BEYOND SCHOOL INPUTS AND RESOURCES: AN ASSESSMENT OF THE EFFECTS OF SUBSIDIES ON EDUCATIONAL OUTPUTS IN KENYA

BY:

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DECLARATION

DECLARATION BY THE CANDIDATE

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DEDICATION

I dedicate this work to God, the almighty; He who never sleep nor slumber; He who gave me the energy, courage, humility and wisdom to understand and appreciate the world and the humanity.

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ABSTRACT

The purpose of this study is to assess the impact of government subsidy on the key determinants of educational attainment; transition, enrolment, retention and quality. The specific objectives of the study are; to present statistical outlay of public subsidies in the education sector in terms of levels and target areas, evaluate educational attainment indices in relation to public subsidies and lastly, to determine strategies of enhancing educational attainment in view of public subsidies. The study adopted a mixed method design. The target population included education officials and principals of high schools. The study sample was 270 school principals out of a population of 493.The respondents were selected using purposive, and simple random sampling technique and the instruments for data collection were questionnaires and interview schedule. The reliability of the instruments was tested through a pilot study in the greater Baringo district of central-rift that is classified as both ASAL and non-ASAL. Data was analyzed using descriptive statistics (for measures of central tendencies and frequencies) and inferential statistics (using t-test and ANOVA models to establish causation and variable traits). The findings of this study revealed that there is a statistically significant relationship between the public subsidy and all educational indices in all the counties except the ASAL Turkana county where the impact was least felt. It was also found that the subsidy improved school supplies in all the counties. The study findings revealed that irrespective of the geographical location of schools, subsidies have a positive and significant effect on the indicators of educational attainments. The study therefore amplifies the need for the government to streamline the public subsidization policy in view of expectations of sessional paper no 1 of 2005, vision 2030, and the global imperatives namely MDGs and EFA goals.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The Kenya government has since independence recognized the role of education as a cornerstone of socio-economic development and a means of improving the welfare of individuals and the society at large (Ayot and Briggs, 1988). Studies by World Bank (1980) and Psacharapoulos and Woodhall (1985) established that investment in education guaranteed higher individual returns than investment in alternative sectors of the economy. Maryor et al (2005) and IBED, (2005) noted that education is viewed as the root source of Human, Social, Cultural, and Economic capital and is perceived as legitimate in terms of both individual and collective good, resulting into explosive growth both in National and Global arena. KIPPRA (2008) observed that provision of quality education is important in generating the opportunities and benefits of social and economic development.

Secondary Education has been perceived as a critical level in the overall development of a county (Psachapoulos and Woodhall, 1985; Wood and Mayer, 1999; Appleton, 2001 and Mingat, 2004). According to EPAA (2007) and World Bank (2008) financing secondary education is important as it constitutes an investment in education that yields considerable social and private returns. UNESCO (2008) observed that in Africa, there are four critical reasons for investing in secondary education. First secondary education is critical for economic growth and development (UNESCO, 2002; Lewin and Stuart, 2003). This is due to the fact that the secondary level provides countries with the human

capital needed for economic growth. In addition it provides a link between primary education and further learning and training (Knight and Sabot, 1990). Secondly secondary education contributes to the socialization process of young people, among them youth, who are at risk of losing the social and moral values (UNESCO, 2004). Secondary School age-group (Adolescence) has the greatest potential for changing its behaviors as secondary education can be decisive in enhancing positive social values among the youth (Lewin,2006). Thirdly, secondary education provides returns and offers young people the opportunity to acquire human capital unlikely to be developed in the lower grades (Knight and Sabot, 1990). This in turn enables the youth to develop job-oriented skills, participate fully in the society, take control of their own lives and continue learning (G.O.K, 1999). Finally the demand for secondary education is increasing rapidly (Bregman and Tallmeiser, 2002; IBRD, 2005)

The importance of secondary education therefore cannot be over- emphasized. As such the key variables that influence individuals' ability to access and therefore benefit from secondary education remain critical to any country (Lewin, 2001). These variables include equity, retention transition and enrolment (UNESCO, 2007). The above variables are strongly influenced by the poverty levels of the households (Bruns, Mingat and Rakatomalala, 2003). According to the National Poverty Eradication Plan 1999-2015, G.O.K, (1999) a critical social service in the development of the skills and human capital of low income groups is education, especially secondary education. Therefore, improving access, retention and transition to education for children of low income groups will remain a priority issue (KIPPRA, 2007; World Bank, 2008; UNESCO, 2008). UNESCO

(2007) added that secondary education has increasingly become a central policy concern of developing countries particularly among those that have made rapid progress in universalizing primary education and those in which demographic transition has shifted towards adolescence. It was further noted that even with the introduction of FPE, transition rates from primary to secondary levels are still wanting (UNESCO, 2008). Poverty has a huge bearing on access to education in terms of drop-outs and provision of basic services. Poverty levels also negatively impact on transition to secondary school education. For students from middle and upper income backgrounds education is more accessible and drop-out levels are lower. KIPRA, (2007) contends that unequal access to all levels of education is a basic characteristic of the education system in Kenya. This leads to deepening regional, class and gender differentiation in the country. Lewin, (2001) observes that though progress has been made in increasing enrolment in primary grades since the world conference on education and most people now live in countries where the primary gross enrolment rate (GER) approaches 100%, progress on increasing secondary participation has been disappointing. In fact in most of those countries with a Secondary GER of less than 40%, participation rate have not increased significantly. UNESCO (2010) further notes that, not only are countries with GER at secondary below 40% predominantly low income but also majority are concentrated in sub Saharan Africa where economic growth has been low and sometimes negative. To address the negative effects of poverty on educational achievement, most governments in both developed and developing countries have formulated interventions aimed at raising access, enrolment equity and transition (KIPPRA, 2007). These intervention measures involved re-organizations of expenditure frameworks to give priority to education (Keith, 2001).

Kenya, for instance, according to G.OK (1999) spends 6.9% of GDP (UNESCO, 2009), which is more than what most African countries spent on education. According to Kenya economic recovery Strategy paper, G.O.K (2007) the broad objectives of education sector interventions are to achieve 100% net Primary School enrolment rate and reduce the disparities at all levels of education.

Greater government subsidization of Education is motivated by the desire to widen access, raise enrolment, increase retention and enhance equity. However various studies carried out in different parts of the world have had contradictory findings and thus putting into doubt the actual impact of public subsidy on educational achievement. Card (2000) carried out a study in USA on the impact of public subsidization of fees on enrolment and retention, established, against expectations, a negative relationship, implying that public subsidy do actually lower enrolment and retention. Mcpherson and Schapiro (1991) on the other hand in a similar study established a positive relationship. KIPPRA (2008) in a similar study on primary schools in Kenya established a positive relationship between public subsidy and all the critical education indices. Kane (1995) on the impact of Government Grants on enrolment and retention established a negative relationship. Whitfield and Wilson (1990) in their study in UK on the effect of Grants to Education on transition and equity established a negative relationship.

1.2 Statement of the Problem

Subsidizing public education in Kenya is motivated by the strong Government desire to raise access to Education for all groups in the society and hence increase enrolment,

enhance student retention and transition and improve equity in education. Consequently, the government has strongly enhanced public funding of education with the above goals in mind. For instance, the total budget for 2005/06 was 508 billion, 2006/07, was 550.2 billion, 2007/08 was 693.6 billion 2008/09 was 759.8 billion, 2009/10 was793.6 billion, 2010/11 was 814.3 billion and for 2011/2012 was 849.6 billion. Allocations to the education sector in the respective years were 96.7 billion, 101.7 billion, 119.6 billion, 140.09 billion, 142.7 billion, 146.5 billion and 152.8 billion, (G.O.K, 2010). However, despite this heavy government funding, there still exist wide disparities in enrolment, retention and transition between different groups and regions in the country. For instance in Turkana county, the primary school dropout rate is 62.9 per cent while in Nandi county it is 5.2 per cent over the 1998 to 2004 period. Similar scenario is experienced at secondary school level (G.O.K, 2005).Subsidizing public education is indeed a move geared towards boosting the indicators of educational attainment. As to whether public subsidization of education shall therefore give the desired results remains a subject of debate, given the governments acknowledged submission that any budgetary changes in favour of education will have major ramifications on the entire economy (GoK, 2006). Several studies on the impact of public subsidy on educational attainment indicators have given conflicting and contrasting results. On the one hand, studies by Card, (2000), Kane (1995), Whitfield and Wilson (1990), Williams, (2006), Lewin, (2008) among others, established a negative relationship between public subsidy and the achievement of critical educational indices like enrolment, equity, transition and retention while on the other hand, Studies by Mcpherson and Schapiro (1991), Kippra (2008), Lewin and cailloids (2001), Cailloids and Hallacks (2004), Frederiksson, (1997), UNESCO, (2008) among

others established a positive relationship between public subsidy and the achievement of critical educational indices.

Unlike this study, all the above studies, except for KIPPRA (2008), contextualized the relationship between the public subsidy and the achievement of critical educational indices in the developed countries and are time series studies. The principle problem with such time series studies is that it is difficult to disentangle funding effect from a general rising trends in education. This study attempts to address this challenge by manipulating the study variables and separate the effect of the general rising trend from the effect of public subsidy on the attainment of educational indicators. Moreover, unlike the KIPPRA (2008) study that dealt with the impact of Free Primary Education (FPE) on enrolment in Kenya, this study focuses on secondary education and more specifically the impact of all government subsidies on the achievement of critical educational indices. The choice of secondary school, as opposed to primary school, was supported by World Bank (2005) that stated that many aspects of secondary schooling remain informed by inadequate data and lack of a robust knowledge base. Addressing this situation will lead to the formulation of a more evidence-based policy. The purpose of this study therefore is to assess the impact of public subsidy on educational outputs in secondary schools in Kenya.

1.3 Purpose of the Study

The main purpose of this study is to assess the impact of public subsidy on determinants of educational attainment; enrolment, retention, transition and equity.

1.4 The Objectives of the Study.

1. To evaluate the specific public subsidy interventions that have been undertaken in terms of implementational challenges and successes.
2. To determine the influence of the inputs (subsidies) on the outcomes (indices) of educational attainment.
3. To determine the policy implications for achieving relevant EFA and MDG goals by 2015 in Kenya in view of the cost-effectiveness of subsidies?

1.5 Hypothesis

1. There is no statistically significant relationship between educational attainment and provision of public subsidies $p \geq 0.05$.
2. There is no statistically significant relationship between the inputs and outcomes of educational attainment $p \geq 0.05$.

1.6 Significance of the Study

Since independence the government has given priority in its annual budgetary allocations to education amid rising demand from other public sectors though limited studies have been undertaken to determine the effect of this allocation on access, retention, transition and equity in the country. Therefore the study is significant in that it provides useful information to the government and all education stakeholders on the actual effect of the subsidy on equity, access, retention and transition in the education system.

Motivated by the desire to attain the millennium development goals and the country's vision 2030, the government uses the findings of this study to justify the reorganization of its budgetary priority areas either in favour of or against education or any other sector.

1.7 Justifications of the Study

Heavy government expenditure on education must be accompanied by an equal return to the society from the investment in education. The government's overall goal of equalizing the inequalities and reducing the gap between the haves and the have-nots together with the regional disparities inherent in the Kenyan society can meaningfully be addressed if budgetary allocations are streamlined towards only those areas that guarantee higher socioeconomic returns to the vast majority of the people who are poor and in the disadvantaged regions of the country.

Public subsidization to education is geared towards addressing the major socio-economic challenges that face independent Kenya. However the continued heavy subsidization of education by the government and the inherent failure of the subsidies to move education indices upwards is a matter of concern. Moreover there are very limited studies that have been done in the past especially in Kenya's North-Rift secondary schools to evaluate the effects of this public subsidy to education on educational indices.

1.8 Scope of the Study

This study was conducted in six North-Rift counties of Rift-Valley province, Kenya. These counties were chosen because of the geographical diversity of the region and hence their diverse educational needs. Some counties of this region are classified as Arid and

Semi-Arid lands (ASAL), while others are classified as non-ASAL. While allocating and disbursing the subsidies, the government recognizes these diversities and the impact of the subsidies may differ from county to county. The independent variable in this study is public subsidy while the dependent variable is enhanced attainment of the education indices, which are transition, retention, enrollment and equity. This study was done between October 2011 and February, 2012.

1.9. Assumptions of the Study

The researcher made the assumption that updated and accurate data on school enrolment, retention and transition is readily available in schools and that school principals and Head teachers have accurate records of all the public subsidies that their schools have benefited from. Moreover, it is assumed that no natural factors like diseases, conflicts and famine would affect pupil enrolment and that all the secondary schools in the study area are registered with the line ministry.

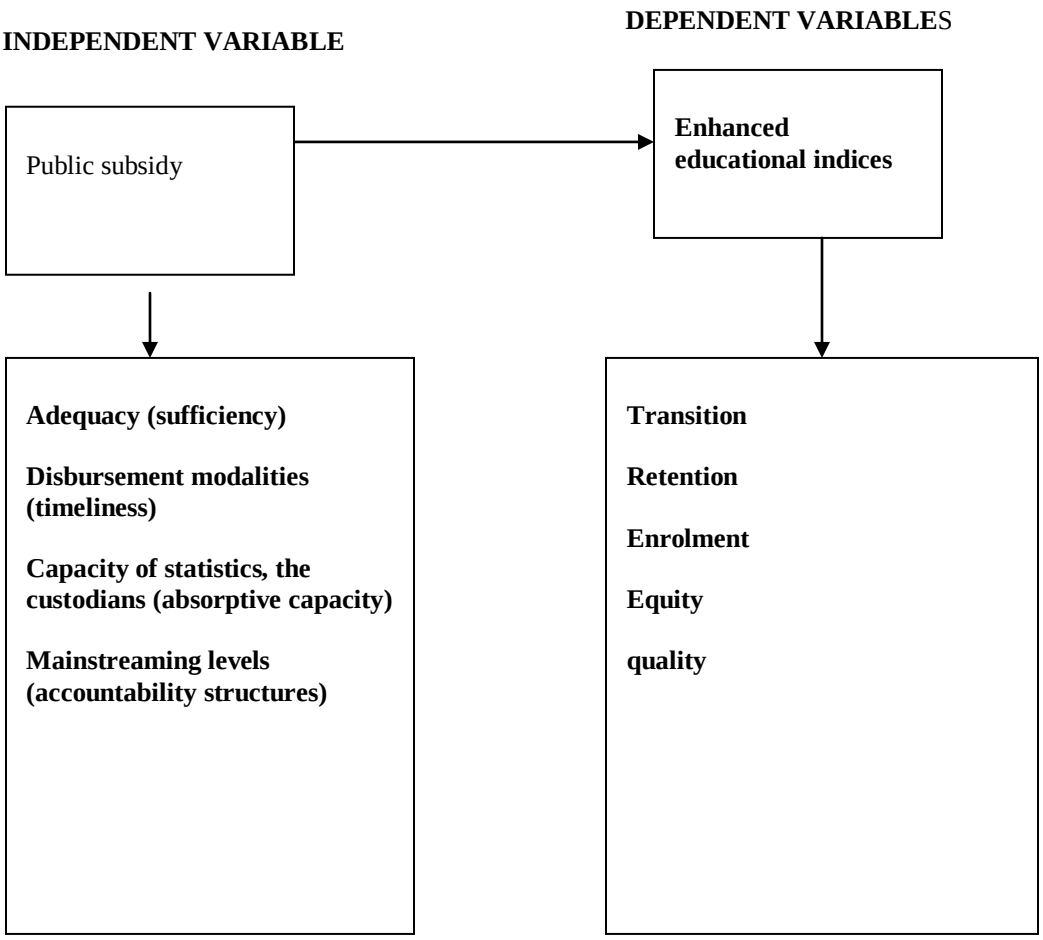
1.10. Limitations of the Study

1. Obtaining accurate data on school repeaters drop-outs and total enrolment might not be an easy task since some schools don't keep such records, others might have closed down while others remain unregistered. The researcher overcame this by looking at more documents from different sources
2. The cross-sectional survey method that was employed by the researcher for data collection is another source of limitation. All the possible implications of the

programme might not be captured in the snap shot but in the long-run. The researcher overcame this by doing content analysis.

3. The instruments used in the study were another source of limitation too. The study limited itself to questionnaires, interviews, and document analysis to collect the relevant data. Questionnaires and interviews yield self-report data which may not establish the truthfulness and veracity of the respondents. This however was remedied through triangulation method.

1.11 Conceptual Framework



1.12 Theoretical Framework

This study is anchored on the theory of social chaos developed by Kiel (1995). This theory states that the world is non-linear and unstable because of chaos, a situation that prevents a stable strategy of problem-solving. Chaos is one possible result of the dynamics of non-linear systems. Non-linearity refers to behaviour in which the relationships between variables in a system are dynamic and disproportionate. In non-linear systems, small changes can have big effects and outcomes are subjects to high levels of uncertainty and unpredictability. In non-linear systems behaviour is erratic and filled with surprises. Disaster and emergency situations epitomizes the non-linearity of human events. These are events in which the relationship between the relevant variables is churning. Even in our desire to create order and control the situations, events often seem to churn one step ahead of our best efforts.

Chaos widens the spectrum of options and forces the organization to seek new points of view. For an organization to renew itself, it must keep itself in non-equilibrium state at all times. Most impropriety during times of high instability such as disaster and occasions when emergency services reach peak levels of activity, it is essential to recognize that stability can only be regained by developing strategies that are themselves unstable. In short, we must match the instability of these environments with management practices and organizational strategies that are dynamic and fluid.

