strengthened over time.

1.2 STATEMENT OF THE PROBLEM

In Kenya as in most African countries, independence detonated an explosion in the school population. With independence there has been a concerted effort on the government to encourage an egalitarian society. Education has been seen as a major determinant of a country's development and further understanding of social change (Gakuru 1992). The goal of the government at independence was to remove discrimination that was seen during the colonial era and be relevant for both men and women (Murenga 1998). However, Gakuru (1998) argues that in the recent times gross primary school enrolment rate has declined from 95% in 1989 to 77.5% in 1996. Such trends are cause to worry and this implies that there is need for experts to establish this state of affairs. The percentage completion rate has remained low and is on the decline. Indeed throughout the world it has been found that the number of illiterate individuals has increased over the last thirty years (UNICEF 1990). There has been high controversy among experts as to the factors that singly or jointly determine students' achievement; some include socio-economic background, learner's motivation, etc (Waweru 1982).

Many studies in recent years have reported significant empirical association between family structure during childhood and children's outcomes later in life (Manski 1992). Parents act as a primary reference group for individuals in relation to their educational aspirations and therefore attainment (Kariuki 1976). They act as social reinforcers of individual's educational attainment. Indeed educational attainment has important consequences for the demographic character of any population (NCPD 1998). However Kombo (1988) argues that these parental influences may vary from country to country and from environment to environment. Urbanisation especially in the Third World Countries is taking place at an alarming rate, stretching the limits of the already overburdened education system in the city. It has been considered as a process concomitant with that of industrialisation and development. However this is not

the case in developing countries where there is concern for planners and policy makers due to the accompanying poverty and its impact on the socio-cultural fabric of the society (Govinda 1995).

Evidence suggests that parents furnish some kind of work role model with which an individual can identify. Chantanavich (1990) holds that in Thailand the most important factor in individual's educational achievement was the parents' economic status. The education they themselves have received and the professions they are involved in determine this. In Kenya, research has been done in the area concerning factors that affect educational attainment (Murenga 1998, Kinyanjui 1990, Muranga 1997, Wa Mwachofi 1991). However, these studies were undertaken in rural areas therefore this prompts the researcher to try and fill this research gap by undertaking a study of an urban area such as Nairobi. Since the influence of parental characteristics varies from environment to environment a study in an urban area was critical. Govinda (1995) also argues that to overcome the weaknesses in education two disparities have attracted research attention that is male-female disparities and rural-urban disparities. However the wide disparities within the urban sphere has rarely drawn serious attention thus a study in Nairobi was vital.

Moreover, since according to NCPD (1998) younger people have attended schools than older people, there was a need to undertake a study in order to ask questions such as: is it because their home background influenced them? Is it because of the state of access to education? This helped the researcher in comparing the significance of this relationship for different generations and the underlying factors that contributed to this state of affairs. These provided pointers in understanding the role of parents in shaping an individual's life in terms of individual educational attainment. Such a study was important because the extent to which opportunities for education are contingent on the characteristics of social origin such as sex, ethnic background is a matter of great importance to the study of social stratification. This is also a pressing problem to a society that stresses on equality as a national goal. The study was guided by the following research questions.

1. How significant is the relationship between parental characteristics and individual educational attainment?
2. What are the variations in the significance of this relationship among different age groups (25-34; 35-44; 45-54 years old)?
3. What are the parental characteristics that influence individual educational attainment?

1.3 STUDY OBJECTIVES

The main goal of the study was to establish the parental characteristics that determine individual educational attainment. The specific objectives were:

To identify and analyse the parental characteristics that influence individual educational attainment

To determine the significance of the relationship between parental characteristics and educational attainment

To establish the variations of the significance of the relationship among the different generations (25-34; 35-44; 45-54 years old)

To recommend policy measures to be taken in order to improve individual educational attainment

1.4 JUSTIFICATION

Orodho (1996:12) contends that issues of education and unemployment have increasingly become critical and central to policy and planning considerations in many countries for instance Kenya. The proposed study was justified in that it sought to provide pointers as to the social aspects of individual educational attainment. The study broadly discussed the role that parents play in determining the educational attainment of their children. This is because the study was justified on the grounds that there

was a need to provide a better understanding of urban people and their educational attainment.

Secondly, the proposed study was justified in that a study using the Event-History Analysis technique has not been conducted in Nairobi. This approach involves tracing events during an individual's lifetime. It stresses on the intertwining of events in the long run and relate them in order to draw conclusions. There have been few opportunities to test the hypotheses. Event History data enables one to establish the linkages between the factors we are trying to investigate. This would provide methodological contributions to the field of sociology and add to the existing body of knowledge in the field. Thirdly, this is the era of development and all developing countries are striving for faster development (Murenga 1998). This cannot be achieved if the population is illiterate. Under the present economic circumstances to keep up pace with the wider world of education is needed. Therefore a study that would enlighten policy makers on how to improve this basic need is needed. This is because at societal level education leads to the production of manpower for the nation while at individual level it develops a person's potential to attain self-actualisation (Zamberia 1996).

Further, the schooling cycle is a very important event to analyse in an individual's lifetime. The events during one's lifetime in school are important and especially in the city where there is need to demonstrate how the city shapes individuals' lives. In particular research on educational attainment has been conducted in the rural areas (Murenga 1998; Kinyanjui 1990; Wa Mwachofi 1991). These studies have not taken into account the city and its diverseness.

A study in an urban area was justified on the grounds that it sought to explain the different conditions that city people experience and how this affects their educational attainment in the long run. Moreover, a study that compares the variations between different generations was vital in that it sought to provide pointers that explain how the city has shaped people's lives since the first migrants arrived in the city of Nairobi. The proposed study was to provide policy makers with indicators that can be used to improve

measures of poverty reduction. There was a need to explain why poverty persists and how it can best be reduced. The study's focus was on parental characteristics and the contribution they make to an individual's life in the city in terms of their educational attainment.

1.5 AN OVERVIEW OF THE NAIROBI URBAN INTEGRATION PROJECT

The study was based on a larger project, Nairobi Urban Integration Project (NURIP) conducted by the University of Nairobi and IFRA (French Institute for Research in Africa). The main purpose of Urban Integration Survey conducted in Greater Nairobi was to measure the medium or long term effects of macro-economic changes on the job market, on access to housing and on demographic behaviour. The project stressed on the intertwining of events in the long run. It has an ability to explain the interrelations between the social, economic and demographic behaviours of the population. Studies of this kind have been carried out in the capital cities of Senegal, Mali and Madagascar.

The studies employ Event History Analysis in order to determine socio-economic differences reflected in distribution of income, infrastructure, education and other services. In this technique the subject is analysed over a period of time. Therefore we are able to determine how event over time have changed their socio economic status in terms of education, housing, demographic patterns and access to employment. Such indicators are useful to governments in terms of future projections for the economy. Various aspects were covered in this particular project for instance, demographic patterns, mortality, employment and business growth, education, housing and in general the socio economic status of the residents of Nairobi.

Preliminary results indicate that in sectors such as education, employment and housing standards had drastically dropped for the younger generation as compare to the older generations. How ever

availability of basic amenities such as water and electricity had improved somewhat. The full results will be presented in due course.

The candidate based her study on the larger objectives of the NURIP project. The candidate was involved in this project from the inception to report writing.

The study analysed histories of individuals residing in Nairobi under the following groups 25-34; 35-44; 45-54 years old. Thus the study was greatly limited in that the interest is in individuals who are aged between 25-55 years old and reside in Nairobi at the time of the survey. Further the study only analysed individuals who were at risk of reaching secondary school while residing in Nairobi. The study was confined to the Greater Nairobi. The fact that only Nairobi was covered prevented the study from being representative of Nairobi.

The study was also limited in that the Greater Nairobi was not covered due to logistical problems and lack of time. This was also a potential source of biasness in the overall study.

The study was also limited due to the nature of the data that is retrospective. This kind of data is subject to many kinds of biases in terms of memory. Thus there are many implications on the kind of data that was generated.

1.6 DEFINITION OF TERMS

Educational attainment- This was the dependent variable. It referred to the probability or risk of entry into secondary school after completion of primary education and the cumulative time spent there.

Age cohort- This is a control variable. It referred to the particular generation each respondent belonged

to e.g. 25-34 years old is an age cohort.

Sex- This is also a control variable. It is the sex of the individual

Independent Variables

Parental Characteristics- This referred to the attributes of parents that may be rooted in culture or socio-economic factors. Indicators will be level of education of parents, ethnicity, and religion

Religious affiliation- This is the belief or faith that one belongs to either by conviction or by association. In our case we will refer to the religion of the respondent's mother

Ethnicity- This referred to the ethnic group to which an individual belongs e.g. Kikuyu or Kamba

Parental Education- This referred to the last level of schooling that a parent has reached

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CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter focused on the review of the currently available literature to understand the parental factors influencing individual educational attainment. Becker (1981) asserts that an individual's education is viewed as a commodity desired by the household that is produced with inputs of money income to buy market goods and services to combine with non-market time in the household production. The output is affected by the parental ability to combine these resources for ensuring achievement. Additional inputs by parents are expected to increase the child's achievement. The underlying fact is that parents view education as an important investment and thus their ability to combine resources has implications on where their children reach in terms of educational attainment. Therefore there was a need to highlight the major salient issues that arise from the viewpoint of parents affecting individuals' educational attainment.

Haralambos (1985) states that according to Durkheim, education perpetuates and reinforces homogeneity of a society by fixing an individual from the essential similarities which collective life demands. He defines education as the action exercised by the older generation upon those that are not yet ready for social life. Opolot et al (1987) hold that the importance of education lies in its ability to offer or withhold the chance to rise in the socio-economic hierarchy. Mbilinyi (1969) argues that education pushes back cultural limits and inhibitions, it widens the scope for decision making because it broadens an individual's notion of the 'possible'.

Education is divided into two categories: that which is formal and is undertaken in institutions such as schools; and that which is informal and is undertaken outside of these institutions (Muthungu 1986). The specific focus of this study will be formal education and the contribution of parents in influencing individual educational attainment.

2.1.1 A HISTORY OF FORMAL EDUCATION IN KENYA

Kenya's formal education system has its roots in the activities of European missionaries at the onset of colonial rule (Orodho 1996). At first they were concerned with spreading the Gospel and the first schools were actually prayer houses. Zamberia (1996) argues that Christian evangelism efforts followed colonialism. The communities that received the highest evangelism were the Kikuyu, Kamba, Meru, Embu and Luo.

At the establishment of colonial rule in Kenya, the colonial government reluctantly began taking part in African Education. By the end of 1929, there was African demand for education, which was not controlled by the mission. Bogonko (1992) posits that Africans wanted an education that would enable them to be on equal terms with the more educated Europeans. This prompted the establishment of Africa independent schools. But these schools were largely segregated from the white schools.

With attainment of independence for Kenya in 1963, it was clear that there were not enough skilled people to man the new state. Indeed Mbilinyi (1969) contends that in Kenya as most African nations, independence detonated an explosion in the school population. This is because growth of education was regarded as being critical in bringing about development. However, during this time Kenya inherited the educational system that was influenced by racism and unequal development (Zamberia 1996) Therefore the educational systems in developing countries such as Kenya are said to be pyramidal in nature (Opolot et al 1987). This means that very many people enrol in schools at primary level but very few reach high levels of education such as joining universities.

Convinced of the importance of education, Kenya devoted the early years of independence to the rapid expansion of educational facilities and the training of qualified personnel to man her economic and administrative division (Kombo 1988). There have been major advances in the field of education in

Kenya. But the major advances have not grown at the same pace as the increase in manpower. Despite the gains in school enrolment, there are low educational attainment levels and thus a decline in manpower (Kariuki 1976). The need for education is associated with lack of manpower.

Kenya has undoubtedly been successful in expanding the numbers enrolled in basic education (Opolot et al 1987). However this does not mean that all those who enrol in primary education are able to reach higher levels of education. There is a need to look into the cause of this state of affairs. However despite the increase in the number of schools that are in the country there are still a large number of people not reaching far in terms of educational attainment. This suggests that there are other reasons why individuals may not attain higher levels of education in Kenya and particularly in the urban areas such as Nairobi. Musgrave (1971) asserts that sharp social and economic inequalities characterise life in the cities of underdeveloped countries such as Kenya. There is need for a study to establish how these inequalities affect educational attainment of individuals.

2.1.2 ACCESS TO EDUCATION AND EDUCATIONAL ATTAINMENT

According to Chege (1983) access has to do with who obtains a place in a school and what kind of schooling attainment at the various cycles once there. Access has two dimensions a) the opportunity which refers to the supply of educational resources and b) participation which refers to the demand which is determined by the cultural, family and individual factors (Govinda 1995). For the interest of the proposed study we are going to deal with the second dimension of access that is participation. Although theoretically education plays an important part in the development of human resources, there are many obstacles that make it inaccessible to many people thereby denying them the opportunity for realisation of personal potential and meaningful participation in the social and economic life (Kinyanjui 1977; Gakuru 1998)

Studies on education support the view that access to education especially at the primary level is almost

the same for both urban and rural peoples. According to NCPD (1998), the rate of school entrance is nearly the same for boys and girls in both rural and urban settings. Trends in educational enrolments show that in primary schools the increase has been at the rate of 5.7% per year. However in the urban areas the enrolments have been significantly higher in that the rates are 21% for urban areas and 10% for rural areas (World Bank 1995). In urban areas such as Nairobi, access to education is not only by ability but also by legitimate educational and social aspirations.

An important finding in stratification research is that the children of higher social class are more likely to aspire to higher education and occupational goals than children from lower class origins. However some lower class children also achieve high-level educational and occupational goals despite the limitations imposed on them by their social class origins. Educational attainment is higher also in males than in females. While most Kenyans attend school; only a small proportion are able to continue to higher levels of education. Moreover the median of completed years of education is highest in Nairobi and Central Province (NCPD 1998)

Parent related characteristics alongside a diversity of environmental factors might influence an individual's educational attainment. Some of the variables cited are parents' educational level, economic status. Indeed Muthungu (1986) asserts that the task of educating individuals lies not only within the school but also with the family. In the family parents are the central points from which children receive education.

In the United States studies by Shah and Sewell (1965) suggest that the social status of the parents be directly related to their educational attainment. Maundu (1988) concurs with this view in his study where he found that the father's socio-economic status was a significant determinant of educational achievement at Certificate of Primary Education (C.P.E). Knight and Sabot (1990) suggest that on the cost side, educated parents generally earn more income and thus are able to finance schooling. Gakuru (1979) agrees in arguing that children from good socio-economic backgrounds tend to perform better and thus

attain higher levels of education. However Kinyanjui (1990) rejects this view in her study of Nyandarua District where she found that there was no significant relationship between parental characteristics and educational attainment. Opolot et al (1987) also holds that the socio-economic background of an individual as shown by the parents' level of education and occupation exerts a very minor influence on the aspirations or expectations of students. However these studies were conducted in rural areas. In exploring an urban area a study would establish whether there are disparities in the significance of the relationship. Ishumi (1986) asserts that to say that socio-economic background alone can help to explain the family attitude to education would be incorrect. This means that other factors alongside socio-economic ones can explain individual educational achievement.

Ethnicity is a determinant to individual's educational attainment. Chege (1983) asserts that some ethnic groups are unlikely to have positive attitudes towards education. These attitudes translate to their children who may not reach high education levels. In Kenya, through observation there is evidence that some ethnic groups have higher numbers of people with higher educational levels than those other groups. Sewell (1971) suggests that ethnic background is a matter of importance in the study of social stratification.