The best way to understand how disasters and emergency events are non-linear systems is to compare the behaviour of such systems with that of linear or simple systems. In linear

systems the relationship between relevant variables is stable i.e. the relationship between the cause and effect is smooth and proportionate. In short, linear systems respond to big changes in a big and proportionate manner and to small changes in an equally small and proportionate way. But when we look at real disasters, the potential for non-linearity and erratic behaviour to occur in complex human environments that are often made about system behaviour and real outcome. If we consider how, as a non linear system evolves overtime, we cannot predict all the consequences of what seem initially to be totally reasonable management decisions.

Chaos is typified by behaviour that over time appears random and disorderly. It occurs within definable parameters i.e. chaotic behaviour remains within boundaries. When chaos occurs a non-linear system doesn't retrace prior identifiable sequences of behaviour and doesn't provide obvious patterns in its behaviour. Chaotic behaviours thus appear extremely disorderly since patters overtime, a symbol of disorderliness, don't appear to exist. Chaotic behaviour simply skips from one identifiable point to the next yet never extends outside clear and distinct boundaries.

One of the interesting qualities of non-linear dynamics as a paradigm for emergency management is that even when the data we examine look erratic and chaotic we can find a deeper order in the data. By looking at this deeper order in organizational data, managers can find both a new means for understanding how much change exists in organizational output and performance but can also begin to see how much effort will be

needed to change and improve the performance and results of world processes in organizations.

Chaos represents both risk and opportunity. The risk of chaos is that a system may not reach another point of stability and thus be over-whelmed by constant uncertainty and instability. The opportunity of chaos is that new ways of behaviour and responding to environmental challenges may be developed and become essential elements of emergent ways of responding to an uncertain world.

Chaos theory teaches us of the value of variation as a means for learning has obvious relevance to the management lens of non-linear dynamics. In non-linear systems, it's the non-average behaviour, the unusual event, the unexpected fluctuations that drives the processes of change. Therefore, the functional aspect of chaos theory is learning, as systems and individuals are allowed to test their parameters of output, service and quality. Moreover, what seems more logical is ensuring that we have a range of adequate responses across the range of potential disaster scenarios. This should ensure that we don't waste resources on unlikely events, but are still prepared for their arrival. We learn in uncertain world where history doesn't necessarily repeat itself that the rapid capacity to learn may be more important than experience. We also learn that in the kind of uncertainty and non-linear world we live that the tools available to managers are not like those available to natural scientists.

In this study, the theory was found relevant in that in the realm of public subsidization of education all over the world, the common feature is non-linearity and unpredictability, especially when we look at the impact of the subsidy on enrolment, retention, transition and equity. For instance, the impact of government subsidy on enrolment is not simple, it is quite dynamic and unpredictable. In some instances its positive (Frederiksson, 1997; Lewin and Calloids, 2001; UNICEF 2008) while in other instances its negative (Whitfield and Wilson, 1991; Lewin, 2008; Card, 2000). Therefore, the relationship may be described as non-linear and unstable because of chaos occasioned by the changing demographic, economic, political and social environments. The international conventions and protocols may be good sources of chaos to a country like Kenya since these conventions and protocols are at times irregular and inconsistent with the country`s practices.

The theory further is found relevant in that it is premised on the need to learn from the changes. It states that in non-linear systems, it's the unexpected fluctuations that drive the process of learning and change. This justifies the frequent reviews of the financing systems overtime from Free Primary Education for lower primary in 1974, introduction of cost-sharing in 1988, the re-introduction of Free Primary education in 2003 and the introduction of tuition free secondary education in 2007.

1.13. Operational Definition of Key Terms

Equity - Refers to the right of all to education. It introduces the value of fairness and social justice in the way educational opportunities and resources are allocated or shared among learners irrespective of gender, race, religion, region etc (Psacharopoulos and Woodhall, 1985)

Public subsidy -This refers to monetary assistance granted by a government to a person or group in support of an enterprise regarded as being in the public interest. (Taro, 1982). In this study it refers to the financial support given to education by the government.

Critical education indices – This refers to the parameters used to measure the effectiveness of a public subsidy and includes enrolment, retention, transition and equity (KIPPRA, 2007).

Inputs - This refers to something put into a system or expended in its operation to achieve output or a result eg any of the items, including materials, equipment and funds required for production (World Bank,2008). In this study, inputs refer to the public funds received by the secondary schools.

Outputs- This refers to the amount produced or manufactured during a certain period of time ie quantity of something that is created usually within a given period of time (World Bank,2008).In this study it refers to the number of graduates produced in a school per year.

Resources _This refers to something that can be used for support or help ie means that can be used to cope with a difficult situation. A source of aid or support that may be drawn upon when needed (World Bank, 2008). In this study it refers to the monetary support given to the needy schools.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is divided into four major sections. Section one deals with the rationale for public subsidization of education in Kenya, sub-Saharan Africa and the rest of the world. Section two deals with the impact of government subsidy on enrolment and equity as indicators of educational attainment. Section three deals with the effect of public subsidization of education on retention and transition as other key indicators of educational attainments. The last section deals with the critique of the literature where the gap is established that this study intends to bridge.

2.2 Rationale for public Subsidization of secondary education

The place of secondary education in the public funding policy of most third world countries has been quite clear (OSE, 2004). Since the worldwide Education for All (EFA) process was initiated in Jomtien in 1990, the significant priority given to primary education in many countries has become evident. International donors, development lending institutions as well as national policies have tended to focus most heavily on primary education (World Bank, 2008). Nevertheless, one of the consequences is that other levels of education systems, mainly secondary and Higher education have escaped attention (Keith and Lewin, 2008). This has led to imbalance between the sectors. In many developing countries, large groups of school leavers from primary schools seeking further education are experiencing that their educational aspirations cannot be met due to the under-development of secondary education (Rudolf, 2002). At the same time many

of these countries, especially in sub-Saharan Africa are undergoing socio-economic reforms and transformation which reduce the possibilities for traditional occupation or employment in rural areas (World Bank, 2008). The increase in the number of unemployed youth has become a major problem in many countries often leading to higher levels of poverty and crimes (World Bank, 2002). In view of the above factors therefore, a growing concern exists in many countries to develop their secondary education sector, through public subsidization intervention, both to over-come these problems and to contribute to increasing levels of both vocational competence and a stronger base for the entry into Higher Education (OSEI, 2004).

According to Lewin and Stuart (2003), investment in secondary education in sub-Saharan Africa will provide countries with critical higher-level skills and knowledge for advanced learning and training of technicians, scientists, entrepreneurs and yields considerable social and private returns. Secondary education plays a crucial role in preparing for higher education and for work, for youth and in a life-long learning perspective (World Bank, 2007). In Sub-Saharan Africa, less than one third of the age-group takes part in secondary education. In these countries, there is a strong pressure to expand secondary level in the education system through direct government interventions in the financing of education (EPAA, 2007; UNESCO, 2008; World Bank, 2007).

Rudolf (2002) on public intervention concerning the private choice of education observed that, in principle, three arguments can be made: the first is a public good argument; an educated person fosters civic participation, a stable democracy and a richer cultural life.

As this democracy accrues to all members of society alike, they can be considered a public good. The second argument relies on liquidity constraints. The optimal schooling choice is dependent on a capital market being accessible for all individuals. Since ability cannot be used as collateral, students from poorer backgrounds may not be able to borrow to invest in their own education. Public funding thus can provide the necessary temporary liquidity by giving loans, the credit market cannot provide. Finally, a more educated population can generate social externalities through complementarities in production or consumption (Frederiksson, 1997).

A number of studies undertaken in sub-Sahara Africa have found a strong correlation between investment in secondary education by both the public and the private sector, and the attainment of the Millennium Development Goals (MDGs). World Bank, (2006); World Bank (2007); UNESCO (2007); and EPAA (2007) all have argued that public financing/subsidization of secondary education will help the region meet the education-related MDGs and Dakar targets and close the education gap with other regions. The studies, however, warns that secondary education in the region faces many challenges. Demand for access in increasing dramatically, as primary enrolment is becoming universal. Achievement of Dakar and MDGs depends in part on expanding secondary education systems by publicly financing this expansion. Economic growth is widely believed to depend on knowledge and skills acquired beyond primary education (Ayot and Briggs, 1988). Secondary schooling can provide access to abstract thinking and analytical competencies that enhance competitiveness in knowledge-based economic activity in a climate of technological change and globalised trading of goods and services

(World Bank, 2008). It is further observed by Appleton, (2001) that sub-Sahara Africa, Kenya included, lags behind other regions in the proportion of the labour force completing secondary school. It needs to narrow this gap and replenish the human capital it has lost to HIV/AIDS and violent conflict. This can be achieved through public subsidization of secondary education. Investment in secondary education has been the missing link in many 21st education development plans (Mangat, 2004).

According to Lewin and Stuart, (2003), basic education for all is still indisputably a priority for Africa. Nevertheless the very fact that it is still a priority calls strongly for increased attention and greater efforts with regard to other levels of the system, especially secondary education. This is reinforced by UNESCO,(2006) characterization of basic education to include secondary education. World Bank (2005) further observed that secondary education has been an area of policy neglect. World Bank (2007) further added that policy in secondary education is often an afterthought and a residual consideration, at best and absent at worst. However, World Bank (2008) generates a sigh of relief when it observed that secondary education is now back on the agenda of developing countries, after a period of historical neglect. Far from being the weakest link in education systems, secondary education is now emerging as the cornerstone of the transformational process of education. UNESCO (2008) adds that as education stakeholders, we have to acknowledge that over the past two decades, in Sub-Sahara Africa, the education strategy has given less attention to secondary education than to primary and tertiary education.

The rationale for subsidizing secondary education in Kenya, as argued above, has its basis in the development of primary education. Most third world countries appreciate the fact that the strength of secondary education is the primary education. Consequently most third world countries, Kenya included have subsidized primary education with the long term goal for developing secondary education. In this regard, as early as 1964, the government established the Ominde Commission to chart the course of the development of the sector. The Commission emphasized Kenya's need for universal primary education (KIPPRA, 2008). Partial implementation of this recommendation started in 1974 and covered standards 1-4; it was extended to standards 5-7 in 1978. The initiative resulted in massive enrollments in primary schools; the gross enrollment rate (GER) level increased from 50 percent in 1963 to a peak of 105.4 percent in 1989. However, the high enrollments were negatively affected by the cost sharing policy introduced in 1989 as part of the Structural Adjustment Programs (SAPs). The policy hindered many children, especially those from economically marginalized groups, from accessing primary education (GOK, 2005). Education therefore became the preserve of the well-to-do members of Kenyan society. By December 2002, GER had fallen to 88.2 percent, compared with the 1989 level of 105 percent. Declining enrolment heightened concern among leaders; thus**,** the provision of free education became the main agenda during the general election of December 2002 (UNESCO, 2008).

There are other factors that contributed to declining enrollments in the 1990s and early 2000s. These include the increase in poverty, the availability of food, the prevalence of HIV/AIDS, and the use of child labour. Others, according to UNICEF, (2008) include;

- The inability of households to shoulder the high cost of education is mainly the result of deepening poverty in Kenya. The Second Report on Poverty in Kenya (Ministry of Finance and Planning 2000) revealed that 56 percent of Kenyans live on or below the poverty line; 30.7 percent of children out of school cite cost as the main reason for nonattendance. The overall cost of education for parents includes teaching and learning materials, fees, extra levies, capital development projects, and other miscellaneous charges.
- In poverty- stricken areas where household food security is precarious, school attendance is severely compromised. For example, in Marsabit district, if transportation problems constrain the availability of food under the World Food Program, schools are closed. In Turkana District, the synthesis report on education for nomads in Eastern Africa (Carr-Hill et al 2005) reveals that one school's enrollment dropped from 300 to 40 pupils at the end of term because of lack of food. This means that the supply of food and water to these areas is critical for enrolment and retention. Worse still, these areas are also beset with natural calamities like floods and strong winds that occasionally destroy classrooms.

It is in the light of the above factors that the Kenyan government, as a policy and an intervention measure, chose to publicly subsidize education (KIPPRA,2006)

2.2.1 Rationale for Free and Compulsory Primary Education in Kenya

Since independence, Kenya has expressed the need to attain universal primary education. To demonstrate its conviction, the government ratified the recommendations of the 1990

Jomtien World Conference on Education for All and the Dakar Framework for Action adopted at the 2000 Dakar World Education Forum and endorsed the goals of the Millennium Summit (2000). The Dakar Forum reiterated the right of every child to education and emphasized the duty of the Kenyan government to provide education to all its citizens. Furthermore, the Children's Act of 2001 grants every Kenyan child the right to education. It is therefore incumbent upon the government to take deliberate policy measures and actions to fulfill this obligation (GOK, 2005).

Expanding access to primary schooling is of fundamental importance to the government's development strategy for various reasons. First, universal primary education is central to the implementation of the Poverty Reduction Strategy since the acquisition of basic literacy skills will expand Kenyans access to employment opportunities and sustainable livelihoods. Second, human resource development is key to sustaining the country's economic growth. Kenya's labour force can only participate in the competitive global economy if it has skills that come with education. Third, universal access to primary school education is the most effective strategy for creating equity in education and in opportunities for survival and development (KIPPRA,2008). Ensuring that all children are able to enroll in school presents new opportunities for disadvantaged children, including children from underprivileged regions and communities and girls (World Bank,2008). In the light of the above factors, Kenya government publicly subsidized primary education by implementing the free primary education policy, whose main objectives, according to GOK, (2008) were;

- To reverse the declining enrollments at primary level
- To enhance access, retention, quality and relevance at the primary level
- To improve participation, progression and completion rates at the primary level.
- To implement sector policy goals, including universally accepted conventions on the provision of education (to which Kenya is a signatory)
- To reduce the cost of education, previously borne by parents in the provision of primary school education.
- To streamline and rationalize the use of educational resources
- To implement the provisions of the Children's Act of 2001
- To improve on learning achievements.

2.3 Impact of Government Subsidy on Enrolment and Equity

Public subsidization of education all over the world is motivated by the governments desire to address the social problems of access, equity and poverty (World Bank, 2002). Several studies done both in the developed and developing countries all point out to the fact that a subsidy influences, among other educational indices equity and enrolment (Rono, 2005). This section analyses the studies done on the influence of public subsidy on enrolment and equity in Europe, America, Latin America, Asia, Africa, Sub-sahara Africa and Kenya.

In Sweden, a study by Frederiksson (1997) analyzed the demand for secondary and university education between 1967 and 1991. Exploiting variations over time, Frederiksson looked particularly at the impact of public funding variables like grants and loans on national enrolment rates. University enrolment rates were measured as the ratio

of students enrolled at university level relative to the number of qualified leavers from upper secondary level (graduates). In this highly aggregated specification, Frederiksson found a robust positive and significant impact of public funding of education through grants and loans on equity and the enrolment rate of graduates of upper secondary level in Sweden. Frederikson therefore concluded that public subsidy has a positive and significant impact on the two educational indices; enrolment and equity. Unlike the Frederiksson's study that was done in the developed world, this study is done in a developing world and includes the ASAL regions. In addition to enrolment and equity, unlike the above study, this study also assesses the impact of subsidy on retention and transition.

In Netherlands, Huijsman et al (1986) in the Journal of Economics (2002) carried out a study on the impact of public subsidy to education on equity and enrolment, among other variables. The study found a significant negative impact of public funding of education on enrolment of males into higher education using a time – series framework for the years 1950 – 1982. The study confirmed that other factors like per capita income have a much higher impact on enrolment. Unlike the Hujisman et al (1986) study on higher education, this study is on the impact of public subsidy to education on enrolment and equity at the secondary school level which according to Koech report (G.O.K. 1999) is part of basic education.

In England and Wales, studies by Whitfield and Wilson (1991) on public spending and enrolment patterns of University students found that government funding on human

capital accumulation can lower enrolment in higher education. This is particularly so if it takes the form of employment and training schemes, which are in fact increasing the attractiveness of alternatives to schooling; a feature which has to be taken into account in analyzing public spending and enrolment patterns in a given country. Just like the Huijsman et al (1986), Whitfield and Wilson (1991) study is on higher education and in a developed world. This study is in a developing country, at the secondary school level and will entail establishing a relationship between the same variables, as their study, but in an ASAL area.

In the United States, McPherson and Schapiro (1991) summarized a bulk of literature concerning cross-sectional analysis of the impact of price or net-cost of education on student's post-secondary education – decision in the US mostly in the late 1970s and the 80s. This review highlights that most of these studies tends to confirm a positive and considerable sensitivity of students' education decisions to the cost of education, whether these costs are influenced by tuition fees or student-grant variation. Decision about where to attend school also responds to relative prices of schooling alternatives. Furthermore, the predicted response varies greatly by family income groups, enrolment of students of less affluent families is found to be significantly more sensitive to either an increase in student aid (grants) or a variation on tuition fees than enrolment of students from more affluent families. To sum up, McPherse and Schapiro observed that the given estimates point to a substantial effect of public funding on individual enrolment decision. Unlike the above study, this study, though using cross-sectional approach focuses on the impact of government subsidy on the indicators of educational achievement in a less

developed country that is characterized by abject poverty, high level of illiteracy and unemployment.

Another study in the United States (US) by Card (2000) on the average cost of education on enrolment found a mixed evidence of the impact of schooling cost on college attendance. Enrolment rates estimated by CPs data indicated a weak negative reaction to average tuition on the one hand and graduation rates calculated form census data show a weak positive relationship to education cost. Unlike the studies by McPherson and Shapiro (1991) and Card (2000) in the United States, this study assesses such relationships in developing economy where the poverty index is quite high. This study also looks at the effect of government subsidy on the other education indices, namely, retention and transition.

In Canada, Dynarski's (1994) analysis focused directly on the impact of eligibility for financial aid on college attainment. Taking the death of a parent (father) as proxy for eligibility and exploiting an exogenous policy change in 1982, Dynarsky used data from the national longitudinal survey of youth (NLSY). The study found a highly significant positive impact of aid eligibility on college attendance and completion and a significant negative impact of the policy shift in 1982, on the youth whose eligibility for aid was affected. Furthermore, the study found evidence for financial aid having a threshold effect implying that public funds are best used when they are generous for the first years of college and decreasing thereafter. This study, unlike Dynarski's is on secondary education not post secondary.

In Australia, a study by Hsieh and Urguilola (2003) in the Australian Journal of Education (2010), observed that the Australian government decision to subsidize education has positively influenced enrolment. Official data demonstrate that private school enrolments were in steady decline in Australia during the 1960s before government subsidies were introduced and then increased steadily as subsidies from both federal and state governments flowed to private schools. Unlike the Australian case, this study is on public schools that depend entirely on government/public support to run their operations.

The evidence from Austria presented in this study suggest that when operating subsidies are provided to private schools, parents from higher socio-economic groups are more likely to choose private education than parents from lower socio-economic groups. This may be a result of higher SES families being less price sensitive than lower SES families but could also be related to the perceived quality of the private schools in terms of student/teacher ratio. The observation that families from higher SES backgrounds are more likely to be choosers is borne out by studies in other countries. Reviewing the empirical literature on school choice in England, Scotland, Belgium and USA, Levin (1998) concluded that those who exercise the choice option are more likely to be for higher SES and to have higher school achievement scores than those who continue to attend their assigned schools. Even when subsidies are restricted to families of low SES the families who exercise choice are more likely to be of higher SES than those who do not choose. Thus the activities of schools and the inactivity of some parents contribute to

the apparent increase in socio-economic segregation between schools in an environment of market choice.

It has been suggested that if targeted grant program are to achieve their stated objectives of impressing their educational outcomes for disadvantaged students, they would have to randomly assign students to oversubscribed schools and deal with obstacles to choice such as transport cost and tuition fees (Ladd, 2002).

In Africa, a number of studies have been done on the impact of government subsidies on educational indices. In Ghana a study by World Bank (2002) noted that after gaining independence in 1957, the government in 1961,made primary school (6 years) and secondary school (4 years) fee free (subsidized) and compulsory. Grade I enrolment increased from 139,000 – 231,000 in the first year and the primary school enrolment increased from 664,332 in 1960 to 1,413,517 in 1965, a staggering 113% increase in 5 years or 16.2% per year. This resulted in an increase in the GER from 59% in 1960 to 106% in 1965. While this high GER resulted from the enrolment of many overage pupils, it could be argued that Ghana in 1965 already had an enrolment capacity to cater for all children of primary school age. However, as economic conditions worsened, enrolment stagnated between 1965 and 1970, resulting in a decline in the GER which in 1975 was only 72% and remained below 80% until 2000 (UNICEF 2008). It was therefore concluded that there is a positive and significant relationship between government subsidy and enrolment.

Regarding the size of grants, the Ghana study by Volan, (2003) describes 3 findings; First, it suggests the use of two criteria for establishing the amount of money allocated to each school, the first providing an amount proportional to the number of pupils enrolled, and the second providing a fixed amount allocated for each school independent of the size of school because there are many fixed costs largely independent of school size. Second, the size of the grant should be adjusted over time to account for inflation. Third, in most urban areas, the amounts schools receive from the capitation grants is considerably less than the amount they received from the school levies.

In short the potential utility of school grants surpasses their use as an effective mechanism for school fees replacement. School grants can be catalyst for developing capacity, accountability and ownership at the school and community level. Unlike the above studies in Ghana, this study, in addition to enrolment, other indicators of educational achievements like equity, retention and transition are also assessed.

In Zambia a study by World Bank (2008) observed that following the government subsidization, the country experienced an increase in GER from 59% at independence in 1964 to above 100% in the early 60s, it then declined during the 1990s to 75% in 1999 and increased during the past few years to reach 111% in 2005. The apparent intake rate in grade I hovered at 100% during 1970-77 period peaking in 1972 at 109% for boys and 102% for girls. A steady decline in the GER began in the early 1980s and continued in 1990s Volan (2003) still on Zambia observed that throughout the 1980s and 1990s the economic crisis hit the education system hard. Primary and secondary schools experienced a difficult time in trying to maintain enrolment, retention; coverage and

standards. The government was urgently asked to intervene and subsidize education to maintain the growth momentum in enrolment and retention.(World Bank, 2007). These studies however did not consider the impact of the subsidy on retention, transition and equity in ASAL areas. This study does that.

Williams (2006) on Tanzania noted that as soon as UPE had been launched, the situation of the country changed for the worse, with a serious economic crisis reflecting downturn in the world economy exacerbated in Tanzanians case by the strain of the Uganda war. An early response to the economic difficulties were the decision to ask parents to contribute 20/= per school child that only 34% of the levies could be collected in 1980. In about 2000/= per pupil was being charged by the end of the century. This led to a sharp decline in student retention and enrolment. Transition rate declined by 20% and the representation of the poor in primary school reduced by 65%.

Tanzania showed a GER in primary education of only 31% at independence in 1961 and remained as low as 35% in 1970. Following a decision in 1974 to introduce Free Universal Primary education by 1977, the grade I apparent intake rate increased from 56% in 1974 to 98% in 1975, 110% in 1976, 111% in 1977 and 168% in 1978. It the declined to 97% in 1979, 83% in 1980, and 82% in 1982. The rate continued to decline to 75% in 1991 and 74% in 1999. This downward trend reflects Tanzania's economic stagnation and decline during most of this period (World Bank, 2008).

Data from Mozambique's case study by World Bank, (2008) show that, in 2004, the GER for the two upper grades of primary education (grades 6 and 7) ranged from 50% for the poor 20% of the families to 87% for the richest 20%. Similarly data from Malawi's case show that, in the 1990 the net enrolment ratio was only 33% for children from the poorest quintile as compared to 75% for the richest. However, in 1997, following the introduction of government subsidy and the abolition of school fees, the corresponding figures were 76% and 80% respectively.

In four northern provinces of Cameroon in 2001, the percentage of admission to primary education from families belonging to the poorest 20% was 31% for girls and 55% for boys in rural areas and 55% and 72% respectively for children belonging to the richest 60% in urban areas was 72% for girls and 84% for boys. In other words, the possibility of entering school in these 4 provinces ranged from 31% - 84% depending on geographical location, gender and income group (World Bank, 2003).

In Cameroon, despite the official elimination of school fees in 2000, low public funding has resulted in high private cost of education, low enrolment and retention and a sharp decline in transition rate (UNESCO, 2005).

The enrolment impact of public subsidy depends on many factors including initial enrolment level, extent to which the fee abolition is phased in and magnitude of the fee(world bank, 2005).

In sub-Sahara Africa, Lewin (2008) carried out a study on enrolment trends. The study found that secondary schools in the region enroll first 25 million of the regions 93 million children of secondary school age and many of them attend irregularly and fail to complete lower secondary school. For the region as a whole, less than a 1/3 of the cohort enrolls in upper secondary grades. The gap in secondary enrolment rates between Sub-Saharan Africa and other developing regions increased between 1990 and 2000 though it's slowly beginning to narrow. Lewin further found out that despite heavy government subsidization of secondary education, enrolment rates still remain low, relative to secondary school-going age. Lewin (2008) therefore recommended that policy-makers in Sub-Sahara Africa need to review policy and practice for secondary schooling for six main reasons:

(1) The output of primary school is set to double in low enrolment countries as universal Primary Education (UPE) enrolment and completion is approached.

(2) Meeting education-related MDGs requires increasing secondary enrolment. Achieving UPE enrolment requires an adequate flow of qualified secondary school graduates into primary teaching.

(3) HIV/AIDS has decimated the active labour force and has undermined prospects for economic growth in some sub-Saharan countries.

(4) Poverty reduction will stall unless increases in enrolment are accompanied by greater equity.

(5) Competitiveness especially in high value-added, knowledge-based sectors of the economy depends on knowledge, skills and competencies associated with abstract

reasoning, analysis, language and communication skills, and the application of science and technology.

(6) Curriculum reforms at the secondary level is essential, both because of expanded access will enroll children with different learning needs and capabilities.

Lewin (2008) warns policy makers in the region that their challenge is to determine how to finance and manage secondary education growth, to streamline public subsidization policy in ways that increase equity and efficiency and that recognize the non-financial constraints on enrolment growth. World Bank, (2005) further adds that many African countries are undertaking important economic reforms, improving macroeconomic management, liberalizing markets and trade and widening the space for private sector activity. However, Africa still faces serious development challenges in human development, notably in post primary education. Osei (2004) while acknowledging the important link between secondary education and overall economic development observed that funding is fundamental both to expand enrolment by raising the number of available school places and to support students to make better use of schooling facilities. On equity, Osei noted that financial support by the government to girls may prevent drop-out and improve learning, and hence be a tool towards more equitable transition pattern. Such "positive discrimination" for girls enhances gender equity at secondary school level. Unlike the Osei (2004) and World Bank (2005) studies, this study considers both the ASAL and non – ASAL regions of an African country, Kenya and tries to establish the impact of subsidization of secondary education and achievement indicators; enrolment and equity.

In sub-Saharan Africa according to UNICEF, (2008) School fee abolition initiative, launched in 2005 by UNICEF was designed to support countries in maintaining and accelerating progress towards UPE as outlined in MDGs and EFA goals. Specifically the program strengthens country efforts to eliminate school fees and or implement targeted exemptions, subsidizations and incentives to reduce education cost for the poor.

The programme promotes access to quality basic education worldwide through specific and inter-linked goals. The first is to construct the knowledge base on school fee abolition in order of inform sound and sustainable policies, strategies and interventions. The programme recognizes that school fee abolition is a complex process that requires both the development of a credible database and the solid analysis that builds on lessons learned from experiences. The second goal is to provide guidance and support to countries in planning and implementing school fee abolition policies. The third goal is to advance the global policy dialogue on the financial barriers to education access (UNICEF, 2008). The result will ensure a good understanding of the complexities involved in school fee abolition, facilitate articulation of complementary roles, and create an environment for success (World Bank, 2008).

In many countries, recent efforts to reduce or abolish school fees are in fact, second attempts. The first efforts were initiated many decades earlier but were abandoned or reversed under pressure of economic crisis. In Ghana for instance, primary school fees were first abolished in 1961; while in Kenya and Tanzania, fee abolition strategies were introduced in 1974 UNICEF, 2008).

These policies had a significant impact on enrolment and retention and resulted in rapid gains towards the goal of UPE. Over time, however, the policies were largely abandoned, and many of the early gains reversed (World Bank, 2008).

According to UNICEF, (2008), between 1960 and 1980, African's gross enrolment rate (GER) grew from 45% to 80% and enrolment, by some 2608, as a result of subsidy, a level of growth not experienced before. Unfortunately, the next 20 years were marked by stagnation. The GER declined from 80% in 1980 to 72% in 1992 and did not regain in its 1980 level until 2000 when subsidies were re-introduced. The 70% increase in enrolment during the 1980 – 2000 period barely matched the growth in the primary school age population during the same 20 year period, leaving the GER unchanged. A comparison between the 2 periods shows that progress in certain regions of Africa, especially sub-Sahara towards the target of UPE by 1980 agreed on in Addis Ababa in 1961 by African political leaders, was far greater than the progress made towards the subsequent target of UPE by 2000, agreed on in Jomtien, Thailand in 1990 (Frederiksen (1981, 1983). Significant enrolment growth in the region, resulting in rapid increases in access, resumed in the late 1990s, when subsidies were re-introduced. The GER reached 97% in the school year ending in 2005 up from 80% in 1999. This represents a 36% increase in enrolment in 6 years at an annual rate of 52% (UNESCO, 2007).

Given the stagnation of 1980s and 90s, the main question about education development in SSA has been: how to address education stagnation. The resurgence of growth in recent years, as a result of subsidy, however, has changed this question. It is now: How to

sustain and reinforce the renewed progress towards EFA? The answer to this question is important with respect to UNESCO programs (UNESCO, 2007), because the growth momentum can be maintained. It is also important from an equity and "right to education" point of view since the children who do not enter school or drop out before completing are increasingly children who – from an economic and social point of view- are the most vulnerable. Finally, the answer is important as UNESCO has ambition of being a "bold initiative" whereby school fee abolition becomes a catalyst for other basic reforms needed to reach equity in both access and quality learning opportunities for all.

Decreased enrolment rates shows that the high priority given to basic education in the 1960s and 70s was not sustained when economic problems started in the early 80s. This could happen again especially as countries address the strong pressure for expanding post-primary education, which results from the present rapid progress towards UPE. For one thing the political voice of primary and secondary school graduates seeking access to the next educational level is much stronger than the voice of those excluded from primary education, who predominantly belong to economically and socially vulnerable groups (World Bank, 2007).

In the context of sub-Saharan Africa in 2006,(World Bank, 2008) observed that on average, more than 90% of children enter school, two-thirds of whom reach the end of primary cycle. Of these, at least half fail to master basic skills. In this context those who don't enter secondary drop out prior to completing primary cycle or don't acquire basic skills are increasingly children – from an economic and social point of view- are the most

vulnerable. They are predominantly form poor rural families, the majority are girls, many are disabled and an increasing one, are orphans because of the impact of civil strife and HIV/AIDS. For these children the indirect and direct cost of education to families is often the single most important factor excluding them from school. Therefore a government subsidy for them increases their school participation. To maintain them in school its necessary to have determined political leadership, resulting in targeted assistance to address both demand and supply factors hampering access and school retention for these children. There is a powerful ethical as well as development case for governments to provide the leadership required to ensure that no child is excluded form school because of inability to pay.

A study by UNICEF,(2008) covering 12 Francophone countries show that, on average, disparity in access between children from families in the 1st and 5th income quintiles is 3-4 times greater than disparity based on gender. Similarly the disparity between urban and rural children is 2-3 times greater than by gender (Mingat, 2003). The combination of being poor, rural and female means that girls account for about 2/3 of those who don't enter school. Therefore targeted assistance for such groups would raise their school participation.

A study by UNESCO (2005) show that of the 4, countries in sub-Saharan Africa, 27 had more than 50% of children from poorest quintile out of school, while this was the case in only 2 countries for children from the richest quintile . Only 3 countries had more than

80% of children from the poorest quintile enrolled, while this was the case in 19 countries for children from the richest quintile.

In terms of access and retention, the overarching challenge of attaining UPE in SSA, which, since independence, has focused on achieving a general increase in enrolment, must shift to focus on ensuring access for poor and disadvantaged children who are excluded from the system (UNESCO, 2007).

According to UNICEF,(2008), the use of capitation grants is a pro-poor strategy since it's the poor in particular, who have responded by enrolling their children in school. The strategy has also narrowed gender and geographical differences. Using the capitation grants is a relatively simple and cost effective strategy for achieving an immediate impact on access.

To address the challenges facing capitation and other forms of government subsidy to education KIPPRA, (2008) gave the preconditions for the sound functioning of school grants. This includes;

(1) Simple implementation guidelines with training in their application for District education officers and headteachers.

(2) A reliable school registry or a school map with reliable grants.

(3) The existence of an effective financial system for transferring the resources from the central level to schools, bank accounts at the school level, and transparent management of the funds at the school level.

Challenges of school grants that need to be addressed according to KIPPRA (2008) include:

(1) The financial sustainability of grants, as well as their timely availability to schools.

(2) The effectiveness and transparency of grant mechanism, including transparency in how much money is received and accountability about how the grants are used, co-operation and trust between school management and communities and capacity in financial management at the school level.

(3) The size of grants.

In Kenya the re-introduction of public subsidy to primary education (FPE) has had significant effect on enrolment. Table 2.1 shows the impact of the subsidy on enrolment by province, 2002-2004.

Table 2.1: Impact of Free Primary Education Policy on Public Primary School Enrolment by Province, 2002-04

	2002		2003		2004	
Province	**Boys**	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**
Central	398,683	399,773	429,366	420,106	430,670	420,677
Coast	199,414	165,344	251,194	208,091	285,455	241,183
Eastern	572,082	574,437	652,555	636,123	685,811	663,127
Nairobi area	72,611	72,668	96,366	96,466	101,044	102,017
North Eastern	33,300	15,034	43,244	21,194	46,188	21,249
Nyanza	514,524	499,554	654,575	626,789	651,151	607,739
Rift Valley	756,571	720,321	889,003	834,884	920,177	853,704
Western	430,433	450,127	527,501	518,898	554,690	537,525
Subtotal	**2,977,517**	**2,897,259**	**3,543,804**	**3,362,551**	**3,675,186**	**3,447,221**
Total for both	**5,874,776**		**6,906,355**		**7,122,407**	

Source: Ministry of Education, Science and Technology, Statistics Section

Free primary education (FPE) subsidy has also had an effect on the enrolment of girls and their retention in school. Figure 2.1(a), 2.1(b) and table 2.2 summarizes the impact of the subsidy on the enrolment of both boys and girls.