Murenga (1998) contends that religion is also a parental factor determining educational attainment. She argues that Muslim people tend not to send their girls to formal school preferring to send them to Quranic classes ('madrassa'). Ishumi (1983) posits that the correlation between Christianity and variables such as awareness, educational and development projects seem to be more positive than the correlation of these variables with either Islam or traditionalism. Chege (1983) also supports the view by asserting that Christians are more committed to Western education than Muslims. In his study he found that the demand for education among Maasai girls varied according to the different religious backgrounds of the parents. Children from Protestant homes dominated participation in education than children from Catholic homes. Christianity provides a framework of attitudes that stress the importance

of literacy. This is evident in that inland people who embraced Christianity tend to attain higher educational levels than the coastal people who are predominantly Muslim. But this may not always be true. Therefore religion has to be gauged against the more determinant historical and economic settings against a modern background of a society in the city.

Evidently, there is a difference in access to education for different generations. There have been a lot of changes in terms of policy as far as education concerned since the independence of Kenya in 1963 (Bahemuka et al 1998). In early independence days there was free education. However from the Early 1980s cost sharing policies were introduced and they have had a lot of impact on parents' ability to educate their children. Responsibility of educating of individuals has been shifted from the government to parents therefore different generations have had different experiences in terms of the extent to which parental characteristics influence individual educational attainment

According to Matsuda (1983) the city is the social field where the heterogeneous, differentiated population in terms of culture, social system and socio-economic status co-exist. This means that in the urban setting such as Nairobi there is cultural mix. These people are more likely to interact with others who are different from them. This may make individual change their way of thinking over time. It is also true that in the urban setting modern lifestyles may be more influential as regards individual educational attainment. This means that, culture and tradition do not have a place in the urban setting where the pull to modernise is greater. It is also true that with the recent and rapid growth of cities many inhabitants do not possess the urban tradition and may integrate poorly with the new environment. In the light of the foregoing there is need for a study to establish what the significance of this relationship has been for the different age groups.

2.1.3 CHANGES IN EDUCATIONAL POLICY IN KENYA

Since independence, Kenyan education has been regarded as a vehicle for national unity. Providing

quality, relevant and equitable education is a challenge. Kenya's commitment to the goal of basic education for all is motivated by the recognition of education as a basic human right. Since independence there have been several policies regarding education and these have implications on the ability of parents to educate their children. These include:

(a) 1964- Kenya Education Commission (Ominde Report)

The commission sought to establish and recommend ways of incorporating the educational needs of children and adults as well as have regard to resource allocation in the education sector. It recognized the contribution of primary education to economic progress and recommended free primary education. A local tax that was capable of replacing school fees was evolved.

(b) 1976-Report of the National Committee on Educational Objectives and Policies (Gachathi Report)

It recommended policies that gave consideration to national unity, economic, social and cultural aspirations of people. There was a need to relate education to employment. It recommended a basic education of nine years.

(c) 1988- Report of the Presidential Working Party on Education and Manpower training for the Next Decade and Beyond (Kamunge Report)

There were recommendations for provision and expansion of education, training and research, effective management and supervision, coordination and harmonization, financing and maintenance of quality and relevance. Girls were encouraged to go to school. Opportunities for girls in secondary schools were encouraged in order to enable them to study technical subjects.

(d) 1997- Master Plan on Education and Training: 1997-2010.

It reviewed existing policies, strategies and objectives.

In 1988, the Kenyan government under Structural Adjustment Programmes implemented the cost sharing policy in the provision of social services including education. Although the policy was meant to revitalize planning and management of education it also left parents to meet the recurrent

costs e.g. maintenance. Prohibitive fees and other levies have had a negative impact on access. The cost sharing policies within the context of existing poverty levels led to the decline in enrollments. Parents are unable to afford education for their children. Source (Koech Report 1999). From the foregoing, it is discerned that parents' influence as to how far their children reach in terms of education must be looked at from the larger policy framework of education that has been in Kenya since independence. These ultimately have great implications as to parents' ability to educate their children.

2.2 THEORETICAL FRAMEWORK

Singleton et al (1988) hold that all empirical studies should be grounded on theory. A theory is hypothetical deductive system because it states deductive connections among hypotheses. It is a set of interrelated concepts; definitions and proportions that present a systematic view of phenomena by specifying relations between variables, with the purpose of explaining and predicting the phenomena (Kerlinger 1964). A theoretical framework is essential to the understanding of factors that may influence or are associated with an identified problem. In the study the following theories were used:

2.2.1 SOCIALISATION THEORY

Socialisation is said to be the process through which the young are prepared for adult membership. The main argument behind this theory is that human behaviour is learned behaviour. The theory seeks to explain human behaviour and the social learning process underlying it. The theory holds that apart from that which is instinctual; all forms of human behaviour and thought are socially learned (Broom and Selznick 1955). Further, Elkin (1972) argues that socialisation is a continuous process in which an individual is socially developed so that he acquires and internalises ideas and values relevant for action in the society. This means that socialisation induces some degree of conformity to the rules of the society or group that he belongs.

The process of socialisation is what makes up a people's culture. It ensures the survival and continuity of the community in the sense that individuals acquire knowledge and skills in order to enter a succession of different worlds; in each he assumes a new role that is a modification of the previous role. In the process of socialisation, certain values become embedded in people's perceptions about what is the correct way to act in particular situations (Murenga, 1998). Socialisation performs two functions: first it gives skills of acting which are distinct to a given society. Secondly, socialisation reinforces established patterns, helps in the adoption of new ideas and ensures minimal deviations (Haralambos 1985).

Socialisation is that process through which individuals acquire knowledge, motives, norms, beliefs, skills and other characteristics expected in groups of which they are or seek to become members (Elkin, 1972).

Socialisation functions to ensure the survival and continuity of the community in the sense that people learn the skills that enable them to participate as members of the groups and the society (Haralambos 1985). An individual is socialised by many agencies: the family, school, peers and in their occupation. Mussen (1984) contends that in the childhood years the family is the major socialising agent. Parents are responsible for socialisation and the neighbourhood and the wider culture in which the family resides influence the socialisation practices. Socialisation is an ongoing affair that continues through the individual life cycle. In this study the theory answered the following question: To what extent do parental characteristics influence individual educational attainment?

2.2.2 MODERNISATION THEORY

Steward (1967) argues that modernisation is used to designate socio-cultural transformations that result from factors and processes that are distinctive of the contemporary industrial world. Modernisation is based on the notion that societies move from less developed into developed societies. The theory posits an original state of underdevelopment, which can be changed. It regards Western society as the ideal, and the development process as a matter of becoming more like the West (Ake, 1988). Modernisation is a

process that focuses on changes. Modernisation is more than just assimilation of the traditional state. It consists of the processes by which qualities unique to the modern world affect any component of urban or rural populations. It results in a culture change in that it may signify increases in culture trait content and richness within an unchanging structure. This process is adopted or rejected through secondary socialisation. Lerner (1968) defines modernisation as the process whereby less developed societies change to become developed societies over time. Western education is a tool for modernisation and some modernisation theories emphasise on cultural change. These changes may affect education, role allocation and lifestyle. Urban areas have changed due to this. If an individual is to be modernised, then he should be ready for new experience and ready for innovation. McClelland (1953) argues that changes and rationality make an individual adapt to modernisation. This is because modernisation creates desires for a better life. In Kenya modernisation was viewed in terms of attaining Western education. As traditional societies begin to modernise education improves especially in the urban areas. Formal education becomes important, as it is a means to a bright future. This is evident in the way Kenyans try and make sure their children receive as much education as possible in the city. This theory is based on the notion that there is a causal link between modernising institutions such as mass media, education, modern value and economic development (Gakuru 1998). However Kinyanjui (1970) criticises the theory in that it fails to put the development of the Third World in the international context where the process is taking place. The theory is also criticised for being western-centric in its view of developing societies. The theory shows that urban centres in Third World will become like those of the West. In conclusion in this study answered the following question: In light of modernity, to what extent do parental characteristics influence individual educational attainment?

2.2.3 ACHIEVEMENT MOTIVE

This is a procedure was devised by David McClelland (1953). Achievement is the desire to do well; to attain an inner feeling of personal accomplishment in all their undertakings (Lambert 1971). McClelland's hypothesis is that 'achievement motivation is in part responsible for economic growth'

(Sills, 1970). He demonstrated that the motivational state of an individual could be diagnosed using a content analysis of his imaginative behaviour. Preliminary evidence shows that achievement on middle class American boys is related to parental encouragement of self-reliance and mastery early childhood. Indeed Secord and Backman (1964) argue that child-rearing practices are associated with achievement. Studies of how parents rear their children based on the reports of parents and ethnographic data identify some key factors in the development of the achievement motive (Sills 1970). McClelland asserts that achievement is higher among educated people and higher among Catholics than Protestants.

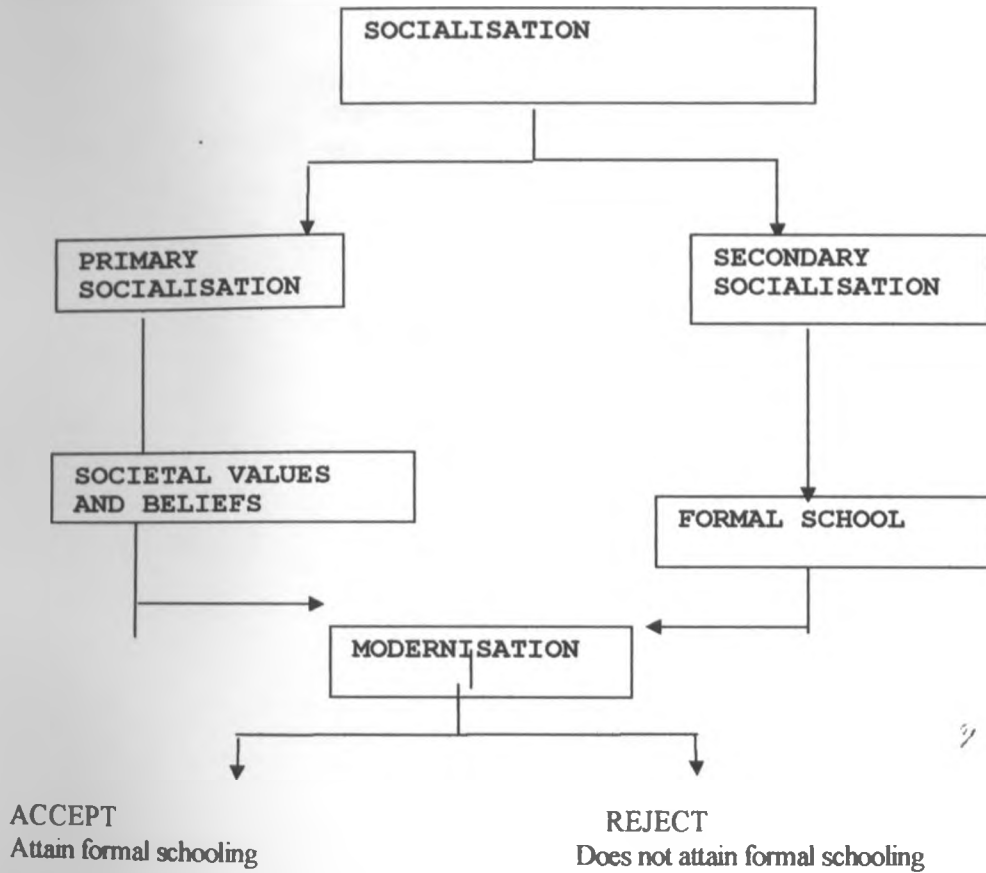
That McClelland suggested that Weber's hypothesis concerning the influence on the development of the capitalism of the protestant ethic, which encouraged this kind of training, might be a specific instance of the more general hypothesis. Weber noticed that the rise of capitalism in Western Europe coincided with the rise in capitalistic enterprise and rapid economic growth. McClelland suggests that a mediating social psychological mechanism. The protestant ideology causes parents to stress achievement self-reliance and self-denial in order to prepare the child for the role of the Elect (Sills 1970). He continues by arguing that innovative and risk taking behaviour activities of entrepreneurs are expression of a strong motive to achieve and not merely a profit-making motive (Secord and Backman 1964).

Social classes differ markedly in achievement motivation. Similar differences have been found among various racial and ethnic groups. McClelland's hypothesis is of importance in our study in that it shows the relationship between parents' child rearing practices and achievement of their children. Specifically this theory answered the question: Is the social psychological make up of an individual in light of parental styles in rearing children likely to have a bearing in their educational attainment?

2.4 CONCEPTUAL FRAMEWORK

From the above theories one can conclude that several concepts arise. We have established that several factors influence educational attainment, socialisation factors and modernisation factors. This can be shown in the framework below.

Fig 1. Conceptual Model



Source: Kinyajui 1977

For the purposes of the study we analysed only the variables that are parental: ethnicity, religion, father's level of education, mother's level of education, sex and generation

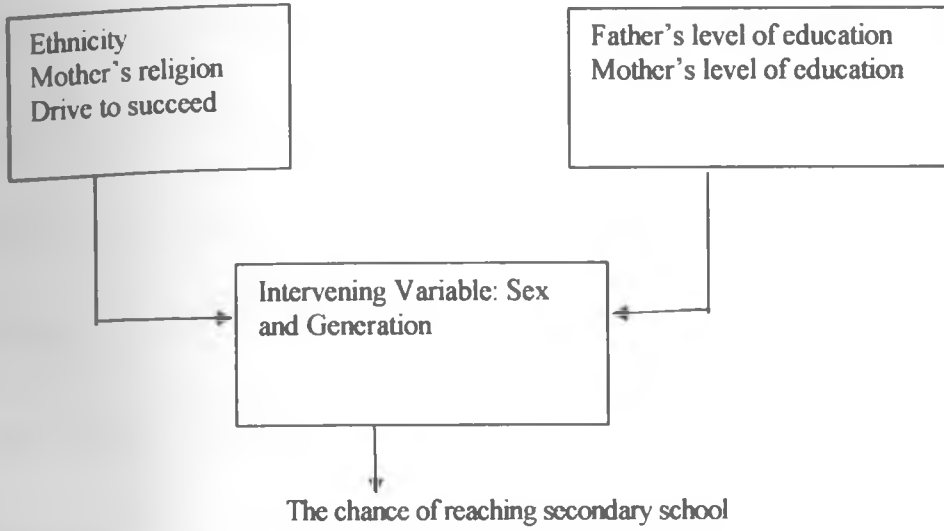
OPERATIONAL MODEL

Fig 2. Operational Model

SOCIALISATION

CULTURAL FACTORS

SOCIO-ECONOMIC FACTORS



2.4 HYPOTHESES

From the literature review conducted and the theoretical framework the following were the research hypotheses for the proposed study:

H1 There is a significant relationship between parental characteristics and educational attainment

This is the working hypothesis. From it are derived the following hypotheses:

H2 Individual educational attainment is influenced by ethnicity of parents

H3 Individual educational attainment varies by sex

H4 Individual educational attainment varies by age cohort

H5 Individual educational attainment is influenced by the educational level of parents

H6 Individual educational attainment is influenced by the religion of parents

CHAPTER THREE

METHODS OF DATA COLLECTION AND ANALYSIS

3.1 INTRODUCTION

The purpose of this section is to outline the area where the research was conducted, how data was obtained, analysed and presented. To do this is of vital importance in order to provide a basis by which we can draw conclusions based on the data.