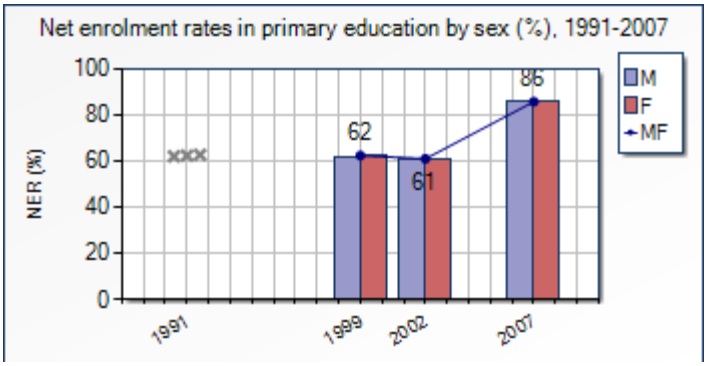


Figure2.1(a): Primary Gross Enrollment Rate by Gender and Province, 1991-2007

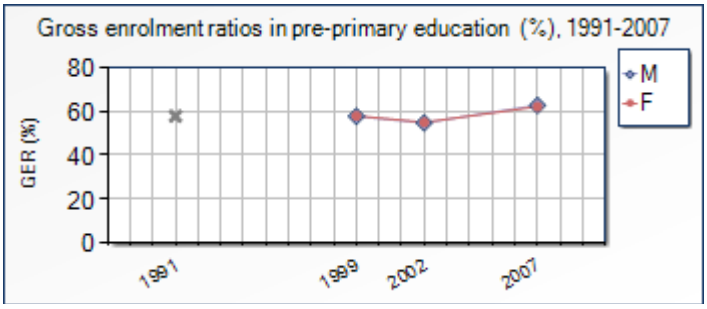


Figure 2.1 (b): Secondary Enrolments

Table 2.2: Primary Gross Enrollment Rate by Gender and Province, 2002-2004

	2002		2003		2004	
Province	**Boys**	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**
Central	92.2	93.3	102.3	100.9	102.2	99.9
Coast	70.3	59.4	86.9	73.7	97.3	83.7
Eastern	103.0	105.2	116.3	114.9	120.6	117.4
Nairobi area	32.3	36.2	39.1	43.9	41.0	45.8
North Eastern	25.3	13.3	32.4	18.8	33.5	18.5
Nyanza	104.8	102.3	127.8	122.8	126.2	117.4
Rift Valley	92.3	88.1	109.5	102.7	113.0	104.2
Western	112.6	108.0	137.4	123.2	143.3	125.9
All Kenya	88.9	87.5	105.0	100.5	108.0	101.6
All Kenya, both	**88.2**		**102.8**		**104.8**	

Source: Ministry of Education, Science and Technology, Statistics Section,2005

The government of Kenya (GOK, 2006) through KIPPRA carried out a trend analysis to determine the impact of the subsidy on the KCSE performance from 2002-2005.Table 2.3 presents this information.

Table 2.3 Analysis of trends in Kenya Certificate of Primary Examination, 2002-05

District	Performance (mean standard score)				Performance trends	
	2002	2003	2004	2005	Improved/ not improved/ fluctuated after FPE 2003-05	Remarks on FPE
Garissa	208.6500	206.9111	219.5600	227.6200	Fluctuated	Gains
Gucha	236.8038	242.8771	250.2462	250.9750	Improved	Gains
Kilifi	279.3048	280.4105	273.4018	263.3105	Not improved	Gains not apparent
Kisii	209.4794	216.5971	217.7156	223.7039	Improved	Gains
Kisumu	261.2143	265.5443	268.8707	273.5371	Improved	Gains
Kwale	263.3974	241.9125	230.7395	226.2500	Not	Gains
Machakos	257.4500	263.6397	255.9242	251.3078	Not improved	Gains
Makueni	288.1486	289.2657	288.5482	284.6771	Fluctuated	Gains
Mandera	167.7867	192.3400	213.4444	218.2125	Improved	Gains
Mbeere	229.0450	239.1858	231.8970	231.9195	Improved	Gains
Meru Central	211.9830	223.0455	218.9500	211.9026	Fluctuated	Gains
Meru North	233.9425	237.5895	232.6305	238.9560	Fluctuated	Gains
Meru South	249.633	254.9611	250.0107	249.551	Fluctuated	Gains
Mombasa	255.9789	2577344	241.7411	234.6611	Not improved	Gains not apparent
Mt. Elgon	240.6242	236.6417	243.7208	226.4958	Not improved	Gains not apparent
Nyamira	238.8111	236.1772	244.3450	234.3872	Not improved	Gains not apparent
Rachuonyo	253.6218	256.3372	264.9961	259.3472	Improved	Gains
Suba	237.0932	255.4289	249.3355	243.1995	Fluctuated	Gains
Teso	249.5235	240.9129	239.3435	224.8915	Not improved	Gains not apparent
Trans Mara	220.8488	217.9732	219.9563	222.9004	Improved	Gains
Vihiga	220.2624	224.6033	221.4853	225.9956	Improved	Gains

Source: Kenya National Examinations Council (KNEC)
Note: FPE= Free Primary Education

Further to the trend analysis presented in Table 2.4 above, KIPPRA (2006) computed the KCPE mean score by gender to determine the impact of the FPE subsidy on gender performance. Table 2.5 below presents this information.

Table 2.4: Mean Score of Kenya Certificate of Primary Education by Gender and Province, 2002- 05

	2002		2003		2004		2005	
Province	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**
Central	234.12	243.78	236.29	248.81	235.53	244.95	234.31	243.79
Coast	248.01	263.23	245.52	262.31	243.33	256.84	238.01	253.32
Eastern	239.90	253.07	238.93	253.36	240.27	251.33	237.60	248.67
Nairobi area	267.21	269.98	267.58	273.03	267.67	269.46	259.29	266.39
North Eastern	167.87	198.42	180.50	205.32	194.32	218.88	190.20	216.07
Nyanza	227.02	246.79	227.80	250.00	233.40	254.32	233.07	253.54
Rift Valley	249.88	263.41	243.70	260.61	242.64	257.98	243.48	259.05
Western	244.60	260.04	243.23	260.94	246.60	262.00	250.34	265.99
All Kenya	241.02	254.39	239.62	255.38	240.79	254.43	240.14	254.01
All Kenya, both	247.91		247.76		247.89		247.44	

Source: Kenya National Examinations Council, 2006

Though it has been established that public subsidy influences either directly or indirectly student enrolment and equity, KIPPRA (2008), cautions that the subsidy faces a number of challenges that include the following;

1) Low transition rates from primary to secondary or to technical, industrial, vocational and entrepreneurship training programs result in high wastage of primary school graduates. The current transition rate stands at 57 percent, denoting a high wastage rate. In the Kenyan context, basic education now

means 12 years of continuous learning in school. However, Kenya also faces budgetary constraints so that all standard 8 graduates cannot be transitioned to secondary schools. Expanding access to the secondary level has not taken center stage after FPE.

2) Is the FPE program financially sustainable? In 2006, over 90 percent of FPE funding came from domestic sources; the balance was covered by development partners. The education sector consumes the largest share of the annual government budget (28 percent in 2006). This high allocation must be weighed against competing demands from other critical sectors, including health, physical infrastructure, and agriculture. The need to engage communities and the local private sector is, therefore, urgent.

3) Although introduction of FPE has increased primary-level access and completion rates, expanding access at the secondary level to cater to primary-level graduates remains a major challenge. In 2006, the transition rate from primary to secondary stands at 57 percent. The massive wastage (43 percent) must be amended to guarantee the investment that has been made in free education.

Kenya experienced strong growth in enrolment after independence in 1963 with another surge in 1970s following abolition of school fees in 1974 for grades 1-4, resulting in a near tripling of grade enrolments. I n 1978, fees were abolished in grades 5 – 7 as well. As a result; Kenya reached a GER of 104% in 1975 which stayed above 100% until 1989. It then declined during a period of economic stagnation to fluctuate at about 90% during

the 1990s until 2002 when it jumped from 88% to 105% in 2004 and 112% in 2005 as a result of abolition of school fees /introduction of subsidy (Gok,2008).

2.4 Effect of Public Subsidy on Transition and Retention

The general purpose of public subsidization of education, as expressed by GoK (2005), UNESCO (2008) and World Bank (2008), is to raise primary to secondary transition rate from the 46% witnessed in Kenya in 2007 to around 90%, and also address the challenges that negatively influence student retention. World Bank (2008) defines transition as the flow of students between different stages in the school system; from one level to the next, between grades within a given level, and out of and back into schools. According to Bondon (1974) the transition through the education system may be described as a series of branching permits at which students may continue schooling, change direction or leave. World Bank (2005) observed that transition from one level to the next depend on the one hand of the availability of school places within realistic reach (geographically and economically) and on the other hand an individual decisions of students and their families. The individual decisions depend on a series of structural factors; students must be adequately prepared from previous schooling and going to school must be considered beneficial both by the individual student, his/her family and the community.

As noted from the above discussions, transition from one level to the next is influenced by a myriad of factors that must be addressed at policy level. For instance, primary to secondary transition is influenced by the enrolment in primary school and the rate of expansion of secondary schooling. UNESCO (2008) noted that naturally, there is a close

relationship between secondary and primary enrolment. If primary school enrolment is low, also secondary enrolment must be low given the relevant school age population. To raise transition from primary to secondary requires first of all raising the primary school enrolment of the relevant school-age population and attain the goal of UPE (World Bank, 2006). The paper further warned that if primary school enrolment is low, also secondary enrolment must be low, though transition rate could be high. On average, the countries with very low secondary enrolment also have relative low primary enrolment, and in addition a significant gender imbalance. However in countries with very low secondary enrolment, secondary enrolment as a ratio of primary enrolment is a much lower than in countries with low or higher secondary enrolment (World Bank, 2005; UNESCO, 2008; Lewin and Calloids, 2001). There are a range of different causes for low participation in secondary schools; low primary school enrolment, low transition from primary to secondary or high drop-out in secondary. Another problem is low transition from lower to upper secondary. In addition, a large proportion of the schooling capacity is occupied by students who are repeating grades (World Bank, 2005, 2008; UNESCO, 2008).

In Sub-Saharan Africa, a study by Lewin (2008) on the relationship between public subsidization of secondary education and transition and retention noted that the relationship is quite complex. Countries have heavily subsidized secondary education but still school participation remains low for some countries and high for others. Lewin therefore concluded that since the effect is irregular and discontinuous, there are other economic and political factors that interfere with the relationship. Low enrolment in secondary education in the region is related to broader problems in school attainment and

quality of schooling, and these countries are scoring lower on most education indicators than other developing countries in general (UNESCO, 2008).

To improve transition from primary to secondary in sub-Saharan countries, Kenya included, requires a policy-shift from primary to secondary (World Bank, 2008). Priority should be given to the expansion of secondary education. Lewin and Stuart (2003) observed that expansion of secondary education should be given a priority in the national budget. The ever-widening gap between the developed and developing countries has become a central issue in developing countries (World Bank, 2008). The effort to reduce it has over the past four decades produced among other things, a transfer of financial resources on an unprecedented scale from the "richest" to "poorer" countries to develop their educational infrastructure especially at secondary school level (OSEI, 2004).

KIPPRA, (2008) noted that the challenges facing education in Kenya, especially secondary education may easily be addressed if policy makers formulate a strategy to target the vast majority of Kenyans who are poor. To raise enrolment, retention, transition and equity among other indicators of educational achievement requires policy makers to give priority the development of the secondary sub-sector. GoK (2006) reiterated the need to invest in the secondary education by the government to improve student retention and enrolment and raise the employability of the graduates. The budgetary allocations to education must therefore be enhanced. World Bank (2005) added that there is a close relationship between poverty and secondary schooling. Two thirds of the world's countries with the lowest gross enrolment ratio at secondary level are in Africa. The average GNP per capita among the countries with the lowest gross

enrolment is less than US $600 against more than US $17000 among countries with high secondary enrolment (Lewin and Calloid, 2001). In addition low participation countries have the highest population growth and the highest 0 – 14 year dependency rate (World Bank 2005).

Rudolf (2000) cautioned that funding of the secondary education is not an automatic correlation with GNP, but also depends on political priorities. Countries with low secondary school participation and retention allocated a smaller proportion of the GNP for education, but a higher proportion of public expenditure. Where allocations to secondary as a proportion to GNP is relatively high, gross enrolment is also high (Lewin and Calloids, 2001). Simulations made by Lewin and Calloids illustrate how the economic situation of poor countries set financial constraints on the expansion of secondary education. For many African countries to reach a secondary education gross enrolment of 80% or more is considered not to be sustainable under current cost structures. One of the reasons is that before obtaining this level, these countries first must increase their primary education enrolment. Limited financial resources not only affect the number of school places in secondary education that can be afforded but also the quality of both primary and secondary schooling. Low quality leads to reduced enrolment as well as increased repetition and drop-out (UNESCO, 2006).

UNESCO (2008) on the need to publicly finance secondary education as an intervention measure to address the challenge of low retention and transition through expansion of secondary education noted that students with secondary schooling increase their chances of formal sector employment and informal sector livelihood and acquire useful skills.

Export-led growth is also more closely associated with investment at secondary level than investment at the primary level (Knight and Sabot, 1990; Wood and Ridao- Cano 1996; Wood and Mayer, 1999; World Bank, 1999; Appleton, 2001). Countries that have experienced the most rapid and sustainable increase in educational attainment, as well as outstanding economic performance have pursued balanced upgrading of the primary, secondary and tertiary levels of education (World Bank, 2008).

Expansion of secondary education requires construction of additional classrooms, the purchase of furniture, equipment and learning materials and the provision of supporting infrastructure (Appleton, 2001). Most countries will not be able to afford substantially expanded secondary school enrollment and retention without a combination of increased budget allocation to the education sector, and to the secondary school sub-sector (World Bank, 2005).

Public subsidy to secondary education is a function of the size of the government budget and the shares of budget allocated to education in general and to secondary education in particular (Appleton, 2001). In order to maximize the impact of public subsidy on the indicators of educational attainment (equity, retention, transition and enrolment) World Bank (2008) came up with a raft of strategies that should be implemented in all the developing countries, Kenya included. Table 2.5 gives such strategies.

Table 2.5: Strategies for Reallocating Resource for Education

	Strategy	**Impact on affordable**

		expansion
1	Increase the share of GDP allocated to education	Substantial where allocation is low
2.	Increase the education's share of public expenditure towards 25%	Substantial where allocation is low
3.	Increase the share of education budget allocated to secondary education to more than 30%	Substantial where allocation is low
4.	Agree of secondary- sector development plans with development parties and seek additional support	Substantial

Source: World Bank 2008, pg 128

According to Appleton (2001) World Bank (2005, 2008), UNESCO (2008) public subsidy to secondary education should drastically be increased if the education-related MDGs are to be attained. More particularly, to raise primary to secondary transition rate and improve retention, governments must re-allocate more resources to secondary education. Budget allocations to education should increase from current levels of about 3.9% of GDP across sub-Sahara Africa, especially in countries that receive debt relief. Movement towards 5% of GDP would improve levels necessary to universalize primary and greatly enhance transition and secondary school enrolment if accompanied by cost-saving reforms (Rudolf, 2002).

Formula-based funding allocations that link staffing and other costs to enrolment and retention should have both equity and efficiency benefits if the allocations are coupled with pupil, teacher and school indicators of need (UNESCO, 2008). School governance

system that promote accountability and value for money and provide incentives to manage resources more efficiently may also be effective (OSEL 2004). Capitation grants for non-salary expenditure can be devolved into school budgets with appropriate accountability to ensure more – regular and more-predictable flows of resource to maintain infrastructure and enhance learning (Knight and Sabot 1990). School quality improvement grants can be earmarked for specific purposes to ensure increased resource-allocations on inputs directly related to pupil achievement and learning experience. Matching grant schemes can allocate more to schools with the least ability to raise funds and the most – difficult working environment (UNESCO, 2008).

To improve the flow of students and increase retention, World Bank (2008) came up with a galaxy of strategies that if implemented effectively are expected to strongly influence the relationship between public subsidy and student retention. Table 2.6 shows the strategies for improving student retention.

Table 2.6: Strategies for Improving the Flow of Students and Retention

	Strategy	**Impact**
1	Reduce repetition rates to less than 5%. Create management incentive systems that reward higher achievement and reduce repetition. Reduce the range of ages within grades to less than 2 years	Reduces costs as flow improves. Substantial impact where repetition is greater than 10%
2.	Identify reasons for drop-out and act accordingly. Reduce barriers to enrolment by subsidizing education and identify effective incentives to remain enrolled (retention – enhancing strategies).	Increases costs but increases retention and completion rates
3.	Reduce direct cost to poor households use means-tested fee waivers and scholarship schemes (subsidy), rather than provide universal fee free secondary education. Discourage elite capture of subsidies by locating fee waivers and scholarships in low fee schools and using selection quotas linked to poverty indicators	Significant if administration costs are low and pro-poor.
4.	Adopt measures to monitor and improve attendance to ensure that learning opportunities are maximized. Make schools more child-friendly and child-seeking	Substantial where attendance rates are low.
5.	Improve reliability and validity of selection expansion. Consider automatic promotion within primary and lower-secondary cycles (transition). Reduce incentives and limit opportunities to re-take selection examination. Integrate measures to improve flows into school management systems.	Greater internet efficiency could increase the number of males available without increasing costs.

Source: World Bank, 2008

2.5 Critique of the Literature Reviewed and the Gaps therein.

This chapter has so far reviewed literature on the important role played by education in the overall economic development of the country. Psacharapoulos and woodhall (1985), World Bank, (2002), Ayodo,(1979), Nafukho, (1991), G.O.K, (2001), Ayot and Briggs (1988), Eshiwani (1993), Thompsons, (1981), G.O.K, (1999), UNESCO, (2007), UNESCO, (2008) World Bank, (2000,2002, 2004, 2005, 2007,2008) ,among others all allude to the fact that education, especially secondary education is quite critical in realizing economic development and more so the millennium development goals and the country's vision 2030. Studies on the critical educational indices, enrolment, transition, equity and retention included those by UNESCO, (2007), UNESCO, (2008), Rono, (1991), Friedman, (2003), G.O.K, (1999), G.O.K, (2005), G.O.K,(2009), among others were extensively reviewed. Studies on the impact of public subsidy on these critical indicators of educational attainment were extensively reviewed and included among others KIPPRA, (2007), Card, (2000), Mcpherson and schapiro, (1991), whitefield and Wilson (1990), Frederiksson, (1999). These studies found contrasting results on the relationship between public subsidy and the indicators of educational attainment. Whereas on the one hand Card, (2000) in his study in USA on the effect of public subsidization of tuition fees on secondary school enrolment revealed that such a subsidy impacted negatively on enrolment, results that were supported in their respective studies by Mcpherson and Schapiro, (1991), Kane, (1995) and Huijsman et al (1986), on the other hand KIPPRA (2008) in a similar study in Kenya found that public subsidization of education has a positive impact, contrary to the other studies, on the indicators of educational attainment. These findings were supported by Frederiksson, (1999),

Dynarsky (1999), Whitfield and Wilson, (1990). Unlike this study, all the above studies, except for KIPPRA (2008), contextualized the relationship between the public subsidy and the achievement of critical educational indices in the developed countries and are time series studies. The principle problem with such time series studies is that it is difficult to disentangle funding effect from general rising trends in education. This study attempts to address this challenge by assessing the study variables and attempt to smoke out the effect of the general rising trend from the effect of public subsidy on the attainment of educational indicators. Moreover, unlike the KIPPRA (2008) study that dealt with the impact of Free Primary Education (FPE) on enrolment in Kenya, this study focuses on secondary education and more specifically the impact of all government subsidies on the achievement of critical educational indices. The choice of secondary school, as opposed to primary school, was reinforced by World Bank (2005) that stated that many aspects of secondary schooling remain informed by inadequate data and lack of a robust knowledge base. Improving this situation is needed to inform more evidence-based policy. The purpose of this study therefore is to assess the impact of public subsidy on educational outputs, given school inputs and resources in Kenya, a country characterized by relatively higher incidence of poverty among the masses and low GDP growth. The ministry of education, policy makers and other education stakeholders therefore would find this study useful as it informs their decision on the relevant policies to be formulated in view of the public subsidization programme.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter constitutes a discussion of the research design (the blue print for the entire study); study population along with the sampling procedures and sample size; instrumentation (a description of the type of tools used along with the requisite validity and reliability considerations); data collection procedures including setting the boundaries for the study; data analysis rationalization in view of the design of the study as well as the instruments used to collect data. Due attention will be paid to ethical issues and confidentiality aspects in relation to the respondents.

3.2 The Research Paradigm/Approach

The research paradigm is a philosophy about the way in which data about a phenomenon should be gathered, analyzed and used (Morgan, 2007).The research philosophy subscribed to in this study is pragmatism worldview. Pragmatism derives from the work of Peirce, James, Mead, and Dewey (Cherryholmes, 1992). The pragmatist researchers look to the *what* and *how* to research, based on the intended consequences where they want to go with it. Pragmatists agree that research always occurs in social, historical, political, and other contexts. In this way, mixed methods studies include a postmodern turn, a theoretical lens that is reflective of social justice and political aims (Johnson & Onwuegbuzie2006).

There are many forms of this philosophy, but this study was guided by pragmatism, a worldview which arises out of actions, situations, and consequences rather than antecedent conditions (as in post positivism). There is a concern with applications, what works and solutions to problems (Patton, 1990). Instead of focusing on methods, the researcher emphasized on the research problem and used all approaches available to understand the problem (Morgan, 2007). As a philosophical underpinning for mixed methods studies, Tashakkori and Teddlie (1998), Morgan (2007), and Patton (1990) convey its importance for focusing attention on the research problem in social science research and then using pluralistic approaches to derive knowledge about the contribution of CBF on access and retention of secondary school students. Using Cherryholmes (1992), and Morgan (2007) views, pragmatism provided a philosophical basis for this research.

Since pragmatism is not committed to any one system of philosophy and reality, it applies to mixed methods research in that inquirers draw liberally from both quantitative and qualitative assumptions when they engage in their research. Individual researchers have a freedom of choice. In this way, this study employed mixed methods design and hence, the researcher was free to choose the methods, techniques, and procedures of research that best meet the needs and purpose of the study.

Pragmatists do not see the world as an absolute unity. In a similar way, mixed methods was adopted by the researcher in collecting and analyzing data rather than subscribing to only one way (e.g., quantitative or qualitative). Thus, in mixed methods research, researcher used both quantitative and qualitative methods because they worked to provide the best understanding of the effectiveness of public subsidy in influencing the critical

education indices; enrolment, retention, transition and equity. In any case, it is good to quantify data by empirical evidence but at the same time there is need to listen to the voices of those figures. The main reason of adopting the pragmatic approach to this research methodology is its emphasis on the connection between epistemological concerns about the nature of the knowledge that the findings produced and technical concerns about the methods that was used to generate knowledge. This moved beyond technical questions about mixing or combining methods and puts researcher in a position to argue for a properly *integrated methodology* for the study.(Ivankova, Creswell, & Stick, 2006; Morgan, 2007)

3.3 Research Design

Research designs are plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis (Creswell, 2009). This study adopted a mixed methods design for it is useful in helping researchers meet the criteria for evaluating the "goodness" of their answers (Tashakkori and Teddlie, 1998) better than do the single approach designs. Indeed mixed methods provide the opportunity for presenting a greater diversity of divergent views. Quantitative research has typically been directed at theory verification, while qualitative research has typically been concerned with theory generation. While the correlation is historically valid, it is by no means perfect, and there is no necessary connection between purpose and approach. Here it is the degree of alignment towards any of the two paradigms that really matters. A major advantage of using the mixed methods research in this study is that it enables the researcher to simultaneously answer confirmatory questions with regard to the public

subsidies as well as answer exploratory questions about the educational outputs through open ended questionnaires, documents and observations. In effect the researcher was able to verify and generate theory in the study on public subsidies in education (Erzberger & Prein, 2004). It indicates whether the survey would be cross-sectional, with the data collected at one point in time, or whether it would be longitudinal, with data collected over time.

3.4 Target Population

The target population for this study comprised senior ministry of education and ministry of planning officials, the provincial director of education the district education officers and the school principals of secondary schools in North-rift. North-rift region was chosen because of its geographical diversity; certain parts are ASAL while others are non-ASAL. With this diversity, schools in this region are believed to have varied educational needs and their subsidy demands are also varied.

3.5 Sample and Sampling Procedure

The researcher targeted the Permanent Secretaries of the Ministry of Education and the Ministry of Planning, the Rift-Valley Provincial Director of Education and the District Education Officers of the sampled districts using purposive sampling technique. To get the schools to participate in the study and hence the principals, the researcher got a list of all the schools in the Rift-valley Provincial Director of Education office (PDEs) office and the schools' subsidy allocations by type and amount from the government. The researcher used simple random sampling technique to select schools from six counties in

the province with a total secondary school population of 493. The researcher used simple random sampling to get 270 schools as per the table for determining random sample size developed by Krecie and Morgan (1970) as quoted by Kasomo (2001) as shown in Table 3.1.

Table 3.1 Recommended Sample Sizes for Different Population Sizes

Population size	Sample size	Population size	Sample size
10	10	250	162
20	19	300	169
30	28	400	196
40	35	1,500	306
50	44	2,000	322
60	52	3,000	341
70	59	4,000	351
80	66	5,000	357
90	73	10,000	370
100	80	20,000	377
150	108	50,000	381
200	132	100,000	384

Based on the above guide, the researcher chose a sample of 270 schools since in table 3.1, any population of between 400 and 1500 should have a sample of between 196 and 306. Table 3.2 shows the study population and the sample in this study.

Table 3.2: Study Population and the sample.

County	Population	Sample
Elgeiyo Marakwet	71	43
Trans-Nzoia	112	68
Nandi	107	51
Uasin-Gishu	105	62
West Pokot	52	27
Turkana	46	19
TOTAL	493	270

Source: PDE's office, Rift-valley, 2011

3.6 Data Collection Procedures

Data for the study was collected between the month of January and March, 2011. Both primary and secondary data was collected by the researcher, that is, the instrument was administered by the researcher to the two permanent secretaries, the provincial director of education the district education officers and the secondary school principals of the sampled schools.

3.7 Research Instrument

The study employed questionnaire and interviews to collect the data. The questionnaire was both structured and semi-structured and consisted of three main parts. The first part of the questionnaire dealt with background information of the schools and then respondents. The second part dealt with public subsidy interventions and their implementational challenges and successes. This is in line with the requirements of objective one. The third part of the instrument collected information on the influence of inputs on educational outcomes, in line with the demands of objective two of the study.

The questionnaires were issued to school principals to solicit the above information. Generally, the questionnaires were used to collect information on the type of subsidy, the amount allocated, the target area of the subsidy, the results, implementational challenges and successes, and finally views of the principals on the effect of public subsidy on the indicators of educational attainment. The questionnaire was found appropriate because the data generated is both qualitative and quantitative in nature and hence calling for a tool that collects such data in line with the design of the study.

The interviews were used to collect data on the modalities of disbursing the public subsidies to schools, the challenges facing the public subsidization programme in the country, the strategies that have been and that need to be formulated to enhance attainment of education-related millennium development goals and the education for all (EFA) goals in view of public subsidies and finally their views on the impact of public subsidy on the attainment of educational indices. This instrument was administered to senior officials at district, provincial and national levels. The instrument was found appropriate to collect such information because the data, as per objective number three, is purely qualitative. Interviews are suitable to collect such qualitative data, given the design of the study.

3.7.1Reliability of the Research Instruments

Reliability refers to the consistency that an instrument demonstrates when applied repeatedly under similar conditions (Mugenda and Mugenda, 1999; Khan, 2008; Kombo and Tromp, 2006; Polonsky and waller,2005). To determine the reliability of the

instrument, Cronbach Alpha coefficient was employed. Cronbach alpha is a coefficient of reliability. It is commonly used as a measure of internal consistency.

Cronbach's $\alpha$is defined as

$$\alpha = \frac{K}{K-1}\left(1 - \frac{\sum_{i=1}^{K}\sigma_{Y_i}^2}{\sigma_X^2}\right)$$

where $K$is the number of components (K-items or testlets), σ_X^2 the variance of the observed total test scores, and $\sigma_{Y_i}^2$ the variance of component i for the current sample of persons.

Theoretically, alpha varies from zero to one, since it is the ratio of two variances. Empirically, however, alpha can take on any value less than or equal to one. Higher values of alpha are more desirable. Some professionals as a rule of thumb require a reliability of 0.70 or higher before they will use an instrument (Nunnally,1978). Cronbach alpha will generally increase as the intercorrelation among test items increase, and is thus known as an internal consistency estimate of reliability of test scores. Because intercorrelations among test items are maximized when all items measure the same construct, cronbach alpha is widely believed to indirectly indicate the degree to which a set of items measures a single unidimensional latent construct (Joppe, 2000) as quoted by Golafshani (2003).

A commonly accepted rule of thumb for describing internal consistency using cronbach alpha is as shown in the Table 3.3.

Table 3.3: Cronbach's alpha decision rule

Cronbach's alpha	Internal consistency
$\alpha \geq .9$	Excellent
$.9 > \alpha \geq .8$	Good
$.8 > \alpha \geq .7$	Acceptable
$.7 > \alpha \geq .6$	Questionable
$.6 > \alpha \geq .5$	Poor
$.5 > \alpha$	Unacceptable

The instrument was piloted in the greater Baringo district, a central rift district that has characteristics of both ASAL and non-ASAL regions. The purpose of piloting was to establish reliability and validity of the instruments. The researcher selected a total of 10 principals from greater Baringo district for piloting, 5 from the ASAL part and 5 from non-ASAL part of the district. Using the cronbach alpha coefficient formula given above, the researcher found a reliability coefficient of 0.79, which according to the table 3.3 , is considered acceptable by every standard.

3.7.2Validity of the Research Instrument

Validity refers to the accuracy and the meaningfulness of inferences, which are based on the research results (Mugenda and Mugenda, 1999; Khan, 2008, Kombo and Tromp, 2006, Kerlinger, 1973). To test validity of the instruments to be used in the study, the instrument was piloted in the greater Baringo districts. Piloting is important to establish the content validity of the instrument and to improve questions, formats and scales. Content is a non statistical type of validity that involves the systematic examination of the test content to determine whether it covers a representative sample of behavior domain to be measured (Anastasi and Urbina, 1997).Content validity evidence involves the degree

to which the content of the test matches a content domain associated with the construct. A test has content validity built into it by careful selection of which items to include (Anastasi and Urbina 1997). Items are chosen so that they comply with the test specification which is drawn up through a thorough examination of subject domain. Foxcraft et al (2004) note that by using a panel of experts to review the test specifications and the selection of items, the content validity of a test can be improved. The experts will be able to review the items and comment on whether the items cover a representative sample of the behavior domain. In the case of this study, the instruments were availed to a panel of Moi University research experts together with the supervisors to review the instruments. The results from the piloting together with the comments from the experts were incorporated in the final instrument revisions and improved its validity. The following threats however influenced the validity of the study instrument;

a) Maturation threat- This refers to change due to aging or development, either between or within groups. In this study, this threat is imminent since there is frequent principal mobility not only in the province but also in the entire country. Data from the principals who are new in their stations and were therefore not there when the subsidies were allocated to the school faces this threat.

b) Selection threat- This refers to a situation where participants in groups may be dissimilar or unlike in some ways, so that the groups will respond in different ways to the independent variable. In this study, principals come from different schools, some in ASAL others in non-ASAL and hence their responses shall be dictated by the location of their schools.

c) Mortality threat- This refers to a situation where participants drop out of the test making the groups unequivalent. In the course of data collection, some principals may resign, get promoted or even retire. This will influence the validity of the data to be collected.

d) Regression to the mean- This refers to the tendency of data to regress towards the mean and thus making scores higher or lower. If a measure is not extremely reliable, there will be some variations between repeated measures. The chances are that the measurements will move towards the mean instead of towards extremes. In this study this threat shall be experienced during the time of subsidy disbursements. The scores will therefore change during the subsidy disbursement time and the subsidy mean in the schools shall regress towards the provincial mean.

e) Hawthorne effect- This refers to a situation when members of one group change in terms of the dependent variable because their participation in the study makes them feel special and so they act differently, regardless of the treatment. In this study the principals in the schools in non-ASAL areas may feel more special than those in ASAL areas and hence variations in their responses as far as the dependent variables; enrolment, retention, transition and equity are concerned.

f) History- This refers to a situation where outside events occurring during data collection or between repeated measures of the dependent variable may have an influence on the results. This threat may be experienced in this study, especially in those schools in ASAL areas where, other than the government subsidy, there are also other players who financially support schools, for example the non-

governmental and religious organizations. This will definitely influence the dependent variables; enrolment, retention transition and equity.

3.8 Data Analysis Procedures

The collected data was analysed both qualitatively and quantitatively. Qualitative data was analyzed using descriptive statistics like mean standard deviation and the ranges. Descriptive statistics give general opinion with regard to the issuance of subsidy and its influence on educational outcomes. Quantitative data was analysed using inferential statistics. Inferential statistics were used to examine hypotheses of the study. The specific tools that were employed under inferential statistics are t-test and ANOVA. ANOVA was found appropriate to measure the difference between groups in terms of opinion on subsidies. The two major groups are the ASAL and non-ASAL schools. Table 3.4 presents a summary of how data was analyzed

Table 3.4: Data Analysis Summary

Objective	Independent Variable	Dependent Variable	Instrument	Data Analysis Tool
1. To evaluate specific subsidy interventions that were undertaken in terms of implementational challenges & successes.	Public subsidy interventions	Implementational challenges and successes	Questionnaires	ANOVA Paired sample t-test
2. To determine the influence of the inputs (subsidies) on the outcomes (indices) of educational attainment.	Educational inputs/subsidies	Educational outcomes/indices of educational attainment	Questionnaires	ANOVA Paired sample t-test
3. To determine the policy implications for achieving relevant EFA and MDG goals by 2015 in Kenya in view of the cost-effectiveness of subsidies.	Subsidy cost-effectiveness	Policy Implications	Interview	Descriptive statistics (mean standard deviation).

3.9. Research Ethics

Ethics are the norms for conduct that distinguishes between acceptable and unacceptable behaviour. It's the disciplines that study standards of conduct, such as philosophy, theology, law, psychology, sociology etc. (Nganga, et al 2009). In this study the following ethical considerations were made;

1. Honesty- Data was honestly reported. Results, methods and procedures were also honestly reported. There were no fabrications, falsifications or misrepresentation of data

2. Objectivity- the researcher strove to avoid bias in data analysis, data interpretation and other aspects of research where objectivity was required.
3. Integrity- the researcher kept promises and agreements, acted with sincerety, strove for consistency of thought and action.
4. Carefulness- the researcher avoided careless errors and negligence, carefully and critically examined this research work. Good record of research activities, such as data collection, research design etc were kept.
5. Openness- the researcher shared data, results, ideas, tools and resources. The work is open to criticism and new ideas.
6. Confidentiality- the researcher protected confidential records and documents.
7. Legality- the researcher strove to know and obey relevant laws of the land and institutional and governmental agencies. Official authorization (permit) was sought from the relevant organ of the government.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

This chapter is divided into three major sections; Section (a) deals with implementational challenges and successes, section (b) is on influence of inputs (subsidies) on outcome (indices) of educational attainment and lastly, section (c) lays the data on the policy implication of achieving relevant EFA and MDG goals by 2015 in view of cost-effectiveness of subsidies.

This information was collected from two main instruments; Questionnaires for school principals and interview schedules for senior ministry of education officials. Out of the 270 questionnaires administered, the researcher managed to get back 268, and hence the return rate was 96% which is acceptable by any standard.