3.2 BACKGROUND OF THE STUDY AREA

As the researcher was confined to the limits of the NURIP survey, the study was conducted in the Greater Nairobi. Nairobi is the main urban town and capital city of Kenya. It is the centre for most socio economic, administrative and political functions of the country. Nairobi has grown rapidly since it began as a railway depot in 1899, following Britain's decision to connect the coast with Uganda by means of a railway. The city exhibits large socio-economic differences reflected in the distribution of income, infrastructure, housing and other services (Anangwe 1995).

In the study, the Greater Nairobi has been defined according to the geographical and social limits, using the nearest neighbour criteria rather than the administrative limits criteria. Therefore some additional satellite towns that influence or are influenced by Nairobi will be included in the sample. This is because they constitute about 15% of the total population of Greater Nairobi. The towns were: Thika, Ruiru, Athi River, Limuru, Ngong Ongata Rongai, Kitengela and Kiserian. These will be lumped up to represent one administrative area. Nairobi Province has eight administrative divisions. These include: Central, Pumwani, Makadara, Embakasi, Westlands, Dagoretti, Kibera and Kasarani.

Nairobi city was chosen purposively as it is the capital city of Kenya and is the largest city in East Africa. It was considered an appropriate choice for this study as it has a very diverse population. Inhabitants of

Nairobi include people of all races: Africans, Asians and Europeans. There is also a diversity of cultures and religions. It formed a good location for a study of this sort in Kenya as compared to other towns.

3.3 UNIT OF ANALYSIS

These were individuals who were residents of Greater Nairobi at the time of the survey. They were cutting across three generations: 25-34; 35-44; 45-54 years old. These generations (age cohorts) were used in order to obtain better variations in the different generations and sex. Due to the fact that the data is mainly survival data, our interest is in periods, that is, observations and not in the people themselves. To take care of the aspect of migration, observations were only done when the individuals were in Nairobi and not when they were elsewhere.

3.4 SAMPLING PROCEDURE

Sampling design refers to the part of the research plan that indicates how cases are to be selected for observation (Singleton 1988). The sampling procedure in the study employed multi-stage-stratified proportional to the population size (PPS). The research used probability-sampling methods based on the concept of random selection. Sampling was done as follows:

Stage I. This consisted of stratification of the administrative divisions and the extra areas drawn from the Greater Nairobi. This was necessary in order to get a representative sample of Greater Nairobi in terms of socio-economic status and density. As has been mentioned before in the study the Greater Nairobi had nine administrative divisions. In order to avoid clustering effect and to attain homogeneity a sample of 150 enumeration areas (E.A.) were sampled across the nine administrative divisions. Due to the uneven distribution of households in each division, the sample was to be proportionate to the number of households in each division.

Therefore selected EAs were: $\text{Total number of households in Division} \times 150 / \text{total number of households}$

Table 1: Distribution of Enumeration Areas

Division	No of EAs	No of HHs	%HH Per Division	Proposed No. of EAs
Central	394	68849	10.7	14
Makadara	368	59156	9.1	12
Kasarani	799	108533	16.6	17
Embakasi	1001	134719	20.7	27
Pumwani	346	54458	8.4	11
Westlands	539	62601	9.6	12
Dagoreti	508	73974	11.3	15
Kibera	528	88571	13.6	18
TOTAL	44881	651861	100.0	130

Source: Kenya Population and Housing Census 1999

Stage II. This was to randomly select the E.A.s in each division from the 1999 census list of E.A.s

Stage III. In each E.A a sample of 35% of the total number of households was selected using a systematic sample from household listing from Central Bureau of Statistics.

Stage IV. Here there was sampling of the biographies or individuals drawn from the sampled households. In Nairobi the age structure showed some skewedness in that there are more males than females in each generation. There are unusually fewer women in the age range of 45-54 years old.

Table 2: Distribution of Residents in Nairobi

Generation	Males	%Males	Females	%Females	Total	%Total
45-54	429	31.7	319	27.3	748	29.6
35-44	460	33.9	417	35.7	877	34.8
25-34	466	34.4	432	37.0	898	35.6
Total	1355	100.0	1168	100.0	2523	100.0

Source: Kenya Housing and Population Census. 1999

Table 3: Sample of Respondents as a Percentage of Nairobi Population

In % of the total population		
Generation	Males	Females
45-54	3.5	1.3
35-44	7.5	3.4
25-34	15.2	8.8

Source: NURIP 2001

Assuming there are 3.28 persons per household the expected sample population in the household aim at 150 E.As*50HH*3.28 persons =24600 persons. This is where the individual biographies were drawn from. The following criterion was used.

Table 4: Distribution of Respondents by Generation and Gender

Generation	Males	Females
45-54	1 out of 2	1 out of 1
35-44	1 out of 4	1 out of 2
25-34	1 out of 8	1 out of 5

Source: NURIP 2001

However due to logistical problems the study was not able to reach its target number of Nairobi. This is mainly due to the fact that the areas that were out of Nairobi were not covered. The areas out of Nairobi represented about 15% of total sample of the study. Other problems that were encountered in the field (see Problems encountered in the field 3.9.3) and this were an obstacle to reaching the target number of respondents. The actual number of biographies is shown in Table 5.

Table 5: Distribution of actual biographies for males by generation and gender

Generation	Males	% Males	Females	% Females	Total	% Total
45-54	221	33.4	317	36.3	538	29.6
35-44	224	33.89	261	29.8	485	34.8
25-34	216	32.7	296	34.0	512	35.6
Total	661	100.0	874	100.0	1535	100.0

Source: NURIP 2001

3.5 CODING OF VARIABLES

Data that is categorical needs to be coded in order to assign numbers to variable categories. The Nurip data needed to be coded in order to fit in all the cells. Only the variables that were of interest to the study were recoded. This was important as some variables had too many categories. Table 6 below shows how the variables were defined and coded.

Table 6: Variables and Coding

Variable	Definition and Coding
Generation	It was a control variable meaning the generation a respondent belonged to. The variable was used to test the relationship between parental characteristics and individuals likelihood of going to secondary school. In order to obtain three different age groups, the variable age was replaced with the variable 'grage' which took three values. 1=45-54 (ref) 2= 35-44; 3 = 25-34 years old.
Father's level of Education	This variable was used to determine the relationship between father's level of education and the educational attainment of the individual. It took four values. 1=no school (ref); 2=primary; 3=tertiary 4= missing values.
Mother's Level of Education	This variable was also used to determine the relationship between mother's level of education and individual educational attainment. It also took four values. 1=no school (ref); 2=primary; 3=tertiary 4=missing values
Ethnicity	This variable was used to denote the ethnic group a respondent belonged. This variable was also used in the study to help in the analysis. It had been hypothesized that ethnicity played a big role in determining the likelihood of one going to secondary school. The father's ethnic group was used to determine the respondent's ethnic group. This is because Africa and Kenya in particular is a patrilineal society. It took four values. 1=Eastern Bantu(ref) ; 2=Other Bantu; 3=Luo; 4=Other Kenyan
Marital Status	This variable was also recoded to take only three values. These were 1=single 2=married; 3 =separated
Mother's Religion	This meant the belief or faith one belonged to either by conviction or by association. This variable was used to give a description of the study population. This referred to the religion of the respondent at the time of survey. It took three values 1=Muslim(ref); 2=Christian; 3=other
Current Religion	The mother's religion at birth of the respondent was recoded. This is because in matters of faith evidence shows that it is the mother who instils religion in the children. It took three values 1=Muslim; 2= Christian; 3=other
Economic Sector	This variable was used to describe the study population. This variable was used to determine the economic sector the individuals were involved in at the time of the survey. It took two values 1=informal; 2= formal
Labour Participation	This variable was also used to determine whether the respondents were in the labour force at the time of survey. It took two values 1= participating 2= not participating

3.6 METHODS OF DATA COLLECTION

Different methods of data collection were used to assemble primary data. This study employed survey methods of data collection. This involved collection of data through interview methods. This is called primary data and it involved the use of questionnaire and other tools. There are several of these tools, which are:

Household Questionnaire

This was used to select the eligible respondents who comprised of persons within the following age brackets- 25-34; 35-44; 45-54 years old. A sample of 2400 respondents was drawn and interviewed using the questionnaire.

Agevent form

This is short for Age and Event Recording Form. It is a tool that can help one to date each event in the right order. It helps the respondent to locate the time the events took place and can also help the interviewer to better locate in time the occurrence of events experience by the respondent. This is because Event –History Analysis generates retrospective data, therefore, it is important to locate each event as it occurs and place great emphasis on ordering of the event. This helps the researcher to establish causal relations. It allows the recording of precise dates as well as incomplete dates. It was used for all the eligible respondents.

Biographical questionnaires

This questionnaire was also used for all the eligible respondents. It was able to answer questions about the respondents' life events. It contained five modules, which contained questions about residences, activities, matrimonial history, and children born alive and general demographic characteristics of the

respondent. The researcher used the household questionnaire to draw a sample of respondents for the biographical questionnaire. The biographical questionnaire was used together with the Agevent form (see Appendix 2) The researcher determined her sub-sample from the events that she analysed. In this case she will analyse the starting event, which was entry at secondary school, and the finishing event that was completion of secondary school education at whatever stage. These events were analysed in light of parental characteristics.

3.7 DATA COLLECTION PROCEDURE

1. The first stage involved identifying the enumeration areas with the assistance of the Central Bureau of Statistics staff.
2. The second stage involved updating the household's lists in each enumeration area.
3. The third stage involved obtaining a sample of 35% of the total number of households in each enumeration area. These were the households that were eligible to administration of the household questionnaire.
4. From the household questionnaire the criteria mentioned above was used to select the individuals who were eligible for the biographical questionnaire.

3.8 DATA ANALYSIS

Data obtained from the field was analysed by a technique called Event-History Analysis. This technique is unique in that it can connect different kinds of events along time frame. Data entry and analysis was done by the use of computer programme called STATA. This programme was found to be most useful as it was able to deal with biographical data. Both descriptive and inferential statistical methods will be used to present the data.

3.8.1 EVENT-HISTORY ANALYSIS

Freedman et al (1988) argues that social scientists have increasingly become interested in the processes that underlie patterns of development growth and change in individuals' lives. Incorporating the timing and sequencing life course events into the research design and analysis can facilitate investigations of dynamics of human behaviour. Event-History methods have become important in the analysing of events over time (Otieno 1999). An Event-History is a record of when events that occurred in the past. The interest is whether and or when a certain event occurred e.g. level of schooling at first employment.

Such analysis helps to sensitise various dimensions of timing and relevant concepts that have emerged over time which are difficult in other types of analysis. Data collection is usually retrospective; for recurrent events; and use 'memorable' events as anchors to aid recall (Turna and Hannan 1984). The sample size needs to be quite large to proceed very far with this approach. Ultimately the major interest is to examine the factors affecting the timing or the rate of occurrence of an event. The main problem of event history analysis arises because respondents are in a wide range therefore may not have experienced the event of interest by the survey date (censoring).

3.8.1.1 DESCRIPTIVE STATISTICS

These are simple statistical methods that do not support or falsify a relationship between variables by simply helping in the description of data. They are a way of categorising variables by summarising patterns in the response of respondents. Percentages, frequency tables, Nelson-Aalen curves etc were used to interpret the findings. In this way, patterns of relationships are identified and variations captured. Nelson-Aalen curves are useful in summarising survival or event data. They are used to estimate the cumulative hazard rate that is the instantaneous risk of experiencing the event at a given point in time. From these curves we can establish median time, failure time, survival time and prevalence of the events. Median time is the time at which half the respondents experience an event. Time to failure is the time at

which a proportion of the group experience the event. Survival time is the time at which proportions of the group experience the event in our case entry into secondary school. Prevalence rates are the rates at which proportions of the individuals are likely to experience the event.

3.8.1.2 MULTIVARIATE ANALYSIS

The study employed multivariate analysis and used Cox Hazard Models analysis in order to study the instantaneous risk of entering secondary school. A brief description of Cox Model is given below.

The Model

Event History Analysis was introduced by Cox (1972) as a synthesis of regression and life tables, first employed in the study of non-repeatable events such as death. In such analysis the dependent variable is the hazard rate that is the instantaneous risk of an event occurring (Raftery et. al 1996). Using this method we are able to overcome the problems of linear regressions. Our data is in the form of event histories and so the most appropriate method is event history analysis. Life tables have now been extended to studies other than mortality analysis (Balakrishnan et al 1988). They have been modified to handle covariates by combining life table method and regression, the model is able to get events occurring in certain duration in the presence of censoring and a set of covariates.

In the study, data analysis involved examining the distribution of time between parental characteristics and educational attainment. The limitation of survival data is that it usually excludes some cases. For instance: some individuals may not experience the event before the end of the study; we may lose track of some individual before the end of the study, other cases may not continue for other reasons, thus they are censored. Thus conventional techniques such as linear regression are inappropriate for this kind of data. Thus there is need to compute life tables in which we subdivide the period of observation into smaller time intervals. Individuals observed in a time interval are used to establish overall probability of the event

occurring at different time points. The survey studied single failure data.

Assumptions of the Model

Assumes that the hazard function is continuous and thus there is no tied survival time

Assumes that the hazard ratio is proportional over time.

3.9 METHOD OF DATA ANALYSIS

The major focus of this study is to establish the relationship between parental characteristics and individual educational attainment with respect to time. Time is the criteria for classifying events. Since Event- History Analysis techniques will be employed in analyzing the data the use of survival tables will be vital. Otieno (1999) argues that survival tables have become a standard procedure for tracking duration specific likelihood of experiencing an event. This procedure involves following a group of people from an initial time till they experience the event. In our study the main event under scrutiny is going to secondary school. Survival time data documents spans of time ending in an event. Some concepts need to be elucidated in order to enhance further understanding. These include:

- Event- these are things that happen at an instant in time e.g. being promoted, getting employment.
- Failure time- this is the event indicating failure as it is defined for the purpose of the analysis. This is the time at which the individual experiences the event.
- At risk-the subject is at risk of failure event occurring e.g. one must be in primary school before going to secondary school.

- Origin- this refers to the time when the subject becomes at risk.
- T- is the analysis time that is time since the onset of being at risk
- Gaps -refer to gaps in observation between entry time and exit time. During gaps the subject is not under observation
- Time0- refers to beginning time of a record.

Further, since the data that will be used for analysis is survival data there are some prerequisites before the data can be analyzed. We need to determine: date of entry, failure time, date of exit from the study, date of censoring and the stopping date. In the case of our study, the date of entry will be fifteen years when one completes Kenya Certificate of Primary Education (KCPE) examination. This is when we began to observe the individual. Failure will be entry to secondary school. Censoring will be due to survey and also due to migration. The analysis will be restricted to individuals who were in Nairobi and were at risk of experiencing the event. Therefore the study will take account of gaps that occur when individuals are in and out of Nairobi in order to analyze only those periods when the individual was in Nairobi.

The dependent variable for the study was educational attainment in this case the likelihood of one entering secondary school. This was designated by entry into secondary school and cumulative years spent there. The independent variables that were used were: father and mother's level of education, place of residence, generation, sex, ethnicity and religion. These variables were classified as permanent variables and these include: father's educational level, sex, generation, mother's level of education, ethnicity. Time varying covariates include; religion and place of residence.

Once the above dates had been established there was a need to create life tables to compute time

elapsed. Life tables are useful because they incorporate heterogeneity at different ages. Durations were computed in terms of months and they showed survival experiences of different generations. There was a need to create a censoring variable to compute cumulative time spent in secondary school. Date of entry into observation was 180 months, which is fifteen years. Failure time was leaving secondary school at whatever age.

3.9.1 TAKING ACCOUNT OF MIGRATION EFFECTS

As has been mentioned earlier, the study took place in the District of Nairobi. Although the data that was collected was retrospective, periods that were observed in Nairobi were the only ones scrutinized. In order to take care of censored cases due to migration there was a need to establish gaps that occurred when a subject was in and out of Nairobi and still population at risk. There are several instances of gaps occurring when an individual moved in or out of Nairobi and they needed to be outlined so as to establish which cases to study. These instances are:

Case 1



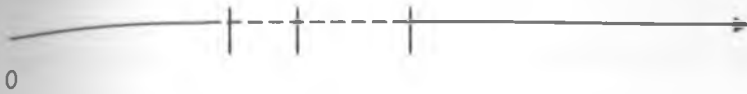
This refers to individuals who were born in Nairobi and have never migrated out of Nairobi and therefore experienced the event in Nairobi.

Case 2



This individual was born in Nairobi, but left after sometime. He came back to Nairobi when he was still at risk of experiencing the event, thus experienced the event in Nairobi.

Case 3



This individual was born in Nairobi, left and experienced the event out of Nairobi but came back when he was out of risk of experiencing the event.

Case 4



This individual was not born in Nairobi but came to Nairobi at certain age, stayed in Nairobi then experienced the event while in Nairobi.

Case 5



The individual came to Nairobi when he had already experienced the event.

Case 6



The individual came to Nairobi, left Nairobi when he was at risk of experiencing the event but experienced it out of Nairobi. Thereafter he came back to Nairobi when he was out of risk.

Case 7



This individual came to Nairobi, left Nairobi when he was at risk but came back when he was still at risk where he experienced the event in Nairobi.

For the purposes of our study case number 3 and 5 will not be observed. Cases number 1 and 2 will be observed. Case number 6 and 7 will be observed only as far as they are at risk of

experiencing the event and they were in Nairobi. Therefore this case will control for their migration status. There is a need to account for their migration status because different backgrounds give different influences to individuals. It may be that migrants from the rural areas have had different life experiences as compared to people who have lived in Nairobi all their lives. These different experiences have a bearing to the exposure to experiencing the event that in our case is entering secondary school. Thus, we may expect differentials in entering secondary school for migrants and non-migrants.

3.9.2 QUALITY OF DATA

Data is not always right for use. In social sciences data always contains errors, this is because in human life it is impossible to have a perfect condition. This has implications on the quality and accuracy of the findings of the study. In the study data collection some errors were said to be inherent. These include:

- In-variable errors- these can be found at the data entry level. They comprise inconsistencies within a variable. For instance a question may have both categories of sex entered.
- In-module- these are also found at data entry level. They comprise inconsistencies between variables
- Between module error- these occur at the data collection level where there is wrong dating. For example one cannot have a child at eight years old.
- In-period errors- these are inconsistencies within periods for example one cannot work in the public sector and have no payslip
- Between period errors- these are inconsistencies between periods for instance being in the university before one goes to secondary school.
- Out of range errors- these are found at the data collection level. They comprise of out of range values in a variable. For instance a variable like sex has only two values, if it has more than two values then this is an out of range error.
- Incomplete modules- this is where by some modules were missing thus the files could not

merge.

These errors had to be cleaned using a special programme but nevertheless we could not get perfect data.

3.9.3 PROBLEMS AND CHALLENGES ENCOUNTERED IN THE FIELD

Owing to the large number of respondents and the vastness of the city of Nairobi, 33 research assistants were employed to deal with data collection. They were trained on the use of the data collection tool particularly the agevent form and the biographical questionnaire. Although the research was successfully carried out, no research is without problems and this survey was no exception. First, the size of the sample had to be scaled down due to inadequate time and financial resources. This means that the areas outside of Nairobi city, which constituted 15% of the sample, were not covered. Thus, this is a potential source of bias for the entire study. Secondly, due to logistical problems there was delay in the take of for the research. Fieldwork was supposed to begin on January 27, 2001 but it finally began three weeks later due to delays by the CBS staff. There was also the problem of insecurity in some areas e.g. Korogocho, Kia Maiko and this led to inadequate coverage. Some areas such as Mathare 4A and Mukuru Kwa Njenga were not covered altogether because of problems of security.

Another major problem that was faced in the field was that of delayed payments of interviewers. This caused work to slow down as they threatened to down their tool. Thus, the result was that the research took longer than it was supposed to. Data collection was also hampered by the unavailability of respondents. This means that the researcher spent more time in the field that she was supposed to.

Some areas such as ThomeV and Karen had poor transport systems and this meant that the researcher and her assistants had to walk very long distances in order to get to the respondents. This resulted in spending more time and money than originally budgeted for. Also some areas such as Platinum Habib and BuruBuru required letters to each household in order to carry out the research. These letters took

very long to be done and this cost more time in the field that was originally intended.

Further, some areas such as Tang'ole had deserted structures and thus the number of respondents was fewer than normal. Moreover in areas such as Habib and ThomeV the researcher was refused entry and this greatly reduced the number of respondents. There was also a problem on the part of the respondents who thought that the researcher was a government official sent to find out their tenure status, e.g. Dandora. This made them wary and thus they refused to respond to the questionnaire.

Weather problems caused inaccessibility of some areas, e.g., Lindi and Korogocho. These areas had to be held off till the weather was better thus slowing down data collection. In some areas such as Mathare North, Hazina and Baba Dogo most respondents belonged to the under 34 years age group. This reduced the number of biographies since the interval for obtaining respondents was too large.

2

CHAPTER FOUR

DESCRIPTIVE AND MULTI VARIATE ANALYSIS

4.1 INTRODUCTION

The main aim of this chapter is to present the findings of the study. The social and demographic profile of the study will be highlighted. The data was then subjected to the first step in the analysis and that is the descriptive analysis. The multivariate analysis and discussion of the findings will be highlighted in the next chapter. The distribution of respondents is given through the use of descriptive statistics such as frequencies and percentages. It was necessary to outline the background characteristics in order to:

- Understand the basis of the findings that were analyzed
- Provide a background to understand the nature of educational attainment in the city of Nairobi

4.2 SOCIAL AND DEMOGRAPHIC PROFILE OF THE POPULATION

The study obtained a sample of 1535 respondents; male and female that ranged between 25 years and 54 years. Of the respondents who were under observation, 56.9% (874) were women while 43% were men. This can be explained by the fact that the sample was very large for women in the older age cohort. It is also possible that most men refused to respond to the questionnaire as compared to the women. As the study was interested in different generations 25-34; 35-44; 45-54 years old it was of vital importance to outline the distribution of respondents according to generation. The findings reveal that 35% belonged to the oldest age cohort; this group had the highest number of respondents. The middle cohort had 31% of the total study population while the youngest cohort was about 33%. This could also be explained by the rate of response by individuals. Most of the respondents of the younger cohort refused to respond to the questionnaire thus the younger cohort registered fewer respondents than the oldest cohort.

The role of ethnicity has been underscored in this study. Its importance is in tracing cultural ideals and as regard education. Thus, ethnicity has everything to do with this study. Though Nairobi is very diverse in terms of ethnicity, disparity has been noted in the way ethnic groups have been represented in the study. Majority of the respondents (51.5%) are from the Eastern Bantu group who comprise the Kamba, Kikuyu, Meru and Embu. The Other Bantu who constituted 21% of the total number of respondents and the Luo who took about 16% of the sample closely followed these. This state of affairs is explained by the close proximity the Bantu people have to Nairobi thereby facilitating migration. Onyango(1991) argues that people from Central and Eastern Provinces dominate Nairobi.

Labour force participation is higher in Nairobi than probably in other parts of Kenya. Most of the respondents were involved in some means of getting a livelihood. The findings in the study indicate that more than half (69%) of the respondents were working while 30% were not. This could be attributed to the migration aspect whereby people are moving from rural areas to urban areas in search of employment. On the other hand in terms of economic sector majority of the respondents (67.9%) were in the informal sector while (32%) were in the formal sector. This can be explained by the rising unemployment levels in Third World cities and especially for a city like Nairobi.

Religious affiliation is a very diverse phenomenon in the city of Nairobi and this can be revealed from the findings of the survey. About 63% of the respondents who were the largest category were Christians while only 7% of the respondents were Muslims. The other religions constituted the rest of the study population. In terms of marital status the study shows that more than half of the respondents were single (73%) while 20% were married. Only 7% were separated from their spouses. This can be explained by the changing trends in marriage patterns among urban peoples. The results are summarized in Table 7 below.

Table 7: Social and Demographic Characteristics of the Respondents

<i>Variable</i>	<i>Categories</i>	<i>Frequencies</i>	<i>Total</i>
Sex	Male	661(43.1)	1535
	Female	874(56.9)	
Generation	1(45-54)	538(35.1)	1535
	2(35-44)	485(31.6)	
	3(25-34)	512(33.4)	
Religion	Muslim	119(7.75)	1535
	Christian	982(63.9)	
	Other	426(27.8)	
	Missing	7(0.5)	
Ethnicity	Eastern Bantu	791(51.5)	1535
	Other Bantu	335(21.8)	
	Luo	250(6.3)	
	Other Kenyan	127(8.3)	
	Missing	32(2.1)	
Marital Status	Single	1125(73.3)	1535
	Married	316(20.6)	
	Separated	94(6.12)	
Economic Sector	Informal	1044(68.0)	1535
	Formal	491(31.9)	
Labor Participation	No	469(30.6)	1535
	Yes	1066(69.5)	

Source: the study data

4.2.1.PARENTAL CHARACTERISTICS

It is the ultimate aim of this research undertaking to establish the extent to which parental characteristics that influence the likelihood of one reaching secondary school. Therefore there was a need to highlight some of the social and demographic characteristics of the parents of the respondents. In terms of religious affiliation again, the Christian population was 89% (1370). These were parents of respondents who were reported to profess this religion. The Muslim population was about 7% while other religions were only 3% of the total number of respondents. The educational levels for the parents of the respondents were quite low. For the father's level of education, the largest category 43% had attended at least primary school while 28% did not attend any school. The rest of the population had parents who had gone past primary school. For the mother's level of education, nearly half of the population (46%) did not attend any school and 35% had attended at least primary school. The findings confirm the fact that women did not always go to school until recent times. The results are presented in Table 9.

Table 8: Characteristics of respondents' parents

Variable	Categories	Frequencies	Total
Father's Educational Level	No school	443(28.9)	
	Primary	667(43.5)	
	Secondary	216(14.1)	
	Tertiary	101(6.6)	
	Missing	108(7.04)	1535
Mother's Religion	Muslim	111(7.23)	
	Christian	1370(89.3)	
	Other	54(3.5)	1535
Mother's Educational Level	No school	721(46.9)	
	Primary	550(35.8)	
	Secondary	98(6.4)	
	Tertiary	53(3.5)	1535

Source: the study data

4.3 DESCRIPTIVE ANALYSIS

In view of the effects of migration there was need to redefine the points at which we began observation and the points at which we ended observation. Our space of observation was only for those periods that were observed in Nairobi. Table 9 below gives a brief description of the survival data. The results reveal that out of 1065 subjects under study, 233 experienced the event of reaching to secondary school while in Nairobi. It was also indicated that each subject had five records (the number of subjects equals the number of records).

All the subjects entered observation at time 0 in our case this was at 180 months that was approximately 15 years of age. Time 0 represents the time at which we began observing the individuals which was between 0 and 453 months (median 54 months that is about 4 years from when we begin observation). The subjects exited between times 13 and 472 (median 242 months that is 20 years). Exit time is the time at which we stop observing the individuals due to the fact the individual has reached secondary school. 100 subjects had gaps this means that they were out of observation. This means that they were not analysed when they had migrated out of Nairobi. The total time at risk was 174956 (person months of observations) and total number of failures was 233(with a maximum of failures per subject).

Table 9: Description of the data

Category	Mean	Minimum	Median	Maximum	Total
No. Of subjects					1065
No. Of records	6	1	5	22	5966
(First) entry time	80	0	54	453	
(Final) exit time	252	13	242	472	
Subjects with gap					100
Time on gap if gap	67	5	51	313	7067
Time at risk	164	1	135	465	174956
Failures	0.0013	0	0	1	233

* All values in months Source: the study data

Table 10: Summary of Survival Data (These refer to the periods of observation by background characteristics)

Category	Frequency	Percentage	Total
SEX			
Male	9300	44.3	20999
Female	11699	55.7	
GENERATION			
1	9013	43	20979
2	6664	31.7	
3	5322	25.3	
MOTHER'S RELIGION			
Muslim	1230	5.86	20999
Christian	18926	90.13	
Other	843	4.01	
FATHER'S LEVEL OF EDUCATION			
No school	6043	30.9	20576
Primary	9435	48.2	
Secondary	2900	14.8	
Tertiary	1208	6.2	
MOTHER'S LEVEL OF EDUCATION			
No school	10038	51.7	19433
Primary	7536	38.8	
Secondary	1217	6.26	
Tertiary	642	3.3	
ETHNICITY			
Eastern Bantu	10381	50.6	20499
Other Bantu	4880	23.8	
Luo	3703	18.1	
Other Kenyans	1535	7.5	
STUDY PERIOD	3945	100	3945
RESIDENCE			
Other	11935	56.8	20970
Nairobi	9035	43.03	

Source: the study data

Table 11 shows a summary description of the survival data. It is important to note that this study focused on periods of observations and not individuals. There was need to summarise the data in terms of observations. From the data we can decipher that there were about 20999 observations that were

obtained from the study. It was necessary to describe the survival data, as this was the main interest of our study

Table 11 shows a summary of statistics by generation. Included is time at risk, incidence rates, number of subjects observed and 25th, 50th and 75th percentile of survival time. The incidence rate refers to the rate at which the event is occurring in this case the rate at which individuals joined secondary school. The total numbers of subjects who were observed in this case were 1065. The total time at risk was computed at 89185, 53949, 31822 months for generations 1, 2 and 3 respectively. The incidence rate for the oldest cohort was very low (0.0009) while the youngest cohort was 0.002 and the middle cohort was at 0.0016. There was an indication that the rate at which individuals reached secondary school was higher for the youngest cohort than the other cohorts. There are differences in when at least a quarter of the population had at least reached secondary school. For the oldest cohort at least a quarter of them had reached secondary school by age 26 years (years computed from the time we begin observation that is fifteen years). The middle cohort had at least reached secondary school by age 24 years while the youngest cohort was by age 27 years. This means that for the younger cohort, they took a longer time before they reached secondary school compared to the other groups. Thus there are differentials in reaching secondary school for the different generations whereby the youngest cohort took more time to experience the event. Table 12 represents the summary of the data by sex. The time at risk for women is 108983 while for men it is 65973. The incidence rate for males was around 0.0015 while for women it was 0.0012. The survival time is at 25% for both sexes. The results indicate that a quarter of males had reached secondary school by at least 26 years and women failed (experienced the event) at the same time. The results show that there were no differentials in reaching secondary school between the different sexes in that the time at which both of the sexes had reached secondary school was at about 26 years.