4.1: Evaluation of Specific Public Subsidy Interventions

Introduction

To attain this first objective of the study, the researcher sought from the respondents the type of subsidies they receive the effect of those subsidies on school infrastructure and resources, student performance, staff development activities and finally do an evaluation of the challenges and successes.

4.1.1 Specific Subsidies Received in the Secondary Schools

The researcher sought information on the types of subsidies received in secondary schools. Table 4.1 gives a summary of these subsidies.

Table 4.1: Types of Subsidies

Type of subsidy	F	%
FDSE	268	100%
Ministry of Education	102	38%
CDF	213	79.5%
N.G.Os	93	34.7%
CBF	169	63%
Others	67	25%

From Table 4.1, it is noted that all the sampled schools (100%) benefited from Free Secondary Education subsidy. Constituency Development Fund (CDF) came next with 79.5% of the respondents benefiting from it. The Constituency Bursary Fund (CBF) came third with 63% of the respondence benefiting from it. Since all the respondents benefitted from FDSE subsidy, the researcher went ahead to look at the effect and cost-effective of this subsidy in view of the changing needs and aspirations of the education sector.

4.1.2: School Buildings and Infrastructure Before the Introduction Of FDSE

The school situation in terms of buildings and infrastructure before the introduction of the FDSE subsidy in 2008 was assessed. Table 4.2 gives statements that describe the school situation before 2008 and views of the principals on this situation.

Table 4.2: School Situation before the introduction of FDSE in 2008

Statement	S.A		A		U		D		SD	
	f	%	f	%	F	%	F	%	F	%
Before 2008, there were adequate number of classrooms than now	16	6.0	28	10.4	0	0	102	38.1	122	45.5
Before 2008, there were adequate number of toilets than now	16	6.0	14	5.2	10	3.7	99	36.9	129	48.1
Before 2008, there were adequate number of sanitation facilities than now	16	6.0	24	9.0	0	0	124	46.3	104	38.8
Before 2008, teachers' furniture were adequate	16	6.0	19	7.1	28	10.4	112	41.8	93	34.7
Before 2008, there were adequate number of desks and chairs	16	6.0	13	4.9	0	0	117	43.7	122	45.5
Before 2008, there were adequate number of buildings in school	26	9.7	10	3.7	0	0	115	42.9	117	43.7

From Table 4.2, it is observed that the majority of the school principals either disagreed or strongly disagreed to the statements given implying that the school situation before 2008 was worse than 2011 and 2012, the period after the introduction of FDSE. This implies that the subsidy has had a positive effect on the school infrastructure.

Since the study was conducted in six counties of North-Rift, the researcher went further to investigate the school situations in the six counties i.e. Elgeiyo-Marakwet, Trans-Nzoia, Nandi, Uasin-Gishu, West Pokot and Turkana. Appendix iii gives the school situation in the six counties sampled in North-Rift. From the findings presented in appendix iii, it is instructive to note that there are county variations in terms of responses. For instance, on the status of classrooms before 2008, majority (44%) of the respondents in the ASAL Turkana county, contrary to the other counties, strongly agreed that before

the introduction of FDSE in 2008, there were adequate number of classrooms than 2011 and 2012. This position contrast with that of Elgeiyo-Marakwet where majority (51.5%) strongly disagreed. This implies that the effect of FDSE on number of classrooms as far as status of classrooms is concerned is not uniform across the counties.

On the status of toilets before the introduction of FDSE, majority of the respondents in Turkana county (44.4%) strongly agreed that before the introduction of FDSE, there were adequate number of toilets than 2011 and 2012. This contrasts with the findings in Elgeyo Marakwet where majority (54.1%) disagreed to the statement that before the introduction of FDSE there were adequate number of toilets than 2011 % 2012. These contrasting results indicate the impact of FDSE on toilets varied from county to county.

The effect of FDSE on sanitation facilities was also investigated. From appendix iii, it is observed that whereas in Turkana county which has been described as purely ASAL county, majority of the respondents (44.4%) strongly agreed that there was adequate number of sanitation facilities in the county before the introduction of FDSE, implying that FDSE has worsened the status of sanitation facilities. This contrasts with the findings in all the other counties. In Elgeiyo-Marakwet county, majority (81.4%) disagreed, in Nandi county majority (49%) strongly disagreed, in Trans-Nzoia county majority (44.1%) strongly disagreed, in Uasin-Gishu county majority (52.5%) disagreed and in West Pokot, majority (55.6%) strongly disagreed. This implies that the FDSE has positively impacted on sanitation facilities while in the ASAL county of Turkana, the effect is negative.

On the adequacy of teachers' furniture, majority of the respondents in Nandi, Uasin-Gishu and West-Pokot counties disagreed (Uasin-Gishu, 55.7%, West-Pokot, 55.6%, Nandi, 49%) to the statement that before the introduction of FDSE, teachers' furniture was adequate. In Turkana county, majority (44.4%) strongly agreed that the teachers' furniture was adequate. A similar picture is painted on the status of desks and chairs and the adequacy of the number of buildings in schools. Appendix iv presents a summary of the school situation before the subsidy. In this table a scale of 1-5 is used where 1 represents strongly agree, 2 agree, 3 undecided, 4 disagree and lastly 5 strongly disagree. Therefore a mean of 1 represent strongly agree and 5 strongly disagree

4.1.3: The Support Schools Received Prior to FDSE and After

The researcher went further to investigate the kind of support schools in the study area received before and after the introduction of FDSE subsidy. Table 4.3 shows the kind of support schools received before and after FDSE.

Table 4.3: Support Received by Schools before and after FDSE

STATEMENT	S.A		A		U		D		SD	
	f	%	f	%	F	%	F	%	F	%
Before FDSE my school had not received any support from the government or any other agency	86	32.1	18	6.7	16	6.0	144	53.7	4	1.5
FDSE led to increase in school resources	132	49.3	102	38.1	0	0	31	11.6	3	1.1
School supplies were improved by FDSE	181	67.5	77	28.7	0	0	0	0	10	3.7
Many organizations supported the government after FDSE	60	22.4	105	39.2	47	17.5	17	6.3	39	14.6
My school got more support after FDSE than before	127	47.4	92	34.3	0	0	23	8.6	26	9.7

Table 4.3 shows that majority of the respondents in the six counties (53.7%) disagreed to the statement that before FDSE was introduced their schools had not received any support from the government or any other agency. This implies that these schools use to get support even before the introduction of FDSE. By virtue of these schools being public, they enjoy public and other stakeholder support. Majority of the respondents (49.3%) strongly agreed that FDSE led to increase in school resources. Another 67.5% strongly agreed that school supplies were improved by FDSE. Majority 39.2% agreed that many organizations supported the government after FDSE while 47.4% strongly agreed that their schools got more support after FDSE than before FDSE. This implies that the government's initiative of introducing FDSE enjoys the goodwill of the other stakeholders in the provision of education.

The researcher went further to do cross-tabulation to get the per county picture in the light of the above variables. Appendix v gives the responses from the six different counties.

Appendix v presents the findings of the type of support schools received prior to and after the introduction of FDSE. The findings from different counties were varied. On the question of whether the schools had not received any support from the government or any other agency, majority of the respondents who strongly agreed (42.6%) were from Trans-Nzoia county and those who agreed 44.4% were from Turkana county. However, majority of those who disagreed were from Nandi county (60.8%) and Uasin-Gishu county 60.7%. Also noted from the table is that even in Turkana and Trans-Nzoia counties where majority of those who strongly agreed and agreed come from, within these counties, the majority of the respondents disagreed. This implies that in overall majority of the respondents disagreed meanings schools had received some support before FDSE was introduced.

On whether FDSE had led to increase in school resources, the responses were also varied. Majority of those who disagreed come from Turkana county (44.4%). Majority of those who strongly agreed come from Trans-Nzoia county (52.9%), Nandi (72.5%), and West-Pokot (74.1%).

The respondents were almost unanimous that school supplies were improved by FDSE. Majority of the respondents in all the counties either strongly agreed or agreed, implying

that FDSE has had a positive impact on school supplies in all the counties, irrespective of whether they are ASAL or non-ASAL.

The findings presented in appendix v also indicated that only three counties namely Elgeiyo Marakwet, West Pokot and the ASAL Turkana acknowledged that many organizations supported the government after the introduction of FDSE. Majority of the respondents (83.3%) in Turkana, and 66.7% in West Pokot strongly agreed while 72.1% in Elgeiyo Marakwet agreed that many organizations supported the government after FDSE. Turkana has been described as purely ASAL while parts of West Pokot and Elgeiyo-Marakwet are also ASAL. This may account for the support especially from the NGOs. For Trans-Nzoia, Nandi and Uasin-Gishu counties, the picture is not clear whether such support is there.

On whether the schools got more support after FDSE than before, majority of the respondents strongly agreed or agreed, while in Turkana Majority (44.4%) disagreed. What may account for this is the fact that schools in Turkana, according to the PDE, Rift-Valley, who was interviewed by the researcher, are enjoying more financial and technical support from mostly the religious organizations and the NGOs, majorly the world-vision.

Table 4.4 presents a summary of type of support received prior to and after FDSE. In the table, a mean of 1 represents strongly agree, 2 agree, 3 undecided, 4 disagree and 5 strongly disagree.

Table 4.4: Summary of Type of Support Schools Received

STATEMENT	COUNTY	MEAN	STD.

			DEV.
Before FDSE my school had not received any support from the government or any other agency	Elgeiyo marakwet	2.7442	1.41578
	Trans-Nzoia	2.6324	1.44454
	Nandi	2.9020	1.43185
	Uasin-Gishu	3.1803	1.34794
	West Pokot	2.8889	1.12090
	Turkana	2.7222	1.48742
FDSE led to increase in school resources	Elgeiyo marakwet	2.1163	.93119
	Trans-Nzoia	1.6765	.96878
	Nandi	1.3922	.77662
	Uasin-Gishu	1.9836	1.05660
	West Pokot	1.2593	.44658
	Turkana	2.4444	1.46417
School supplies was improved by FDSE	Elgeiyo marakwet	1.5581	.73363
	Trans-Nzoia	1.2794	.75004
	Nandi	1.4118	.98339
	Uasin-Gishu	1.7213	1.00218
	West Pokot	1.2593	.44658
	Turkana	1.1111	.32338
Many organizations supported the government after FDSE	Elgeiyo marakwet	2.5814	1.23890
	Trans-Nzoia	3.0000	1.06505
	Nandi	2.1176	1.07046
	Uasin-Gishu	3.0820	1.42939
	West Pokot	1.5556	1.08604
	Turkana	1.1667	.38348
My school got more support after FDSE than before FDSE	Elgeiyo marakwet	1.8837	.82258
	Trans-Nzoia	2.0882	1.58100
	Nandi	2.2549	1.52109
	Uasin-Gishu	1.9016	1.13585
	West Pokot	1.2593	.44658
	Turkana	2.5000	1.42457

Based on the above findings, the researcher carried out a paired samples t test to test the null hypothesis that states that, "*there is no statistically significant relationship between educational attainment and provision of public subsidies."* There are in total five pairs, each relating to a particular aspect of the variables. Table 4.5 shows the results of the test

Table 4.5 Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	County of respondent - before 2008, there were adequate number of desks and chair	-1.12313	1.82670	.11158	-1.34283	-.90344	-10.065	267	.000
Pair 2	the support raised student enrolment - The support did not have any effect on enrolment	-2.09701	1.60696	.09816	-2.29028	-1.90375	-21.363	267	.000
Pair 3	FDSE has no effect on learning achievement - FDSE has a negative effect on learning achievement	-.36940	1.23378	.07536	-.51779	-.22102	-4.902	267	.000
Pair 4	the government developed teacher-tailored training programmes to support implementation of FDSE - the training programmes developed focused on quality education	.26493	.70363	.04298	.18030	.34955	6.164	267	.000
Pair 5	Public subsidy increases class enrolment in secondary schools - Government subsidy doesn't affect in any way enrolment	-2.02239	2.25181	.13755	-2.29321	-1.75156	-14.703	267	.000

Table 4.5 presents results of paired samples t test. As can be noted in the table there are five pairs. The first pair is composed of the county of respondent and the status of desks and chairs before the introduction of FDSE in 2008. The second pair deals with the effect of FDSE support on enrolment. The third pair deals with the effect of the support on

learning achievement. The fourth pair deals with the training programmes related to FDSE. The last pair deals with the effect of the subsidy on enrolment in secondary schools. Based on the data presented on Table 4.5, the null hypothesis stated above in relation to the first pair would read, " *there is no statistically significant relationship between the county of respondent and the adequacy of desks and chairs before the introduction of FDSE"* From the table it is observed that; t (267) = -10.065, p = .000 This was found to be significant at 0.05 level, implying that the null hypothesis is rejected. It is concluded that there is a statistically significant relationship between the county of respondent and the adequacy of desks and chairs before the introduction of FDSE. Some counties were worse off than others as far as the adequacy of desks and chairs is concerned before FDSE was introduced. Concerning the training programmes developed by the government following the implementation of FDSE and the quality of education, the null hypothesis may be restated as " *there is no statistically significant relationship between the training programmes developed following the implementation of FDSE and the quality of education."* From the table it is observed that

t (267) = 6.164, p = .000

This was found to be significant at 0.05 level, implying that the null hypothesis is rejected. It is concluded that there is a statistically significant relationship between the training programmes and the quality of education. This conclusion is supported by KIPPRA (2008) that observed that the quality of education is strongly influenced by the type of training offered to teachers.

4.1.4: Effects of FDSE on Enrolment and Students' Performance in KCSE

The researcher investigated the effect of FDSE subsidy on enrolment and student performance in KCSE according to the views of the principals. Figure 4.1(a) and (b) presents the effects of FDSE on the two variables. Table 4.6 also presents data on the effect of FDSE subsidy on enrolment and student performance.

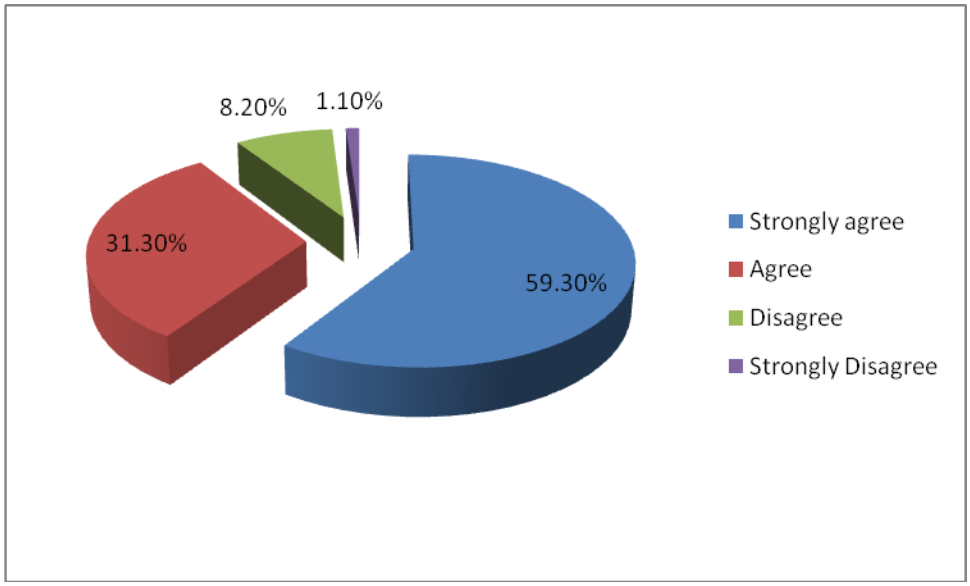


Figure 4.1(a): Effect of FDSE on Enrolment

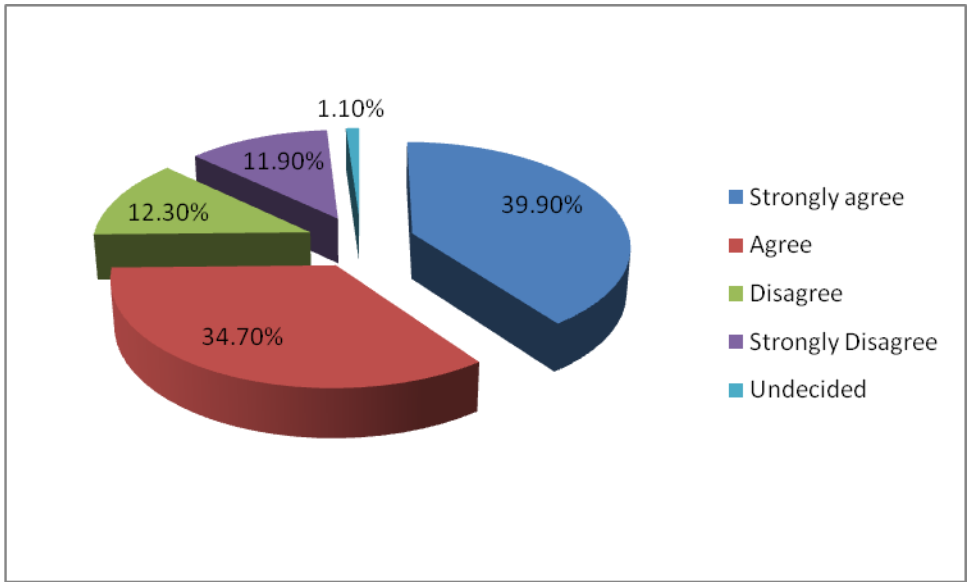


Figure 4.1(b): Effect of FDSE on Student Performance

Table 4.6 Effect of FDSE on Enrolment and Performance

Statement	S.A		A		U		D		SD	
	f	%	f	%	f	%	f	%	F	%
The support raised student enrolment	159	59.3	84	31.3	0	0	22	8.2	3	1.1
The support improved KCSE performance	107	39.9	93	34.7	3	1.1	33	12.3	32	11.9
The support did not have any effect on achievement	19	7.1	32	11.9	53	19.8	70	26.1	94	35.1
The support did not have any effect on KCSE performance	27	10.1	0	0	3	1.1	124	46.3	114	42.5
The support lowered student enrolment	0	0	0	0	0	0	85	31.7	183	68.3
The support negatively influenced KCSE performance	0	0	0	0	18	6.7	80	29.9	170	63.4

Figure 4.1 (a) presents data on the views of principals on whether the support raised student enrolment. It is observed that majority of the respondents (59.3% and 31.3%) strongly agreed and agreed respectively that the subsidy raised student enrolment. Figure 4.1 (b) shows that majority of the respondents (39.9%) and (34.7%) strongly agreed and agreed respectively that the support improved KCSE performance. Table 4.9 present data

on the effect of FDSE on enrolment and performance. It's observed from the table that majority of the respondents (59.3%) strongly agreed to the statement the FDSE raised student enrolment in schools. These findings are in agreement with those of World Bank, (2008) in Zambia, UNESCO, (2005) in Cameroon and UNICEF (2008) in Francophone countries. All these studies found a positive and significant relationship between public subsidy and enrolment. Another 39.9% and 34.4% strongly agreed and agreed respectively, that the FDSE support improved KCSE performance. These findings are in line with those of KIPPRA (2008) that revealed that government subsidy on education has a positive relationship with performance in the national examinations.