Table 11: Summary Statistics

	Time at risk	Incidence rate	No. of subjects	25%
Generation				
1	89185	0.0009	387	135
2	53949	0.0016	332	119
3	31822	0.002	346	146
Totals	174956	0.0013	1065	134
Sex				
Male	65673	0.0015	429	137
Female	108983	0.0012	636	134
Total	174956	0.0013	1065	134

Source: the study data

Table 12 below indicates log rank test for differences in reaching secondary school by generation and sex. In the oldest cohort the results indicate that events (reaching secondary school) observed were 75 while the youngest cohort had 87 events observed and it was statistically significant at 0.0324. The implication is that there are significant differences in the log odds of experiencing the event by age cohorts. We can see that for the youngest generation the events are more. In terms of sex the log rank test established that events observed (reaching secondary school) for the males were 118 while those of females were 116. Thus there were few differences in the likelihood of reaching secondary school for men and women. Overall the model is significant at 0.0009.

Table 12: Log-rank test for equality of survivor functions

Generation	Events observed	Events expected	
1	75	83.42	Chi=2.82
2	72	81	p>chi2=0.0342
3	87	69.6	
Total	237	234	
Sex			
Male	118	91.4	Chi=10.9
Female	118	142.6	p>chi2=0.0009
Total	234	234	

Source: Study Data

Graph 1(see appendix 1) shows the Nelson-Aalen estimates by generation. The graphs indicate the proportions of people who have reached secondary school. Here disparities are evident in that the highest hazard rate is for the youngest cohort and lowest for the oldest cohort. This means that the chance of reaching secondary school is higher for the lowest age cohort than for the oldest cohort.

The hazard rate for all the groups is highest between time 0 and time 200 months (16 years). Between 0 and 200 months (16 years) 70% of the respondents had entered secondary school.

The Graph 2 (see appendix 1) shows the Nelson-Aalen estimates by sex. The curves indicate that both males and female reached secondary school at about the same time. The curves meet at time 180 months (15 years) this is when most of the respondents had the chance of reaching secondary school. This means that there were no differentials in the likelihood of entering secondary school for male and females. The hazard rate is also highest between time 0 and time 200 months (16 years).

4.3 THE COX REGRESSION ANALYSIS

This is the last step in the analysis of the study data. Cox's regression analysis estimates the maximum likelihood proportional hazards models on survival data. It is appropriate for these data that are single failure data. Multivariate analysis in this case was used to determine the effect of all the independent variables under study and the dependent variable that is the likelihood of entering secondary school while controlling for sex and generation.

In this analysis the coefficient was interpreted in terms of magnitude and sign of coefficient. This is a regression coefficient that measures the association between all the independent variables upon the dependent variables. The coefficient measures the amount of decrease or increase in the dependent variable for one-unit difference in the dependent variable and the independent variables.

The sign of the coefficient refers to the direction of the relationship between the dependent and the independent variables. Further in order to make comparisons across distributions taking into account varying means and standard deviations we compute standard scores called z scores.

The main aim is to establish the log odds of one entering secondary school. The coefficient measures the strength and direction of the relationship. The analysis will estimate two models

where the first model estimates the effect of the independent variables on the dependent variables while controlling for sex and generation. The second model estimates the effect of all the independent variables on the dependent variables while taking account of migration.

4.4.1 MODEL A: EFFECT OF EXPLANATORY VARIABLES ON THE LIKELIHOOD OF REACHING SECONDARY SCHOOL CONTROLLING FOR SEX AND GENERATION

The main aim of the study is to establish the extent to which parental characteristics influence the likelihood of one entering secondary school. All the study variables were tested against the dependent variable that is reaching secondary school. Table 14 presents the results of regression of all independent variables on the dependent variables without taking account of migration.

1. Effect of Sex

In terms of sex, the results indicate that there is less risk entering secondary school (log odds=-.218) for the females compared to the males. However this relationship was found to be statistically insignificant. This indicates that there are no differentials in reaching secondary school for males and females.

2. Generation

Generations showed that compared to the oldest cohort that is over 45 years old the middle cohort was less likely to enter secondary school but this was insignificant (log odds=-0.12). There were no differentials between the middle and oldest cohort in the chance of reaching secondary school. However compared to the oldest cohort the findings indicate that the youngest age cohort was less likely to enter secondary school (log odds=-0.42). The major implication is that the oldest cohort had a higher hazard rate than all the other generations. This means that over time the older generation living in Nairobi were more likely to have reached secondary school compared to the

youngest cohort that were obtained from the sample.

3. Father's Level of Education

With reference to the no school category, the findings reveal that individuals who had fathers who had gone past secondary school were most likely to experience the event of going to secondary school and this was found to be highly significant when measured at 99% confidence level. On the other hand individuals whose parents had gone to secondary school were likely to experience the event of entering secondary school as compared to the individuals whose parents had not gone to school (log odds=0.724).

For the individuals whose fathers had only gone up to primary school, they were likely to experience the event that is reaching secondary school (log odds=0.51). The implication is that the more the father is educated the higher the hazard rate of entering secondary school in that the more education the father has attained the more likely one is to enter secondary school. There are clear differences in the rate of reaching secondary school by father's level of education. The log odds increase with higher father's educational level.

2

4. Religion

We find that compared to the Muslims, the individuals whose parents belonged to other religion were more likely to go to secondary school, however it was statistically insignificant. For the individuals whose parents were Christians, they were more likely to experience the event as compared to those whose parents professed other religion and this was found to be statistically insignificant. The implication is that there are no differences in the log odds of entering secondary school for individuals of different religions in the city. The findings indicate that the log odds of

reaching secondary school is not different for people of different religions in the city such as Nairobi.

5. Mother's Level of Education

The results of the study show that compared to the no school category, individuals whose parents had gone up to primary school were more likely to experience the event (reaching secondary school) and it was statistically significant when measured at 95% confidence level. Individuals whose mothers had attained secondary school education were also more likely to reach secondary school when compared to those whose mothers had had no school. However this was found to be statistically insignificant. For the individuals whose mothers had gone past secondary school they were more likely to experience the event than the no school category but this was statistically insignificant.

The implication is that those respondents whose mothers had gone up to primary school were more likely to go to school compared to the reference category that is no school. Further, there were no differentials in reaching secondary school for the individuals whose mothers had reached secondary school and tertiary education with those whose mothers had had no school.

6. Ethnicity

In terms of ethnicity we find that other Kenyans are less likely to enter secondary school and this was insignificant, compared to the Eastern Bantu. For the Luo, they were less likely to experience the event of entering secondary school than Eastern Bantu and this was also statistically insignificant. The Other Bantu group was less likely to experience the event than the Eastern Bantu and this was insignificant. The major implication is that over time compared to the Eastern Bantu, there were no differences in the log odds of entering secondary school for the other ethnic groups.

The insignificance of the z value is a clear indicator of no differentials in reaching secondary school for different ethnic groups.

Table 13: Cox Model Estimates of the Main Effects on the Likelihood of Reaching Secondary School

Category	Model A		Model B	
	Coefficient	z	Coefficient	z
Sex				
Reference category= male				
Female	-.218(0.14)	-1.54	.226(.14)	-1.58
Migrants (Gaps).				
Reference category= 0(not a migrant)				
Migrant	na	na	0.57(.78)	0.73
Generation				
Reference Category=oldest cohort				
Middle cohort	.012(0.172)	-0.07	-0.01(.172)	-0.06
Youngest cohort	-.42(0.2)	-2.1**	-.42(.2)	-2.1**
Father's level of education.				
Reference category=no school				
Primary	0.51(.22)	2.32*	.53(.78)	2.4*
Secondary	0.724(.28)	2.56*	.74(.285)	2.58*
Tertiary	1.21(.33)	3.73*	1.23(.328)	3.74*
Ethnicity.				
Reference category=Eastern Bantu				
Other Bantu	-.128(.17)	-0.75	-.19(0.19)	-0.75
Luo	-.2(.19)	-1.02	-.19(.19)	-1.00
Other Kenyan	.262(.44)	-0.6	-.261(.44)	-0.6
Mother's level of education.				
Reference category=no school				
Primary	.403(.18)	2.2**	0.04(.16)	2.2**
Secondary and over	.372(.31)	1.25	.374(.306)	1.26
Mother's religion.				
Reference category= Muslim				
Christian	.53(.53)	1.00	.521(.527)	0.99
Other religion	.63(.674)	0.09	0.062(.67)	0.09

Source: the study data () robust standard error *<0.01 **<0.05

Overall, the model is said to be statistically significant in explaining the event of entering secondary school.

4.4.2 MODEL B: THE EFFECT OF MIGRATION

This model estimated all the explanatory variables that is the variables under study while taking account of gaps (migration). This is because the major aim of the study was to study the individuals only as far as

they were in Nairobi. The effect of migration was tested against the independent variables. The results reveal that:

1 Generational differences

While taking account of migration there is an indication that compared to the oldest cohort the middle cohort was less likely to experience the event of going to secondary school and this was highly insignificant. Further, for the youngest cohort was less likely to reach secondary school and this was statistically significant. The results imply that there are no differentials in entering secondary school for the middle cohort and the oldest cohort. However, compared to the oldest cohort the log odds of reaching secondary school for the youngest cohort were low.

2. Migration Effects

The findings reveal that as compared to those who had no gaps that is those who had not migrated out of Nairobi, the individuals with one gap were more likely to experience the event (reaching secondary school), however this was found to be statistically insignificant. This shows that there are no differences in reaching secondary school for migrants and non-migrants.

3. Religion

In terms of religion, compared to the Muslims individuals whose parents professed other religion were more likely to experience the event, that is, reaching secondary school (0.062) but this was statistically insignificant. The individuals whose parents were Christians were more likely to experience the event (0.521) and this was insignificant at 0.99. The results indicate that there is no differentials in reaching secondary school for individuals whose parent profess different religions. This means that for migrants and non-migrants alike, religion does not affect the log odds or reaching secondary school in Nairobi.

4. Sex

Compared to the males we find that the log odds of entering secondary school for females was lower but this was found to be statistically insignificant. This implies no differentials in reaching secondary school for both sexes.

5. Ethnicity

Where ethnic groups were concerned, using the Eastern Bantu as the reference category we find that the Other Bantu were less at risk of entering secondary school and this was statistically insignificant. For the Luo, there is indication that they were less likely to experience the event compared to the Eastern Bantu and this was also insignificant. The Other Kenyan category had lower log odds of reaching secondary school compared to the Eastern Bantu and this was insignificant. This means that there are no differentials in reaching secondary school for all the ethnic groups.

6. Father's Level of Education

The findings reveal that compared to the no school category, individuals whose fathers had attained tertiary education were more likely to enter secondary school and this was highly significant when measured at 99% confidence intervals. The individuals whose fathers had gone up to secondary school were more likely to enter secondary school and this was highly statistically significant when measure at 99% confidence level. Individuals whose fathers had only reached primary were also likely to experience the event compared to the no school category and this was highly significant at 3.73 when measured at 99% confidence intervals. This means that while taking account of migration, the more the father is educated the more likely the risk of entering secondary school. The major implication is that the more the father is educated the more the log odds of reaching

secondary school.

7. Mother's Level of Education

Using the no school category as the reference category, the individuals whose mothers reached primary school were more likely to enter secondary school and this was highly significant when measured at 99% confidence intervals. Those whose mothers had gone up to secondary school were more likely to experience the event of reaching secondary school compared to those whose mothers had not attended school, but this was found to be statistically insignificant. The individuals that had mothers who had attained tertiary education were likely to experience the event than the reference category and this was statistically insignificant at 0.89. The results reveal that compared to the mothers who had not gone to school, those who had attended primary school increased the likelihood of entering secondary school for their children. However there were no differentials in reaching secondary school for the individual whose mothers went up to higher levels of education.

4.5 CONCLUSION

The foregoing chapter presented the results based on the findings of the study. It is apparent that parental education is crucial in determining the likelihood of one going to secondary school. Other factors do not seem to have the same effect on the log odds of reaching secondary school. We have established that migration does not affect the log odds of one entering secondary school. In the next chapter, we will present a discussion of the results obtained from this chapter.

CHAPTER FIVE

DISCUSSION OF RESULTS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The aim of this chapter is to provide a discussion of the results obtained in the previous chapter and also test the hypotheses that were formulated. Objectives of regression are:

- To determine if a relationship exists
- To describe the nature of the relationship
- To describe the direction of the relationship

The study employed Cox regression analysis. The major aim was to provide understanding to the results that were provided in the previous chapter.

5.2 TESTING EFFECTS ON THE DEPENDENT VARIABLE

5.2.1 H1: THERE IS A SIGNIFICANT RELATIONSHIP BETWEEN PARENTAL EDUCATION AND EDUCATIONAL ATTAINMENT

Kariuki (1976); Kinyanjui (1990); emphasize that parental education emerges as an important factor in determining where individuals reach in terms of education. However Richards (1974) asserts that the opposite is true in that an individual's educational attainment is independent of parental education. Our study reveals that when tested at 99% level of significance, father's level of education has a strong relationship with likelihood of one going to secondary school. The effect was shown to be stronger for fathers who had attained higher levels of education. This confirms Richards (1974) study but rejects Kinyanjui's study. The results could be attributed to the fact that educated fathers instil the value of education to their children and also serve as role models for them to reach higher levels of education. The other reason could be that fathers who are more educated earn more income and thus are able to afford to pay for their children's education. This explains why the relationship is significant for people

with highly educated parents whereby the log odds of entering secondary school are very high.

On the other hand we find that mother's level of education did increase the likelihood of going to secondary school. However this relationship was found to be insignificant except at primary school level. This shows that the level of education of the mother does not influence the likelihood of one going to secondary school. This conforms to Kinyanjui (1990) and Murenga (1998) studies who concluded that the mother's level of education does not influence the educational attainment of individuals. The fact that fathers tend to be dominant figures in explaining children's educational attainment is important in explaining this state of affairs. The other explanation could be that fathers who are educated tend to marry educated wives thus the effect of mother's level of education tends to be absorbed by the father's level of education. However the study found that majority of the respondents' mothers had little or no education at all. The fact that most mothers did not go past primary schooling may be the reason why the effect is very minimal.

Sewell(1968) confirms that father's education and mother's education is positively related to educational attainment. Father's education shows a stronger effect than mother education in all individuals. On the contrary, Manski (1992) also observed that mother's and father's education appear to contribute substantially and equally to a child's success in school. Thus the probability that a child graduates from high school increases markedly with both parents' education. However Manski's study was undertaken in a developed country with several other opportunities for children to enter secondary school, but the situation is somewhat different in a developing country such as Kenya. Thus we can conclude that in terms of parents' level of education, father's level of education tend to show a stronger effect on the likelihood of one entering secondary school than does mother's level of education. We accept the hypothesis due to the fact according to the data presented in Chapter Four parental education determines the log odds of one reaching secondary school.

5.2.2 H2: INDIVIDUAL EDUCATIONAL ATTAINMENT IS INFLUENCED BY ETHNICITY OF PARENTS

The importance of ethnicity has to be underscored. However the findings of the study show that there is no relationship between parents' ethnicity and individual educational attainment. There is an indication that ethnicity does not determine the likelihood of one going to secondary school. This could be due to the fact that in the urban setting where cultural ties are not very tight. Wirth (1960) asserts that the urban people are different from rural people in that they are not bound by their cultures. The results differ from Chege's (1983) study that found that there was a relationship between ethnicity and individual educational attainment. However, Chege's study was undertaken in rural Maasai land while our study was conducted in Nairobi and this could explain the disparities in terms of his findings and our findings. It could also be that there is a lot of cultural mixing in urban area so individuals do not belong to any culture but the urban culture. Thus, their thinking is purely urban and thus they are able to embrace the modern concept of getting an education for their children. The findings conform to Crawford (1975) who argues that ethnic groups tend to be more similar relative to their economic status. We therefore reject the hypothesis according to the findings revealed in this study, as there are no differentials in the log odds of reaching secondary school for different ethnic groups.