The researcher went further to cross-tabulate the above findings to see how the six counties responded to the variables. Table 4.7 presents the responses from the six counties on the effect of FDSE subsidy on enrolment and KCSE performance.

Table 4.7: Effect of FDSE Support on Enrolment and Student Performance

Statement	Response		County						
			Elgeiyo Marakwet	Trans-Nzoia	Nandi	Uasin-Gishu	West Pokot	Turkana	Total
The support raised student enrolment	Strongly agree	Count	16	41	38	28	20	16	159
		%within county	37.2%	60.3%	74.5%	45.9%	74.1%	88.9%	59.3%
		% of total	6.0%	15.3%	14.2%	10.4%	7.5%	6.0%	59.3%
	Agree	Count	21	11	12	31	7	2	84
		%within county	48.8%	16.2%	23.5%	50.8%	25.9%	11.1%	31.3%
		% of total	7.8%	4.1%	4.5%	11.6%	2.6%	0.7%	31.1%
	Disagree	Count	6	14	1	1	0	0	22
		%within county	14.0%	20.6%	2.0%	1.6%	0%	0%	8.2%
		% of total	2.2%	5.2%	0.4%	0.4%	0%	0%	8.2%
	Strongly Disagree	Count	0	2	0	1	0	0	3
		%within county	0%	2.9%	0%	1.6%	0%	0%	1.1%
		% of total	0%	0.7%	0%	0.4%	0%	0%	1.1%
TOTAL		Count	43	68	51	61	27	18	268
The support improved KCSE performance	Strongly agree	Count	5	33	17	25	12	15	107
		%within county	11.6%	48.5%	33.3%	41%	44.4%	83.3%	39.9%
		% of total	1.9%	12.3%	6.3%	9.3%	4.5%	5.6%	39.9%
	Agree	Count	19	18	28	23	3	2	93
		%within county	44.2%	26.5%	54.9%	37.7%	11.1%	11.1%	34.7%
		% of total	7.1%	6.7%	10.4%	8.6%	1.1%	0.7%	34.7%
	Undecided	Count	0	1	2	0	0	0	3
		%within county	0%	1.5%	3.9%	0%	0%	0%	1.1%
		% of total	0%	0.4%	0.7%	0%	0%	0%	1.1%
	Disagree	Count	10	2	3	10	8	0	33
		%within county	23.3%	2.9%	5.9%	16.4%	29.6%	0%	12.3%
		% of total	3.7%	0.7%	1.1%	3.7%	3%	0%	12.3%
	Strongly Disagree	Count	9	14	1	3	4	1	32
		%within county	20.9%	20.6%	2%	4.9%	14.8%	5.6%	11.9%
		% of total	3.4%	5.2%	0.4%	1.1%	1.5%	0.4%	11.9%
TOTAL		Count	43	68	51	61	27	18	268

Table 4.7 shows the effect of FDSE on student enrolment and KCSE performance in the six counties of North-Rift. From the table, it is observed that majority of the respondents in the six counties either strongly agreed or agreed to the statement that FDSE subsidy raised student enrolment and improved KCSE performance. From the table, 88.9% of the respondents in Turkana county, 74.1% in West Pokot, 74.5% in Nandi 60.3% in Trans-Nzoia strongly agreed that FDSE subsidy raised student enrolment. No respondent (0%) strongly disagreed in Elgeiyo-Marakwet, Nandi, West-Pokot and Turkana that the support raised students' enrolment. These findings agree with those of Frederikson (1997) in Sweden and Dunarski (1994) in Canada that found a robust positive relationship between public subsidy and enrollment and student retention.

On the effect of FDSE support on KCSE performance, majority of the respondents in all the counties either strongly agreed or agreed that FDSE subsidy improved KCSE performance. In Turkana county, majority (83.3%) strongly agreed while 54.9% of the respondents in Nandi county agreed. This implies that the subsidy has positively influenced enrolment and KCSE performance. These findings are in sharp contrast with those of Card (2000) in USA that found a negative relationship between public subsidy and enrolment and student performance.

4.1.5 Effect of FDSE on Learning Achievement

The researcher investigated the effect of FDSE on learning achievement on schools. This is because the intention of the government and policy makers in any public subsidization programme is to positively influence quality and learning achievement (Lewin, 2002).

Figure 4.2 and Table 4.8 present data collected from the principals on the effect of FDSE on learning achievement.

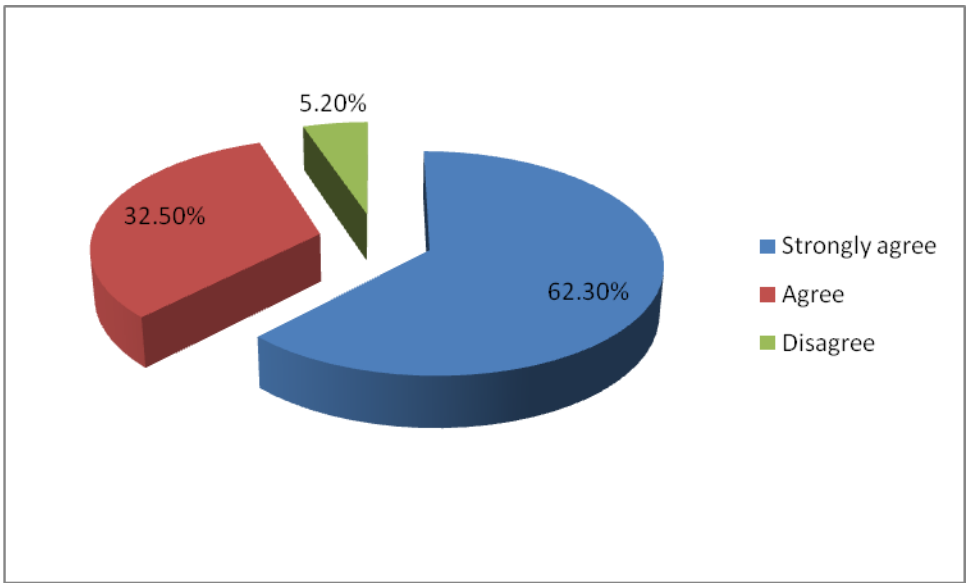


Figure 4.2 FDSE has positive effect on learning achievement

Table 4.8: Effect of FDSE on Learning Achievement

Statement	**SA**		**A**		**U**		**D**		**SD**	
	f	%	f	%	f	%	f	%	F	%
FDSE has positive effect on learning achievement	167	62.3	87	32.5	0	0	14	5.2	0	0
FDSE has not effect on learning achievement	26	9.7	0	0	0	0	122	45.5	120	44.8
FDSE has a negative effect on learning achievement	3	1.1	0	0	0	0	115	42.9	150	56.0
There is no relationship between FDSE and learning achievement	24	9	12	4.5	0	0	102	38.1	130	48.5

From Table 4.8, majority of the respondents (62.3%) strongly agreed and 32.5% agreed that FDSE subsidy has a positive effect on learning achievement. Also majority of the respondents 44.8% strongly disagreed while 45.5% disagreed to the statement that FDSE subsidy has no effect on learning achievement. Moreover, majority 56% strongly

disagreed while 42.9% disagreed to the statement that FDSE 42.9% disagreed to the statement that FDSE has a negative effect on learning achievement. Majority again 48.5% strongly disagreed and 38.1% disagreed to the statement that there is no relationship between FDSE subsidy and learning achievement. These findings are in agreement with those of UNICEF (2008), Lewin (2008), UNESCO, (2005) and World Bank, (2008). All these studies found a robust significant relationship between public subsidy and learning achievement. In fact Lewin (2008) in his study in sub-Sahara Africa went ahead to recommend that governments in sub-Sahara Africa should increase their budgetary allocations to education with a view to raising the quality of education and learning achievements.

To determine the county responses on the above relationship the researcher cross-tabulated the findings. Since the respondents were unanimous that FDSE has a positive effect on learning achievement, a cross tabulation table (Table 4.9) only limited itself to this relationship.

Table 4.9: Effect of FDSE Subsidy on Learning Achievement

Statement	Response		County						
			Elgeiyo Marakwet	Trans-Nzoia	Nandi	Uasin-Gishu	West Pokot	Turkana	Total
FDSE has a positive effect on learning achievement	Strongly agree	Count	19	61	21	31	20	15	167
		%within county	44.2%	89.7%	41.2%	50.8%	74.1%	83.3%	62.3%
		% of total	7.1%	22.8%	7.8%	11.6%	7.5%	5.6%	62.3%
	Agree	Count	18	7	30	27	3	2	87
		%within county	41.9%	10.3%	58.8%	44.3%	11.1%	11.1%	32.5%
		% of total	6.7%	2.6%	11.2%	10.1%	1.1%	0.7%	32.5%
	Disagree	Count	6	0	0	3	4	1	14
		%within county	14%	0%	0%	4.9%	14.8%	5.6%	5.2%
		% of total	2.2%	0%	0%	1.1%	1.5%	0.4%	5.2%
TOTAL		Count	43	68	51	61	27	18	268

From Table 4.9, it is observed that majority of the respondents in the ASAL Turkana county (83.3%) West Pokot county (74.1%), Uasin Gishu county (50.8%) and Trans-Nzoia county (89.7%) strongly agreed the FDSE subsidy has a positive effect on learning achievement. These findings agree with those of World Bank, (2008) in Sub-Sahara Africa that found a positive relationship between government subsidy and learning achievement. This implies that the goal of FDSE subsidy of raising learning achievement is on course to being realized.

In the light of the above findings on the influence of the government subsidy on enrolment, KCSE performance and the overall learning achievement, an analysis of variance (ANOVA) was carried out to test the hypothesis that stated that "*there is no*

statistically significant relationship between the inputs and outcomes of educational attainmen". Table 4.10 shows the ANOVA results.

Table 4.10: ANOVA Table on The Relationship Between Inputs and Outcomes of Educational Attainment

		Sum of Squares	df	Mean Square	F	Sig.
The support did not have any effect on enrolment	Between Groups	23.425	4	5.856	3.863	.005
	Within Groups	398.695	263	1.516		
	Total	422.119	267			
the support improved KCSE performance	Between Groups	207.522	4	51.881	44.025	.000
	Within Groups	309.925	263	1.178		
	Total	517.448	267			
the support negatively influenced KCSE performance	Between Groups	20.243	4	5.061	16.321	.000
	Within Groups	81.548	263	.310		
	Total	101.791	267			
FDSE led to increase in school resources	Between Groups	59.400	4	14.850	18.623	.000
	Within Groups	209.715	263	.797		
	Total	269.116	267			
many organizations supported the government after FDSE	Between Groups	73.371	4	18.343	12.643	.000
	Within Groups	381.570	263	1.451		
	Total	454.940	267			
FDSE has no effect on learning achievement	Between Groups	78.564	4	19.641	19.213	.000
	Within Groups	268.854	263	1.022		
	Total	347.418	267			
There is no relationship between FDSE and learning achievement	Between Groups	76.981	4	19.245	16.186	.000
	Within Groups	312.706	263	1.189		
	Total	389.687	267			

The outcomes of educational attainment (enrollment, KCSE performance and learning achievement) are the dependent variables while FDSE support is the independent variable. On the relationship between the enrolment index and the support it is observed that; $F(4, 263) = 3.863$; $p<0.05$

This was found to be significant and hence the researcher failed to accept the null hypothesis that stated that *there is no significant difference between the inputs and outcomes of educational attainment.* Consequently it was concluded that there is a statistically significant relationship between enrolment as an outcome of educational attainment and the input. These findings concur with those of World Bank (2002) which found out a statistically significant relationship between public subsidy to education and enrolment. On the relationship between the FDSE support and performance in KCSE, it was found that; $F(4, 263) = 44.025$; $p<0.05$. This was also found to be significant at 0.05 level and hence the researcher failed to accept the null hypothesis that stated that "*there is no significant difference between the FDSE support and performance*" and concluded that there is in fact a significant difference between the support and performance. This conclusion is in sharp contrast with the findings of Card (2000) who found an insignificant relationship between the FDSE support and performance.

Table 4.10 further presents the ANOVA results on the relationship between the FDSE support (input) and learning achievement (outcome). It was observed that;

$F(4, 263) = 19.213$; $p<0.05$

This was found to be significant at 0.05 level. The null hypothesis that stated that "there is no statistically significant difference between the FDSE support and learning

achievement" was rejected. It was therefore concluded that there is a statistically significant difference between the FDSE support and learning achievement. This conclusion is reinforced by the responses from the six counties where majority of the respondents strongly agreed that the support positively influences the learning achievements.

On the relationship between FDSE support and overall school resources, it was found that; $F(4, 263) = 18.623$; $P<0.05$

This was significant and therefore the null hypothesis that stated "*there is no statistically significant difference between the inputs and school resources"* was rejected at 0.05 level. It was concluded that there is a significant relationship between the two variables. This conclusion is supported by Lewin (2008) in the study in Sub-Sahara Africa that found a significant relationship between government subsidy and the resource mobilization abilities of schools.

Concerning the relationship between the introduction of FDSE support and the support the government received from other organizations it was observed that;

$F(4, 263) = 12.643$; $p<0.05$

This was significant at 0.05 level, implying that the null hypothesis that stated that "*there is no statistically significant difference between the introduction of FDSE input and the support the government received from other organizations"* failed to be accepted. The conclusion therefore was that there is a statistically significant difference between the introduction of FDSE by the government and the support the government received from

other organizations both locally and internationally. KIPPRA (2008) observed that a number of organizations including foreign donor agencies technically and financially supported the government following the introduction of FDSE.

4.1.6 Staff Development Activities Following the Introduction of FDSE.

Since FDSE project was a new initiative, the researcher found it prudent to investigate the staff development activities that were developed for successful implementation of FDSE. This is anchored on the fact that capacity building initiatives greatly determines successful implementation of any project. Table 4.11 describes, in the opinion of principals, the staff development activities that were developed to ensure successful implementation of FDSE project.

Table 4.11: Staff Development Activities

Statement	SA		A		U		D		SD	
	f	%	f	%	f	%	f	%	F	%
There are a number of staff development/teacher training activities that were undertaken between 2008 and 2010	117	43.7	131	48.9	0	0	3	1.1	17	6.3
Ministry of education developed a training programme	116	43.3	117	43.7	10	3.7	3	1.1	22	8.2
KESI developed a training programme	104	38.8	132	49.3	19	7.1	13	4.9	0	0
QAS office mounted a training programme	72	26.9	135	50.4	32	11.9	19	7.1	10	3.7
The focus of staff development activities is curriculum development	92	34.3	127	47.4	19	7.1	20	7.5	10	3.7
The staff development activities focused more on teacher and teaching resources	89	33.2	123	45.9	11	4.1	26	9.7	19	7.1
The government developed teacher-tailored training programme to support implementation of FDSE	71	26.5	119	44.4	19	7.1	3	1.1	56	20.9
The training programmes developed focused on quality education	75	28	125	46.6	19	7.1	40	14.9	9	3.4
The training programmes were quite beneficial to the teachers	104	38.8	107	39.9	19	7.1	29	10.8	9	3.4

Table 4.11, shows that majority of the respondents interviewed either strongly agreed or agreed that a number of training programmes were mounted following the introduction of FDSE subsidy. Majority of the respondents 49.3% and 38.8% agreed and strongly agreed respectively that KESI developed a training programme. Moreover, majority of the respondents, (48.9%) and (43.7%) respectively agreed and strongly agreed that there are a number of staff development and teacher training activities that were undertaken

between 2008 and 2010. In line with this, majority of the respondents (45.9%) and (33.3%) agreed and strongly agreed respectively that these staff development activities focused more on teacher and teaching resources. Another 44.4% and 26.5% agreed and strongly agreed respectively that the government developed teacher-tailored training programmes to support implementation of FDSE. On the quality of education, majority (46.4%) and (28%) agreed and strongly agreed respectively that the training programmes developed focused more on quality education.

In overall, majority of the respondents acknowledge the fact that there are quite a number of training programmes that were developed to aid implementation of FDSE subsidy
This implies that the inherent successes in the implementation of FDSE subsidy is hinged on the number of tailor-made training programmes that were developed following the introduction of FDSE whose major focus was quality education.