3

5.2.3 H3: INDIVIDUAL EDUCATIONAL ATTAINMENT VARIES BY SEX

Many studies show that there is a disparity as to how far both sexes reach in terms of educational attainment (Sewell 1965 and Kariuki, 1976). Our study revealed that there was less likelihood of one going to secondary school if one was female compared to the male by the relationship was statistically insignificant at (-1.54) while not taking account of migration status. The inference is that sex does not influence the likelihood of an individual going to secondary school. The findings of our study do not conform with Richards'(1974); Kinyanjui's(1990) but do conform with Kariuki's(1976). The difference in the findings could be attributed to the time factor. In the earlier years after independence girls were

seen as less equal than boys and thus there were disparities in terms of educational attainment. However, today these disparities are slowly diminishing as there are more girls' schools than before and also there has been a changing view in the education of girls. Thus the study finds that girls and boys have been given equal opportunity to get an education. Moreover the urban setting is responsible for changing peoples perceptions concerning education of girls and this has implications as to how far one can get in terms of education. Another explanation is that women whose parents had lived or migrated to Nairobi were of higher social class and thus valued higher education. There were no differentials in entering secondary school for males and females in that the chance of reaching secondary school is the same for both males and females. The z score is -1.54 and this is not significant and thus we reject the hypothesis. The coefficient is also $-.218$ and this shows no direct relationship between the log odds of reaching secondary school and sex.

5.2. 4 H4: INDIVIDUAL EDUCATIONAL ATTAINMENT VARIES BY AGE COHORT

It was important to show the relationship between parental education and individual educational attainment across time. There was a need to establish how this relationship varies with respect to different generations. For the middle cohort the findings of the study reveal that compared to the oldest cohort, they were less likely to reach secondary school but this was statistically insignificant. However, for the youngest cohort the log odds of reaching secondary school were low and this was highly significant (2.07). Policy change may explain this state of affairs. In the early years of independence, secondary education was heavily subsidised by the Government (GoK 1967, 1980) and thus parents were able to take their children to higher levels of education. However in the more recent times parents had had to take up the burden of educating their children. Structural Adjustment Programmes compelled the Government to reduce spending on social welfare services such as education, thus shifting the cost of education to the parents. Gakuru (1992) asserts that the problem of low completion rates became worse due to the introduction of cost cutting measures. This explains the reason why fewer people in the youngest cohort are likely to go to secondary school due to the fact that the burden of educating children

has been shifted from the government to the parents. There were no generational differentials in reaching secondary school for the middle and oldest cohort, but the youngest cohort were less likely to reach secondary school compared to the oldest cohort. We thus accept the hypothesis according to the data presented in the previous chapter.

5.2.4 EFFECT OF MIGRATION

The findings indicate that those who have migrated tend to have more likelihood of entering secondary school though the relationship is not significant compared with those who had not migrated. It may be explained by the fact that since independence there was a concerted effort by the government to expand the education sector thus many people understood the value of education even when they originated from rural areas.

5.2.5 H6: INDIVIDUAL EDUCATIONAL ATTAINMENT IS INFLUENCED BY THE RELIGION OF PARENTS

The results of the regression show that religion increases the risk of reaching secondary school, but this is found to be statistically insignificant. The findings reject (Chege 1983, Sewell 1968) studies that found that religion had a role to play in determining how far one went in terms of education. However, Chege's study was undertaken in a rural area where cultural and religious ties are still very strong. On the other hand Sewell's study was conducted in a highly stratified society (America) where religious differences are overt. This explains why the factor of religion produces no differentials in the log odds of reaching secondary school. Another explanation could be that religious ties seem to be diminished in an urban setting such as Nairobi. The study finds no differentials in the likelihood of reaching secondary school for different religious groups. Therefore we reject the hypothesis on the grounds that the coefficient is low (0.53) for Christians according to the data presented.

5.3 CONCLUSION

In conclusion we can say that the results say that parents' level of education plays a big role in increasing or decreasing the likelihood of one going to secondary school. The findings reveal that the more the father is educated the more the likelihood of one going to secondary school. It may be that educated parents may value schooling more highly and transmit this value of schooling and instil this value to their children. It may also be that educated parents are wealthier therefore they are able to support their children's continuation in school (Manski 1992). However, the mother's level of education has been seen not to have an effect on the rate at which one can go to secondary school. Other factors such as ethnicity have been found not to have an influence on the likelihood of one going to school. This can be explained by the fact that in the urban setting different culture tend to mix and assimilate and thus they have one culture that is the urban culture. Thus, the influence of rural culture tends to be minimal especially in a city such as Nairobi. This may explain why there is no relationship between ethnicity and the likelihood of one going to school.

Further, we find that the results show that there is no relationship between migration and the likelihood of one going to secondary school. This could be explained by the fact that during the early independence years there was an urgent plea from the leaders of Kenya to strive for education. Education is still viewed as vital tool for upward mobility in the society. Thus wherever people came from in the rural areas the value of education was deeply instilled in them. Thus this could explain why there was no effect in terms of migration to likelihood of one going to secondary school.

Sex is a factor that has received considerable attention in the study of educational and occupational aspiration. Kariuki (1976) found that girls were less likely to finish school than boys. In terms of sex we found that the log odds of entering secondary school were lower for women than that of men but the relationship is statistically insignificant. This is because in the earlier years there was a negative attitude to the education of girls. However, this has not been the case in the recent times and there has been a

drastic rise in the education of girls thus, the study shows no differentials of sex on the entering of secondary school.

The impact of age on the likelihood of one going to secondary school was also evident in that it is the younger cohort that has experienced the event in lower numbers than the older age cohorts. The influence of urban life is seen as evident in that as people stayed in Nairobi the urban life pervaded them and thus the parents were able to see the value of education unlike the older cohorts whose parents were rural based. However it has become increasingly difficult for them in terms of financing of education due to rising poverty levels. This effect was very strong especially for the younger cohort.

The effect of parents' religion to the likelihood of one going to secondary school was to exhibit a scenario where the log odds of entering secondary school were high for all religions though this was not significant thus there were no differentials in the entering of secondary school for members of different religions. This could be explained by the fact that also in the urban areas the religious ties are not very strong. Thus the effect of religion does not explain the likelihood of one going to secondary school because the relationship is insignificant.

5.4 RECOMMENDATIONS FOR POLICY AND FURTHER RESEARCH

On the basis of the above findings, the following recommendations can be made.

- There have been structural steps taken within the educational system to remove obstacles to attainment, however these steps have not sufficiently stimulated forces that enhance attainment. Thus if our goal is to equalise opportunity for education, it may be necessary to avail funds to help students whose parents cannot afford cost of education;
- The costs of education should be subsidised in order to cater for the needs of the poor. This has been found most evident for the youngest cohort that has shown appalling levels of

education in that the likelihood of reaching secondary school was low;

- There should also be policies to increase opportunities for women in terms of education such that the opportunities are equal for both men and women;
- The study established mainly that parents' level of education determines the likelihood of one going to secondary school. A study of female-headed families would enhance further research in establishing whether the lack of a father figure affects their likelihood of going to secondary school;
- Studies should also be conducted to examine the other factors such as type of family, type of residence, peer influence, media influence;
- Studies should also be undertaken in other urban areas such as Nakuru and Kisumu in order to establish the levels of urbanisation.

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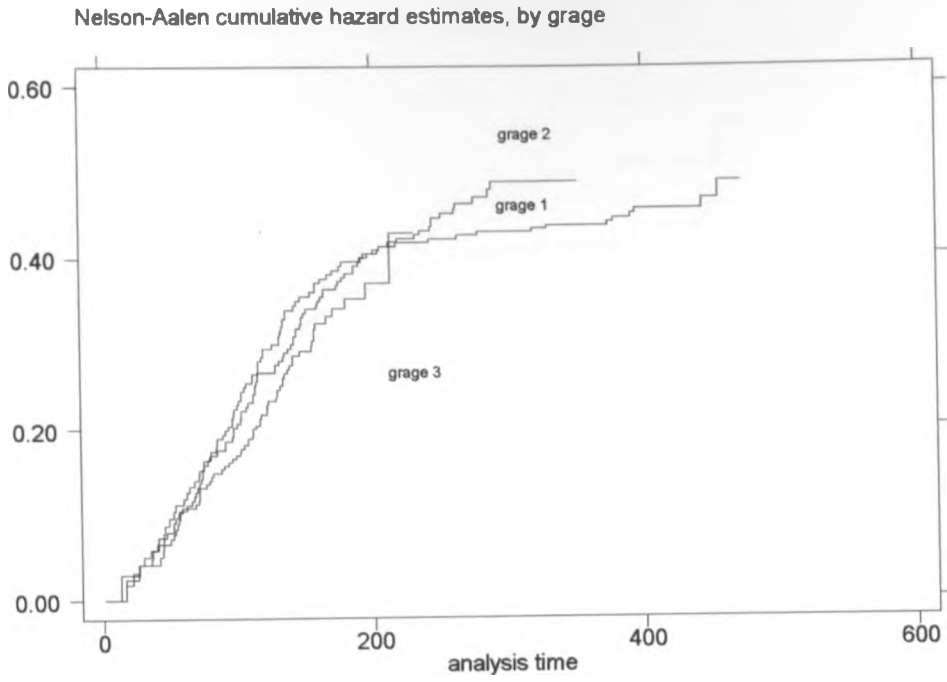
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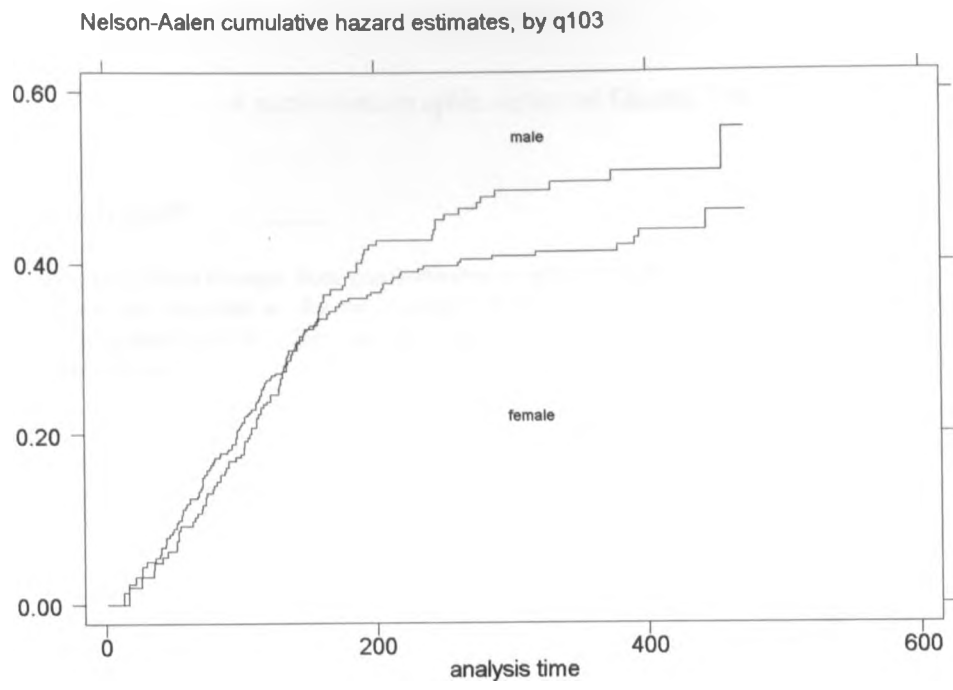
2

APPENDIX 1

Nelson -Aalen Estimates by Generation



Nelson-Aalen Estimates by Sex



2

APPENDIX 2

**University of Nairobi
Nairobi Urban Integration Project
(NURIP)**

A socio-demographic survey of Greater Nairobi

Authorisation Number: _____

The information you obtain through those questionnaires is strictly **confidential** and will be used only to compile statistics. You are not permitted to discuss it, gossip about it, or show your records to anyone who is not an authorised officer within the Project. Any interviewer who discloses to a third party the information contained in the questionnaire will be used.

Make all entries on the questionnaire yourself. On no account should you allow any unauthorised persons to fill in any part of the questionnaire. Do not leave your questionnaires lying around anyhow where unauthorised persons may have access to them.

Name of interviewer and code: _____ / _ / _ / IntMen

Name of field supervisor and code: _____ / _ / _ / SupMen

IDENTIFIER:

To be filled by supervisor

IdMod	MODULE	/ _ 0 /
IdEA	EA	/ _ / _ / _ /
IdClus	CLUSTER	/ _ / _ /
IdStruc	STRUCTURE	/ _ / _ /
IdHH	HOUSEHOLD	/ _ / _ /

*To be filled by
interviewer*

DATE OF INTERVIEW OF HOUSEHOLD
DayHH

/ _ / _ / 2001 / Day / Month / 2001
--

Category	An.	Du r.	FAMILY status	RESIDENCES Status	ACTIVITIES status
	2001	0			
	2000	1			
	1999	2			
	1998	3			
	1997	4			
	1996	5			
	1995	6			
	1994	7			
	1993	8			
	1992	9			
	1991	10			
	1990	11			
	1989	12			
	1988	13			
	1987	14			
	1986	15			
	1985	16			
	1984	17			
	1983	18			
	1982	19			
	1981	20			
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	1953	48			
	1952	49			
	1951	50			
	1950	51			
	1949	52			
	1948	53			
	1947	54			
	1946	55			
	1945	56			

HOUSEHOLD QUESTIONNAIRE

Name (Q000)	Serial N° (Q001)	Relation to Head of hhd (Q002)	Residential status (Q003)	Sex (Q004)	Age (Q005)	Ethnic group (Q006)	Natio- nality (Q007)	Religion (Q008)	Marital status (Q009)	Birth place (Q010)	Residence 5 years ago (Q011)	School attend (Q012)	Level at school (Q013)	Labour particip (last 7 days) (Q014)	Biography		
															Eligible Q015	Selected (Q016)	
		Head 1 Spouse 2 Son /daughter 3 Brother / sister 4 Father /mother 5 Other relative 6 Non relative 7 Employee 8 NS /DK 9	<i>Regularly present:</i> Not here previous night 0 Here previous night 1 <i>Not resident here</i> previous night 2	circle Male Female	In completed years. Under 1 year write 00	See codes	See codes	See codes	Never married 1 Staying together 2 Monog 3 Polyg 4 Widow 5 Divorced 6 Separatd 7 NS/DK 9	See codes	Residence in January 1996 See codes	Never went 0 Attend now 1 Left school 2	Primary: uncompleted 1 completed 2 Secondary uncompleted 3 completed 4 High school 5 Post-second. training 6 University 7 NS/DK 9	Work for pay 0 Leave/sick 1 Family/own buz 2 Seek 1 st job 3 Seek job (worked before) 4 Student 5 Retired 6 Incapacitated 7 Homemaker 8 Other (<i>specify</i>) 9	<i>To be filled only by supervisor</i>	<i>To be filled only by supervisor</i>	
	0 1		0 1 2	M F												Yes No	Yes No
	0 2		0 1 2	M F												Yes No	Yes No
	0 3		0 1 2	M F												Yes No	Yes No
	0 4		0 1 2	M F												Yes No	Yes No
	0 5		0 1 2	M F												Yes No	Yes No
	0 6		0 1 2	M F												Yes No	Yes No
	0 7		0 1 2	M F												Yes No	Yes No
	0 8		0 1 2	M F												Yes No	Yes No
	0 9		0 1 2	M F												Yes No	Yes No
	1 0		0 1 2	M F												Yes No	Yes No
	1 1		0 1 2	M F												Yes No	Yes No
	1 2		0 1 2	M F												Yes No	Yes No

Fill a continuation form if more than 12 people in the household

NUMBER FEMALE:
Q017

NUMBER MALE:
Q018

TOTAL NUMBER:
Q019

HOUSEHOLD CONDITIONS AND AMENITIES (to be asked of the household head or any other responsible person)

Dwelling units		Main dwelling unit tenure status (Q022)		Dominant construction materials of main dwelling unit			Main source of water (Q026)	Main human waste disposal (Q027)	Main cooking fuel (Q028)	Main type of lighting (Q029)					
(Q020)	(Q021)			Roof (Q023)	Wall (Q024)	Floor (Q025)									
How many dwelling units does this household occupy?	How many habitable rooms does (do) this (these) dwelling units contain?	<i>If owner occupied:</i>													
		Purchased	1	Corrugated	Stone	1	Cement	1	Well	1	Electricity	1			
		Constructed	2	iron sheet	1	Brick/block	2	Tiles	2	Borehole	2	Septic tank	2		
		Inherited	3	Tiles	2	Mud/wood	3	Wood	3	Piped/tap	3	Pit latrine	3		
		<i>If rented/provided</i>		Concrete	3	Mud/cement	4	Earth	4	Private vendors	4	Bucket latrine	4		
		Govnt	4	Asbestos sheets	4	Wood only	5	Other	9	Community-owned	5	Field/Bush	5		
		Local auth.	5	Grass	5	Corrugated	iron sheets	6	kiosk	5	Paid toilet	6	Solar	6	
		Parastatal	6	Makuti	6	Grass/reeds	7	Tin	8	Other	9	Drains	7	Other	9
		Private comp	7	Tin	7	Other	8	Other	9	Other	9	Other	9		
Individual	8	Other	9	Other	9										
Other	9														

CHARACTERISTICS OF THE DECEASED OF THE FIVE (5) PAST YEARS (FROM 1996 TO 2001) AT THE TIME OF THEIR DEATH

"In the last five years, from January 1996 to today, did any resident of this household died for any particular reason?"

Name	Serial N° (Q030)	Relation to Head of hhd (Q031)	Residential status at death (Q032)	Sex (Q033)	Age at death (Q034)	Year death (Q035)	Ethnic group (Q036)	Natio-nality (Q037)	Religion (Q038)	Marital status (Q039)	Birth place (Q040)	Residence 5 years ago (Q041)	School attend (Q042)	Level at school (Q043)	Labour partic before death (Q044)	Cause of death (Q045)
		Head 1	<i>Regularly present:</i>							Never married 1		<i>Residence in January 1996</i>	Never went 0	Primary:	Work for pay 0	Transport accident 1
		Spouse 2	Not here previous night 0	circle	In completed years.					Staying together 2		See codes	Attended at the time of death 1	uncompleted 1	Leave/sick 1	1
		Son /daughter 3	Here previous night 1	Male			See codes	See codes	See codes	Monog 3	See codes	See codes	Completed 2	completed 2	Family/own buz 2	Other accident 2
		Brother / sister 4	Not resident here previous night 2	Female	Under 1 year write 00					Polyg 4			Completed 3	3	Seek job (worked before) 3	Attack 3
		Father /mother 5								Widow 5			Completed 4	4	Seek job 4	Suicide 4
		Other relative 6								Divorced 6			Completed 5	5	Student 5	Illness up to: 4 - 1 month 5
		Non relative 7								Separatd 7			Completed 6	6	Retired 6	+ than 6 months 7
		Employee 8								NS/DK 9			Completed 7	7	Incapacitated 7	Recurrent illness 8
		NS /DK 9											Completed 8	8	Homemaker 8	Other (specify) 9
													Completed 9	9	Other (specify) 9	
	1		0 1 2	M F									0 1 2			
	2		0 1 2	M F									0 1 2			
	3		0 1 2	M F									0 1 2			

NUMBER FEMALE DECEASED: Q046

NUMBER MALE DECEASED: Q047

TOTAL NUMBER DECEASED: Q048

CODES

Codes for main ethnic groups		Codes for Nationality		Codes for Residences		Codes for Religion	
Central Bantu (Embu, Kamba, Kikuyu, Mbeere, Meru, Tharaka) 01	Nilo-Hamitic (Dorobo, el Molo, Tugen, Kipsigis, Nandi, Pokot, Keiyo, Marakwet, Masai, Njemps, Samburu, Teso, Turkana, Sabaot, Kalenjin) 05	Kenya 01	North Africa & middle East 10	Nairobi 001	Coast: Mombasa, Kilifi, Kwale, Lamu, Malindi, Taita Taveta, Tana River 006	Nyanza: Kisii, Homa bay, Kisumu, Kuria, Migori, Rachuonyo, Siaya, Suba, Bondo, Nyando 010	Traditional 01
Western Bantu (Kisii, Kuria, Luhya, Basuba) 02		Somalia 02	India /Pakistan /Bangladesh /Sri Lanka 11	Central: Kiambu, Kirinyaga, Muranga, Nyanarua, Nyeri, Thika, Maragua 002	North Eastern: Garissa, Mandera, Wajir) 007	Western: Bungoma, Busia, Elgon, Kakamega, Lugari, Teso, Vihiga, Butere/Mumias 011	Hindu 02
Coastal Bantu (Bajun, Boni-Sanye, Mijikenda, Pokomo, Taita, Taveta, Swahili Shirazi)03	Eastern Hamitic (Ajurua, Degodia, Gosha, Gurreh, Hawiyah, Ogaden, Somali-so-stated) 07	Ethiopia 03	Other Asia 12	North Rift Valley: Turkana, Samburu, Baringo, Marakwet, West Pokot 00	Upper Eastern: Isiolo, Moyale, Marsabit 008	Foreign countries (100 + code nationality) 100+	Sikh 03
Nilotic (Luo) 04	Kenyan Asian 08	Sudan 04	Europe 13	Central Rift Valley: Bomet, Keiyo, Kericho, Koibatek, Laikipia, Nakuru, Nandi, Trans Nzoia, Uasin Gishu, Buret 004	Lower Eastern: Embu, Kitui, Makueni, Machakos Mbeere, Meru, Mwingi, Tharaka 009	NS/DK 999	Muslim 04
Western Hamitic (Boran, Gabra, Orma, Rendile) 06	Kenyan European 09	Uganda 05	North America 14	South Rift Valley Kajiado, Narok, Trans Mara 005			Catholic 05
	Kenyan Arabs 10	Rwanda 06	Other continents 15				Anglican 06
	Other Kenyans 11	Burundi 07	NS/DK 99				Methodist 07
	NS/DK 99	Tanzania 08					Presbyterian 08
		Other sub- saharan Africa 09					Africa inland church 09
							Evangelical 10
							7th day Adventist 11
							Syncretic (Akorino, Israeli, etc.) 12
							Other Christian 13
							Other religion 14
							NS/DK 99

Name of interviewer and code: _____ / ___/___/

Q050

Name of field supervisor and code: _____ / ___/___/

Q051

DATE OF INTERVIEW / ___/___/2001

Q052 Q053

Time at the beginning of the interview / ___h/___mn/

Q054 Q055

Identifier /_1/ EA /___/___/ CLUSTER /___/ STRUCTURE /___/ HOUSEHOLD /___/ RESPONDENT /___/

MODULE 1: SOCIAL AND DEMOGRAPHIC CHARACTERISTICS OF RESPONDENT

Name of the respondent (not coded, confidential)	First name	Last (family) name
101-102 DATE OF BIRTH	Month /___/___/	Year /___/___/
103 Gender	Male 1 Female 2	
104 What was your mother's religion at your birth?	(see hhold questionnaire)	Specify if other Christian or other religion (coded 13 or 14) /___/___/
105 Have you ever changed religion since birth?	Yes 1 Go to 106 No 0 Go to 114	
106-107 When did you first change religion?	Month /___/___/	Year /___/___/
108 What was your new religion then?	(see hhold questionnaire)	Specify if other Christian or other religion (coded 13 or 14) /___/___/
109 Do you have the same religion now?	Yes 1 Go to 114 No 0 Go to 110	
110 How many religions did you have since birth?	Number of religious affiliations /___/___/	
111-112 When did you last change religion?	Month /___/___/	Year /___/___/
113 What is your religion now?	(see hhold questionnaire)	Specify if other Christian or other religion (coded 13 or 14) /___/___/

114 What was/is your father's last level of education?	No school 0 Primary 1 Secondary 2 High school 3 Post-secondary training 4 University 5 DK 9
115 From which ethnic group is your father? (specify)	_____ /___/___/
116 Father's main profession when respondent was 15 years old (specify)	_____ /___/___/
117 What was/is your mother's last level of education?	No school 0 Primary 1 Secondary 2 High school 3 Post-secondary training 4 University 5 DK 9
118 From which ethnic group is your mother? (specify)	_____ /___/___/
119 Mother's main profession when respondent was 15 years old (specify)	_____ /___/___/
120 What is your present nationality?	(see hhold questionnaire) /___/___/

MODULE 3: SCHOOL, APPRENTICESHIP & ACTIVITY

/_3/ EA /_/_/_/ CLUSTER /_/_/ STRUCTURE /_/_/ HOUSEHOLD /_/_/ RESPONDENT /_/_/

INTERVIEWER: THIS MODULE IS ABOUT ACTIVITIES OF THE RESPONDENT. REGARDLESS HIS/HER PLACE OF RESIDENCE YOU MUST NECESSARILY FILL IN A LEAST ONE COLUMN FOR EVERY ACTIVITY OR STATUS IN THE SAME COMPANY.

PLEASE REFER TO THE AGEVENT FORM TO FILL IN QUESTIONS 301 TO 304.

FROM THE AGE OF 6 ONWARD	A 01	A 02	A 03	A 04	A 05
301 No of the period (see AGEVENT form)	/ / /	/ / /	/ / /	/ / /	/ / /
302 How many months are there between the end of the last period and the current one? or How many months did you spend unemployed before finding this job?		N° of months / / / (if more than 6 months and if necessary fill in an unemployment period)	N° of months / / / (if more than 6 months and if necessary fill in an unemployment period)	N° of months / / / (if more than 6 months and if necessary fill in an unemployment period)	N° of months / / / (if more than 6 months and if necessary fill in an unemployment period)
303-304 When did you start this activity?	/ / / / / / Month Year	/ / / / / / Month Year	/ / / / / / Month Year	/ / / / / / Month Year	/ / / / / / Month Year
305 Was it a period of...?	Study 1-> 306 Illness 2-> 309 Invalidity 3-> 309 Retirement 4-> 309 Homemaker 5-> 309 Unemploym. 6-> 309 Other inactiv. 7-> 309 Apprenticeship or employment 8-> 310	Study 1-> 306 Illness 2-> 309 Invalidity 3-> 309 Retirement 4-> 309 Homemaker 5-> 309 Unemploym. 6-> 309 Other inactiv. 7-> 309 Apprenticeship or employment 8-> 310	Study 1-> 306 Illness 2-> 309 Invalidity 3-> 309 Retirement 4-> 309 Homemaker 5-> 309 Unemploym. 6-> 309 Other inactiv. 7-> 309 Apprenticeship or employment 8-> 310	Study 1-> 306 Illness 2-> 309 Invalidity 3-> 309 Retirement 4-> 309 Homemaker 5-> 309 Unemploym. 6-> 309 Other inactiv. 7-> 309 Apprenticeship or employment 8-> 310	Study 1-> 306 Illness 2-> 309 Invalidity 3-> 309 Retirement 4-> 309 Homemaker 5-> 309 Unemploym. 6-> 309 Other inactiv. 7-> 309 Apprenticeship or employment 8-> 310
306 EDUCATION LEVEL (only for period of studying)	Primary 1 Secondary 2 High school 3 Post-secondary educ. 4 University 5	Primary 1 Secondary 2 High school 3 Post-secondary educ. 4 University 5	Primary 1 Secondary 2 High school 3 Post-secondary educ. 4 University 5	Primary 1 Secondary 2 High school 3 Post-secondary educ. 4 University 5	Primary 1 Secondary 2 High school 3 Post-secondary educ. 4 University 5
What was your level of education reached at the end of this period?	Primary 1 Secondary 2 High school 3 Post-secondary educ. 4 University 5	Primary 1 Secondary 2 High school 3 Post-secondary educ. 4 University 5	Primary 1 Secondary 2 High school 3 Post-secondary educ. 4 University 5	Primary 1 Secondary 2 High school 3 Post-secondary educ. 4 University 5	Primary 1 Secondary 2 High school 3 Post-secondary educ. 4 University 5
307 What was the highest certificate or degree you attained during this period?	None 0 KCPE/CPE/KAPE/KPE 1 KJSE 2 KCSE/KCE/EACE/CSC 3 KACE/EAACE/HSE 4 Diploma/certificate 5 Bachelor's degree 6 Masters degree 7 Other 9	None 0 KCPE/CPE/KAPE/KPE 1 KJSE 2 KCSE/KCE/EACE/CSC 3 KACE/EAACE/HSE 4 Diploma/certificate 5 Bachelor's degree 6 Masters degree 7 Other 9	None 0 KCPE/CPE/KAPE/KPE 1 KJSE 2 KCSE/KCE/EACE/CSC 3 KACE/EAACE/HSE 4 Diploma/certificate 5 Bachelor's degree 6 Masters degree 7 Other 9	None 0 KCPE/CPE/KAPE/KPE 1 KJSE 2 KCSE/KCE/EACE/CSC 3 KACE/EAACE/HSE 4 Diploma/certificate 5 Bachelor's degree 6 Masters degree 7 Other 9	None 0 KCPE/CPE/KAPE/KPE 1 KJSE 2 KCSE/KCE/EACE/CSC 3 KACE/EAACE/HSE 4 Diploma/certificate 5 Bachelor's degree 6 Masters degree 7 Other 9
308 What type of educational establishment were you in?	Public 1 Private religious 2 Private non-religious 3 Go to 309	Public 1 Private religious 2 Private non-religious 3 Go to 309	Public 1 Private religious 2 Private non-religious 3 Go to 309	Public 1 Private religious 2 Private non-religious 3 Go to 309	Public 1 Private religious 2 Private non-religious 3 Go to 309

309 SUPPORT OF STUDENTS AND INACTIVES (illness, invalidity, retirement, homemaker, unemployment, other period of inactivity)

How were you mainly supported during this period?	Retirement or other benefits 1	Retirement or other benefits 1	Retirement or other benefits 1	Retirement or other benefits 1	Retirement or other benefits 1	Retirement or other benefits 1
	Private/property income or savings 2	Private/property income or savings 2	Private/property income or savings 2	Private/property income or savings 2	Private/property income or savings 2	Private/property income or savings 2
	Scholarship only 3	Scholarship only 3	Scholarship only 3	Scholarship only 3	Scholarship only 3	Scholarship only 3
	Scholarship & stipend 4	Scholarship & stipend 4	Scholarship & stipend 4	Scholarship & stipend 4	Scholarship & stipend 4	Scholarship & stipend 4
	Spouse 5	Spouse 5	Spouse 5	Spouse 5	Spouse 5	Spouse 5
	Older gen. relatives 6	Older gen. relatives 6	Older gen. relatives 6	Older gen. relatives 6	Older gen. relatives 6	Older gen. relatives 6
	Younger gen. relatvs 7	Younger gen. relatvs 7	Younger gen. relatvs 7	Younger gen. relatvs 7	Younger gen. relatvs 7	Younger gen. relatvs 7
	Other relatives 8	Other relatives 8	Other relatives 8	Other relatives 8	Other relatives 8	Other relatives 8
	Welfare 9	Welfare 9	Welfare 9	Welfare 9	Welfare 9	Welfare 9
	Petty jobs 10	Petty jobs 10	Petty jobs 10	Petty jobs 10	Petty jobs 10	Petty jobs 10
Other _____ 99	Other _____ 99	Other _____ 99	Other _____ 99	Other _____ 99	Other _____ 99	
	Go to 333	Go to 333	Go to 333	Go to 333	Go to 333	Go to 333
310 FOR ALL EMPLOYED OR APPRENTICES						
What was your main occupation? or What was the trade/craft/profession that you were learning? (specify)	_____	_____	_____	_____	_____	_____
311 What was your status during this period of activity?	Salaried 1-> 318 Apprentice 2-> 317 Family business 3-> 317 Own business 4-> 312	Salaried 1-> 318 Apprentice 2-> 317 Family business 3-> 317 Own business 4-> 312	Salaried 1-> 318 Apprentice 2-> 317 Family business 3-> 317 Own business 4-> 312	Salaried 1-> 318 Apprentice 2-> 317 Family business 3-> 317 Own business 4-> 312	Salaried 1-> 318 Apprentice 2-> 317 Family business 3-> 317 Own business 4-> 312	Salaried 1-> 318 Apprentice 2-> 317 Family business 3-> 317 Own business 4-> 312
312 FOR OWN BUSINESS						
How many employees/apprentices worked for you at the beginning of this period?	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5
313 How many employees/apprentices worked for you at the end of this period?	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5	0 (self-employed) 1 1-2 persons 2 3-5 persons 3 6-10 persons 4 More than 10 5
314 How did you keep your accounts record?	Personal book 1 Formal accountancy 2 No written accounts 3	Personal book 1 Formal accountancy 2 No written accounts 3	Personal book 1 Formal accountancy 2 No written accounts 3	Personal book 1 Formal accountancy 2 No written accounts 3	Personal book 1 Formal accountancy 2 No written accounts 3	Personal book 1 Formal accountancy 2 No written accounts 3
315 Was your company registered? (PIN, VAT)	Yes 1 No 0	Yes 1 No 0	Yes 1 No 0	Yes 1 No 0	Yes 1 No 0	Yes 1 No 0

316	None	0	None	0	None	0	None	0	None	0
To set up this business what was the main source of finance you resorted to?	Own savings	1	Own savings	1	Own savings	1	Own savings	1	Own savings	1
	Inheritance	2	Inheritance	2	Inheritance	2	Inheritance	2	Inheritance	2
	Family assistance	3	Family assistance	3	Family assistance	3	Family assistance	3	Family assistance	3
	Spousal support	4	Spousal support	4	Spousal support	4	Spousal support	4	Spousal support	4
	Merry-go-round	5	Merry-go-round	5	Merry-go-round	5	Merry-go-round	5	Merry-go-round	5
	Association	6	Association	6	Association	6	Association	6	Association	6
	Credit from suppliers	7	Credit from suppliers	7	Credit from suppliers	7	Credit from suppliers	7	Credit from suppliers	7
	Bank loan	8	Bank loan	8	Bank loan	8	Bank loan	8	Bank loan	8
	NGO loan	9	NGO loan	9	NGO loan	9	NGO loan	9	NGO loan	9
	Co-operative loan	10	Co-operative loan	10	Co-operative loan	10	Co-operative loan	10	Co-operative loan	10
	Personal loan	11	Personal loan	11	Personal loan	11	Personal loan	11	Personal loan	11
	Shylock	12	Shylock	12	Shylock	12	Shylock	12	Shylock	12
	Other _____ 99		Other _____ 99		Other _____ 99		Other _____ 99		Other _____ 99	
	Go to 325		Go to 325		Go to 325		Go to 325		Go to 325	

317 FOR APPRENTICES AND FAMILY BUSINESS

How were you mainly supported during this period?	Older gen. relatives	1	Older gen. relatives	1	Older gen. relatives	1	Older gen. relatives	1	Older gen. relatives	1
	Younger gen. relatvs	2	Younger gen. relatvs	2	Younger gen. relatvs	2	Younger gen. relatvs	2	Younger gen. relatvs	2
	Other relatives	3	Other relatives	3	Other relatives	3	Other relatives	3	Other relatives	3
	Manager/boss	4	Manager/boss	4	Manager/boss	4	Manager/boss	4	Manager/boss	4
	Welfare	5	Welfare	5	Welfare	5	Welfare	5	Welfare	5
	Petty jobs	6	Petty jobs	6	Petty jobs	6	Petty jobs	6	Petty jobs	6
	Other _____	9	Other _____	9	Other _____	9	Other _____	9	Other _____	9
		Go to 321		Go to 321		Go to 321		Go to 321		Go to 321

318 FOR SALARIED EMPLOYEES

How did you obtain this job?	Family relations	1	Family relations	1	Family relations	1	Family relations	1	Family relations	1
	Personal relations	2	Personal relations	2	Personal relations	2	Personal relations	2	Personal relations	2
	Employment bureau	3	Employment bureau	3	Employment bureau	3	Employment bureau	3	Employment bureau	3
	Adverts	4	Adverts	4	Adverts	4	Adverts	4	Adverts	4
	Association	5	Association	5	Association	5	Association	5	Association	5
	Own initiative	6	Own initiative	6	Own initiative	6	Own initiative	6	Own initiative	6
	Other _____	9	Other _____	9	Other _____	9	Other _____	9	Other _____	9

319 How was your main record of payment?	No record	0	No record	0	No record	0	No record	0	No record	0
	Logbook	1	Logbook	1	Logbook	1	Logbook	1	Logbook	1
	Payment voucher	2	Payment voucher	2	Payment voucher	2	Payment voucher	2	Payment voucher	2
	Payslip	3	Payslip	3	Payslip	3	Payslip	3	Payslip	3

320 What was the main mode of payment?	Fixed salary/wage	1	Fixed salary/wage	1	Fixed salary/wage	1	Fixed salary/wage	1	Fixed salary/wage	1
	Pay per job	2	Pay per job	2	Pay per job	2	Pay per job	2	Pay per job	2
	Commission or %	3	Commission or %	3	Commission or %	3	Commission or %	3	Commission or %	3
	In kind	4	In kind	4	In kind	4	In kind	4	In kind	4

321 PROMOTION (for salaried/employee, apprentices and family business)

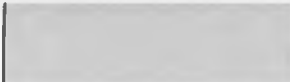
Since the beginning of this period have you been promoted?	Yes	1	Go to 322	Yes	1	Go to 322	Yes	1	Go to 322	Yes	1	Go to 322
	No	0	Go to 325	No	0	Go to 325	No	0	Go to 325	No	0	Go to 325

322-323 When were you promoted?	Month	Year	Month	Year	Month	Year	Month	Year	Month	Year
	___/___	___/___	___/___	___/___	___/___	___/___	___/___	___/___	___/___	___/___

324 What was your new position? (specify)	_____	_____	_____	_____	_____	_____
325 FOR ALL EMPLOYED RESPONDENTS: CHANGE IN EDUCATION LEVEL (through evening classes, parallel courses...)						
During that period, did you study to obtain higher educational qualification?	Yes 1 Go to 326 No 0 Go to 330	Yes 1 Go to 326 No 0 Go to 330	Yes 1 Go to 326 No 0 Go to 330	Yes 1 Go to 326 No 0 Go to 330	Yes 1 Go to 326 No 0 Go to 330	Yes 1 Go to 326 No 0 Go to 330
326 What level of education did you attain?	None 0 KCPE/CPE/KAPE/KPE 1 KJSE 2 KCSE/KCE/EACE/CSC 3 KACE/EAACE/HSE 4 Diploma/certificate 5 Bachelor's degree 6 Masters degree 7 Other 9	None 0 KCPE/CPE/KAPE/KPE 1 KJSE 2 KCSE/KCE/EACE/CSC 3 KACE/EAACE/HSE 4 Diploma/certificate 5 Bachelor's degree 6 Masters degree 7 Other 9	None 0 KCPE/CPE/KAPE/KPE 1 KJSE 2 KCSE/KCE/EACE/CSC 3 KACE/EAACE/HSE 4 Diploma/certificate 5 Bachelor's degree 6 Masters degree 7 Other 9	None 0 KCPE/CPE/KAPE/KPE 1 KJSE 2 KCSE/KCE/EACE/CSC 3 KACE/EAACE/HSE 4 Diploma/certificate 5 Bachelor's degree 6 Masters degree 7 Other 9	None 0 KCPE/CPE/KAPE/KPE 1 KJSE 2 KCSE/KCE/EACE/CSC 3 KACE/EAACE/HSE 4 Diploma/certificate 5 Bachelor's degree 6 Masters degree 7 Other 9	None 0 KCPE/CPE/KAPE/KPE 1 KJSE 2 KCSE/KCE/EACE/CSC 3 KACE/EAACE/HSE 4 Diploma/certificate 5 Bachelor's degree 6 Masters degree 7 Other 9
327 What type of educational establishment were you in?	Public 1 Private religious 2 Private non-religious 3	Public 1 Private religious 2 Private non-religious 3	Public 1 Private religious 2 Private non-religious 3	Public 1 Private religious 2 Private non-religious 3	Public 1 Private religious 2 Private non-religious 3	Public 1 Private religious 2 Private non-religious 3
328-329 When did you attain that level?	____/____ Month Year	____/____ Month Year	____/____ Month Year	____/____ Month Year	____/____ Month Year	____/____ Month Year
330 CHARACTERISTICS OF THE COMPANY						
Which economic sector did your company/organisation belong to?	Public service 1 Parastatal 2 Private company 3 Export proc. zone 4 NGO 5 International organ. 6 Small business 7 Household 8 Other 9	Public service 1 Parastatal 2 Private company 3 Export proc. zone 4 NGO 5 International organ. 6 Small business 7 Household 8 Other 9	Public service 1 Parastatal 2 Private company 3 Export proc. zone 4 NGO 5 International organ. 6 Small business 7 Household 8 Other 9	Public service 1 Parastatal 2 Private company 3 Export proc. zone 4 NGO 5 International organ. 6 Small business 7 Household 8 Other 9	Public service 1 Parastatal 2 Private company 3 Export proc. zone 4 NGO 5 International organ. 6 Small business 7 Household 8 Other 9	Public service 1 Parastatal 2 Private company 3 Export proc. zone 4 NGO 5 International organ. 6 Small business 7 Household 8 Other 9
331 In which estate/area was your company located during this period? For Nairobi: estate/area For outside Nairobi: nearest town or country	_____	_____	_____	_____	_____	_____

332 TRANSPORTATION MEANS What was your main transport (longer distance covered) for going to work during this period?	Work at home 1 On foot 2 Cycle 3 Motorbike 4 Own car 5 Shared car 6 Company's bus 7 Matatu 8 Taxi 9 KBS bus 10 Train 11 Other 12	Work at home 1 On foot 2 Cycle 3 Motorbike 4 Own car 5 Shared car 6 Company's bus 7 Matatu 8 Taxi 9 KBS bus 10 Train 11 Other 12	Work at home 1 On foot 2 Cycle 3 Motorbike 4 Own car 5 Shared car 6 Company's bus 7 Matatu 8 Taxi 9 KBS bus 10 Train 11 Other 12	Work at home 1 On foot 2 Cycle 3 Motorbike 4 Own car 5 Shared car 6 Company's bus 7 Matatu 8 Taxi 9 KBS bus 10 Train 11 Other 12	Work at home 1 On foot 2 Cycle 3 Motorbike 4 Own car 5 Shared car 6 Company's bus 7 Matatu 8 Taxi 9 KBS bus 10 Train 11 Other 12
333 What was the main reason for changing activity at the end of this period? NOTICE TO INTERVIEWER: CODE 99 FOR THE LAST ACTIVITY	Laid off 1 "Terminated" 2 Company bankrupt 3 End of contract 4 End of apprenticeship 5 Low salary/income 6 Working conditions 7 Personal conflicts 8 Find (better) job 9 Promoted 10 Medical 11 Bankruptcy 12 Family relocation 13 Retirement 14 Other 99	Laid off 1 "Terminated" 2 Company bankrupt 3 End of contract 4 End of apprenticeship 5 Low salary/income 6 Working conditions 7 Personal conflicts 8 Find (better) job 9 Promoted 10 Medical 11 Bankruptcy 12 Family relocation 13 Retirement 14 Other 99	Laid off 1 "Terminated" 2 Company bankrupt 3 End of contract 4 End of apprenticeship 5 Low salary/income 6 Working conditions 7 Personal conflicts 8 Find (better) job 9 Promoted 10 Medical 11 Bankruptcy 12 Family relocation 13 Retirement 14 Other 99	Laid off 1 "Terminated" 2 Company bankrupt 3 End of contract 4 End of apprenticeship 5 Low salary/income 6 Working conditions 7 Personal conflicts 8 Find (better) job 9 Promoted 10 Medical 11 Bankruptcy 12 Family relocation 13 Retirement 14 Other 99	Laid off 1 "Terminated" 2 Company bankrupt 3 End of contract 4 End of apprenticeship 5 Low salary/income 6 Working conditions 7 Personal conflicts 8 Find (better) job 9 Promoted 10 Medical 11 Bankruptcy 12 Family relocation 13 Retirement 14 Other 99
334 Did someone other than the members of the household help with the housework?	No 0 Yes, not paid 1 Yes, paid 2 Don't know 9	No 0 Yes, not paid 1 Yes, paid 2 Don't know 9	No 0 Yes, not paid 1 Yes, paid 2 Don't know 9	No 0 Yes, not paid 1 Yes, paid 2 Don't know 9	No 0 Yes, not paid 1 Yes, paid 2 Don't know 9
FOR PERIOD WHEN RESPONDENT WAS UNDER AGE 10 OR AT SCHOOL GO TO NEXT COLUMN, OTHERWISE GO TO Q335					
335 During this period did you have another source of income?	Yes, regular 1 Yes, occasionally 2 No 0 If YES go to _____ If NO go to _____	Yes, regular 1 Yes, occasionally 2 No 0 If YES go to _____ If NO go to _____	Yes, regular 1 Yes, occasionally 2 No 0 If YES go to _____ If NO go to _____	Yes, regular 1 Yes, occasionally 2 No 0 If YES go to _____ If NO go to _____	Yes, regular 1 Yes, occasionally 2 No 0 If YES go to _____ If NO go to _____
336 What was your second source of income? (quote the most important if more than 2)	Own business 1 Relative's business 2 Non-relative's busnss 3 Properties income 4 Other 5	Own business 1 Relative's business 2 Non-relative's busnss 3 Properties income 4 Other 5	Own business 1 Relative's business 2 Non-relative's busnss 3 Properties income 4 Other 5	Own business 1 Relative's business 2 Non-relative's busnss 3 Properties income 4 Other 5	Own business 1 Relative's business 2 Non-relative's busnss 3 Properties income 4 Other 5
337-338 When did you start this secondary activity?	Month Year Month Year	Month Year Month Year	Month Year Month Year	Month Year Month Year	Month Year Month Year

339 As compared to the preceding period did you find that your income...?



Increased 1
Decreased 2
Remained the same 3

Increased 1
Decreased 2
Remained the same 3

Increased 1
Decreased 2
Remained the same 3

Increased 1
Decreased 2
Remained the same 3