4.1.7: Implementational Challenges Facing FDSE Subsidy

The researcher, convinced that the FDSE subsidy has its fair share of successes went ahead to investigate the implementation challenges facing the subsidy. This information was collected using an interview schedule. The researcher interviewed senior ministry of education officials, the Provincial Director of Education, (PDE) Rift-Valley and the Principals. Table 4.12 gives a summary of these challenges.

Table 4.12: Implementational Challenges

Challenge	Principals		Ministry Officials	
	f	%	f	%
1. Delay in disbursement of funds	266	99.3%	1	50%
2. Limited funds	260	97%	1	50%
3. Ineffective PTA and/or B.O.G	211	78.7%	2	100%
4. Unclear policy guidelines	162	60.45	0	0
5. Bureaucracy in disbursement	196	73.13	0	0
6. Weak capacity building techniques/strategies	149	55.6%	1	50%
7. Poor accountability of funds	123	45.9%	2	100%
8. Weak legal framework	119	44.4%	2	100%
9. Diversity in school requirements	102	38.06%	2	100%
10. Rising poverty level	96	35.8%	2	100%
11. Rising inflation	77	28.7%	2	100%
12. Schools in ASAL areas too poor	77	28.7%	2	100%

From Table 4.12, its observed that both principals (99.3%) and senior ministry officials (50%) acknowledge that the greatest challenge facing FDSE is the delayed disbursement of funds that negatively impacts on the effectiveness of the subsidy to intervene. FDSE subsidy intervention therefore may not be adequately realized because of the delay. Majority of the principals (97%) and ministry officials (50%) admit that limited funds is a major challenge also. The allocation to schools is so limited that the interventional impact may not be felt in schools. Ineffective PTA and/or B.O.G have also been cited as another implementation challenge. B.O.Gs/PTAs in some schools are inactive/non-functional or where they are functional, their energy is more of destructive than constructive. Majority of the principals (60.45%) also cited the challenge of unclear policy guideline that in some cases derail the successful implementation of the FDSE subsidy. In addition, another (73.13%) of the principals blame bureaucracy in the disbursement of funds for the slow implementation of the subsidy.

All the senior ministry officials (100%) cited poor accountability of funds that precipitates corruption, weak legal framework, diversity in school requirements, rising poverty level, inflation and the demands of ASAL schools as major challenges in the implementation of FDSE subsidy.

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4.2: Influence of Subsidies on the Indices of Educational Attainment

The second objective of the study was to determine the influence of inputs (subsidies) on the outcome (indices) of educational attainment. To attain this objective, the researcher issued a questionnaire to principals in six counties of North-Rift and interviewed senior ministry of education officials with a view to collect information on these variables. This is grounded on the fact that all inputs are resources and quite scarce. Every allocation of these scarce resources must lead to a commensurate return if such allocation is to be cost-effective and efficient.

This section is divided into four major sub-sections;

(a) Influence of FDSE subsidy on enrolment

(b) Influence of FDSE subsidy on retention

(c) Influence of FDSE subsidy on transition

(d) Influence of FDSE subsidy on equity

4.2.1: Influence of Subsidies on Enrolment

Enrolment is one of the key indicators of educational attainment. It is one of the aspects that have formed the focus of EFA and MDG goals. Figure 4.3 (a, and b) and Table 4.13 gives a summary of the responses from the principals sampled on their views on the influence of the FDSE subsidy (input) on enrolment as an indicator of educational attainment.

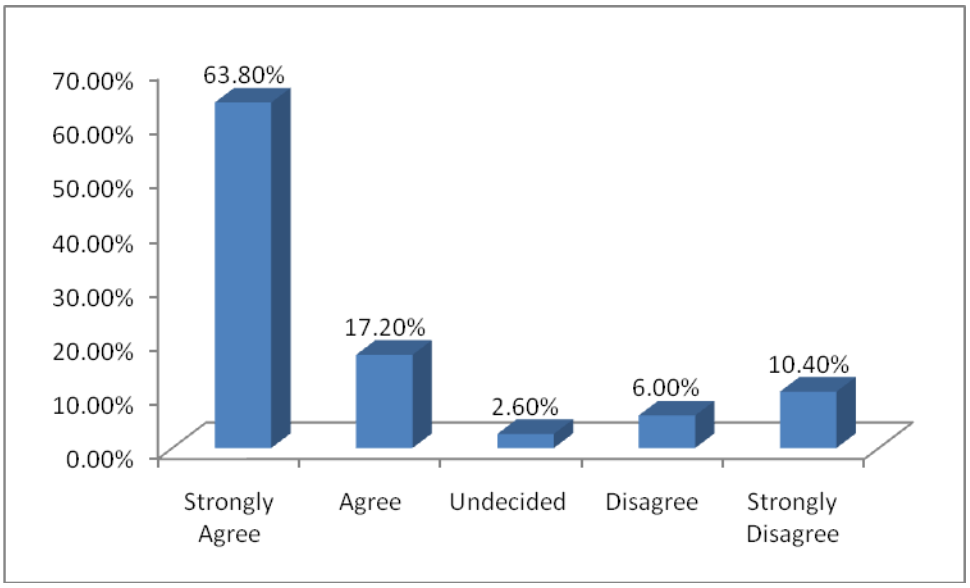


Figure 4.3(a): Public subsidy increases class enrolment

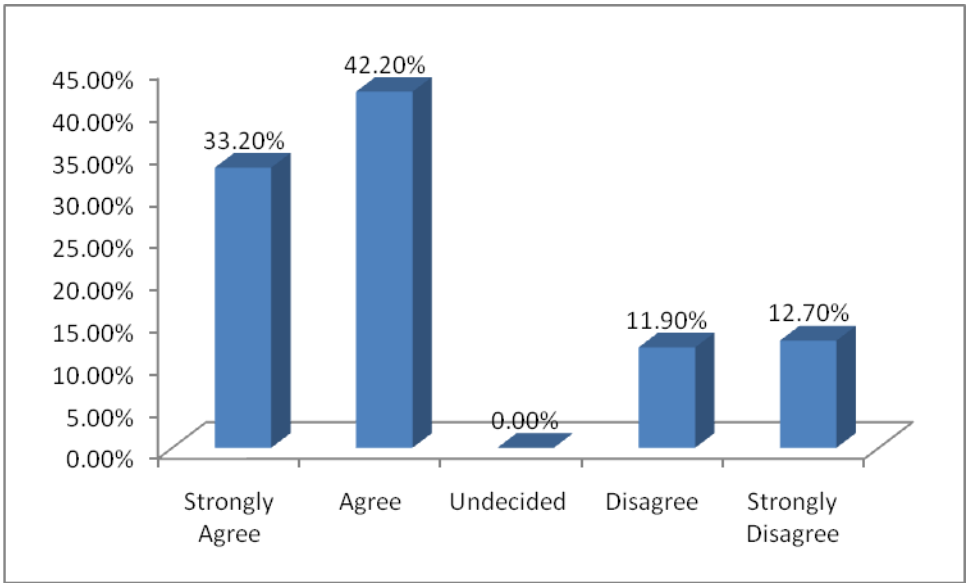


Figure 4.3(b): There is need to streamline public subsidization programme in terms of enrolment

Table 4.13: Influence of FDSE Subsidy on Enrolment

Statement	**SA**		**A**		**U**		**D**		**SD**	
	f	%	f	%	f	%	f	%	F	%
Public subsidy increases class enrolment	171	63.8	46	17.2	7	2.6	16	6.0	28	10.4
Government subsidy doesn't affect in any way enrolment	50	18.7	9	3.4	9	3.4	65	24.3	135	50.2
There is need to streamline public subsidization programme in terms of enrolment	89	33.2	113	42.2	0	0	32	11.9	34	12.7

From Figure 4.3 (a and b) and also Table 4.13, it is observed that majority of the respondents (63.8%) strongly agree that public subsidy increases class enrolment in secondary schools. This implies that in effect, the subsidy positively influence enrolment. These findings agree with the findings of the study by World Bank (2002) in Ghana that found strong evidence that public subsidies positively influence enrolment at primary and secondary school levels. These findings however disagree with those of

Card, (2000) in USA that found a strong negative relationship between public subsidy and enrolment in post secondary institutions. To support the study position and that of World Bank, (2002), majority of the respondents (50.4%) strongly disagree that government subsidy doesn't affect in any way enrolment. However, majority (42.2%) and (33.2%) agreed and strongly agreed respectively that there is need to streamline public subsidization programme in the country in terms of enrolment. This may have been informed by the inherent implementation challenges cited earlier in this thesis.

The researcher did some cross-tabulation to get per county picture on the influence of subsidy on enrolment. Appendix vi, presents per county responses on these variables. Appendix vi, presents data on the influence of FDSE subsidy on enrolment in the six counties of North-Rift. From the table, it is observed that in the six counties, majority of the respondents who strongly agreed that public subsidy increases class enrolment in secondary schools come from the ASAL Turkana county with 88.9% followed by West Pokot with 74.1% and Nandi with 74.6%. These striking findings indicate that the influence of the subsidy on enrolment is strongly felt in the ASAL county of Turkana, a county whose poverty index is the highest among the six counties. These findings agree with the position of GOK (2005) that stated that the subsidy allocations should be hinged on the school unique needs. KIPPRA (2008), in line with the above findings, contend that ASAL schools are generally poor and need much more financial assistance from the government than non ASAL schools. The impact of the subsidy, if given, shall be stronger relative to non ASAL schools.

Majority of the respondents in all the six counties either strongly disagreed or agreed to the statement that government subsidy doesn't affect in any way enrolment in Turkana county, 50% strongly disagreed and 11.1% disagreed; in West Pokot county 74.1% strongly disagreed and 25.9% disagreed, in Nandi county, 54.9% strongly disagreed and 15.7% disagreed; in Trans-Nzoia county 58.8% strongly disagreed and 8.8% disagreed. This implies that overall, in all the six counties, respondent are somewhat in agreement that government subsidy has an influence on enrolment.

For policy purposes, respondents were asked their views on the need to streamline public subsidization programme in the country in terms of enrolment, majority of the respondents in Turkana (88.9%) and West Pokot county 51.9% strongly agreed while 60.7% from Uasin Gishu County and 51.2% in Elgeiyo-Marakwet agreed on the need to streamline this programme. This implies that, to attain the intended goal of raising enrolment and meeting the MDG and EFA goals, the policy markers at both local and national level together with the other players in education must develop policies that streamline the subsidy implementation and hence raising enrolment. They should be cognizant of the fact that the enrolment needs of ASAL and non-ASAL areas are different. Table 4.14 presents a summary of the influence of subsidy on enrolment. In the table, a mean of 1 represents strongly agree, 2 agree, 3 undecided, 4 disagree, and 5 strongly disagree.

Table 4.14:Summary Table On The Influence Of Subsidy On Enrolment

Statement	County	Mean	Std. Deviation
Public subsidy increases class enrolment in secondary schools	Elgeiyo marakwet	1.9535	1.04548
	Trans-Nzoia	1.7647	1.29428
	Nandi	1.4902	1.22266
	Uasin-Gishu	1.7705	1.40705
	West Pokot	1.1111	.32026
	Turkana	3.8889	1.40958
Government subsidy doesn't affect in any way enrolment	Elgeiyo marakwet	3.9535	1.23353
	Trans-Nzoia	3.6176	1.84496
	Nandi	3.7451	1.69521
	Uasin-Gishu	3.6230	1.50736
	West Pokot	4.7407	.44658
	Turkana	4.1111	.96338
There is need to streamline public subsidized programme in the country in terms of enrolment	Elgeiyo marakwet	2.1628	1.11120
	Trans-Nzoia	2.4706	1.44005
	Nandi	3.0980	1.64018
	Uasin-Gishu	2.1639	1.18575
	West Pokot	1.4815	.50918
	Turkana	1.2222	.73208

In the light of the above findings, the researcher carried out a paired sample statistics in the scale of 1- 5 where 1 represents strongly agree, 2 agree, 3 undecided, 4 disagree and 5 strongly disagree. Table 4.15 presents results of paired samples statistics.

Table 4.15: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	County of respondent	3.06	268	1.461	.089
	before 2008, there were adequate number of desks and chair	4.1791	268	1.07648	.06576
Pair 2	the support raised student enrolment	1.6045	268	.93231	.05695
	The support did not have any effect on enrolment	3.7015	268	1.25737	.07681
Pair 3	FDSE has no effect on learning achievement	4.1567	268	1.14070	.06968
	FDSE has a negative effect on learning achievement	4.5261	268	.62055	.03791
Pair 4	the government developed teacher-tailored training programmes to support implementation of FDSE	2.4552	268	1.43585	.08771
	the training programmes developed focused on quality education	2.1903	268	1.10378	.06742
Pair 5	Public subsidy increases class enrolment in secondary schools	1.8209	268	1.34833	.08236
	Government subsidy doesn't affect in any way enrolment	3.8433	268	1.52804	.09334

Table 4.15 presents five paired samples. In the first pair, the county of respondent mean is 3.06 and standard deviation of 1.461while the adequacy of desks and chairs before 2008 mean is 4.1791 with standard deviation of 1.076. A mean of 4.1791 indicates that majority of the respondents disagreed to the statement that before the introduction of FDSE in 2008, there were adequate number of desks and chairs. This implies that the support has positively influenced the adequacy of desks and chairs in schools.

In the second pair of statements, that the support raised student has a mean of 1.6045with a standard deviation of .93231 while the statement that the support did not have any effect on enrolment has a mean of 3.7015 with a standard deviation of 1.2573. The mean of 1.6045 indicates that majority of the respondents agreed that the support raised enrolment while the mean of 3.7015 indicates that majority of the respondents disagreed to the statement that the support did not have any effect on enrolment.

The third pair of statements, that the FDSE has no effect on learning achievement has a mean of 4.1567 with a standard deviation of 1.14070 while the statement that FDSE has a negative effect on learning achievement has a mean of4.5261 with a standard deviation of .62055. The two means indicate that majority of the respondents disagreed to the two statements, implying the support has a positive effect on learning achievement.

The fourth pair of statements, that the government developed teacher tailored training programmes to support implementation of FDSE has a mean of 2.4552 with a standard deviation of 1.43585, while the statement that the training programmes developed focused on quality education has a mean of 2.1903 with a standard deviation of 1.10378. The two means indicate that majority of the respondents agreed to the two paired statements that the teacher-tailored training programmes supported the implementation of FDSE and that these programmes were focused on quality education.

The last pair of statements, that the subsidy increases class enrolment has a mean of 1.8209 with a standard deviation of 1.34833, while the statement that the subsidy does

not affect in any way enrolment has a mean of 3.8433 with a standard deviation of 1.52804. The mean of 1.8209 indicate that majority of the respondents agree to the statement that the subsidy increase class enrolment. The mean of 3.8433 on the other hand indicate that majority of the respondents disagreed to the statement that the subsidy does not affect in any way enrolment.

Based on the above findings and the hypotheses stated in chapter one, the researcher conducted a paired samples correlations to determine whether the differences in means of paired sample statements given in Table 4.15 are statistically significant. Table 4.16 presents the paired samples correlation results.

Table 4.16; Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	County of respondent & before 2008, there were adequate number of desks and chair	268	-.014	.825
Pair 2	the support raised student enrolment & The support did not have any effect on enrolment	268	-.056	.358
Pair 3	FDSE has no effect on learning achievement & FDSE has a negative effect on learning achievement	268	.116	.058
Pair 4	the government developed teacher-tailored training programmes to support implementation of FDSE & the training programmes developed focused on quality education	268	.879	.000
Pair 5	Public subsidy increases class enrolment in secondary schools & Government subsidy doesn't affect in any way enrolment	268	-.223	.000

Table 4.16 presents paired data on various aspects of the study variables. The first pair shows that there is a negative and insignificant relationship between the county of respondent and the adequacy of chairs and desks prior to the introduction of FDSE. Therefore, from Table 4.15, the difference between the mean of 3.06 for county of respondent and 4.1791 for adequacy in number of desks and chairs is not statistically significant since $P>0.05$. This implies that there was inadequate number of desks and chairs in all the counties before 2008.

The second paired statements "the support raised student enrolment and the support did not have any effect on enrolment" were negatively correlated and not significant. From

Table 4.15, the difference between the mean of 1.6045 for the statement that "the support raised enrolment" and 3.7015 for the statement that "the support did not have any effect on enrolment" is not statistically significant since P>0.05. This implies that the increase in FDSE had a positive but not significant relationship with enrolment

The third paired statements "FDSE has no effect on learning achievement and FDSE has a negative effect on learning achievement" were positively correlated and the relationship was not significant. From Table 4.15, the difference between the mean of 4.1567 for the statement that "FDSE has no effect on learning achievement" and 4.5261 for the statement that "FDSE has a negative effect on learning achievement" is not statistically significant since P>0.05, indicating that FDSE had a positive effect on learning achievements.

The fourth paired statements "the government developed teacher-tailored training programmes to support implementation of FDSE & the training programmes developed focused on quality education" were highly correlated positively and at the same time were statistically significant since P<0.05, indicating that the government training programmes were teacher-tailored, supported implementation of FDSE and focused on quality education.

The last paired statements "Public subsidy increases class enrolment in secondary schools & Government subsidy doesn't affect in any way enrolment" were negatively correlated (r = -.223) and statistically significant since P<0.05. This implies that where there is no

government subsidy, student enrolment reduces significantly unlike when there is government subsidy where the student population per school increases.

4.2.2: Influence of FDSE Subsidy on Retention

Retention has been a major challenge in both developed and developing world (Psacharapoulos and Woodhall 1985). In Kenya, one of the issues that the country must address is the challenge of low secondary school retention (KIPPRA 2005). The introduction of public subsidy was intended to address this challenge. The researcher investigated the influence of FDSE subsidy on student retention in secondary schools. Figure 4.4(a) and (b) presents data on the responses from the sampled schools.

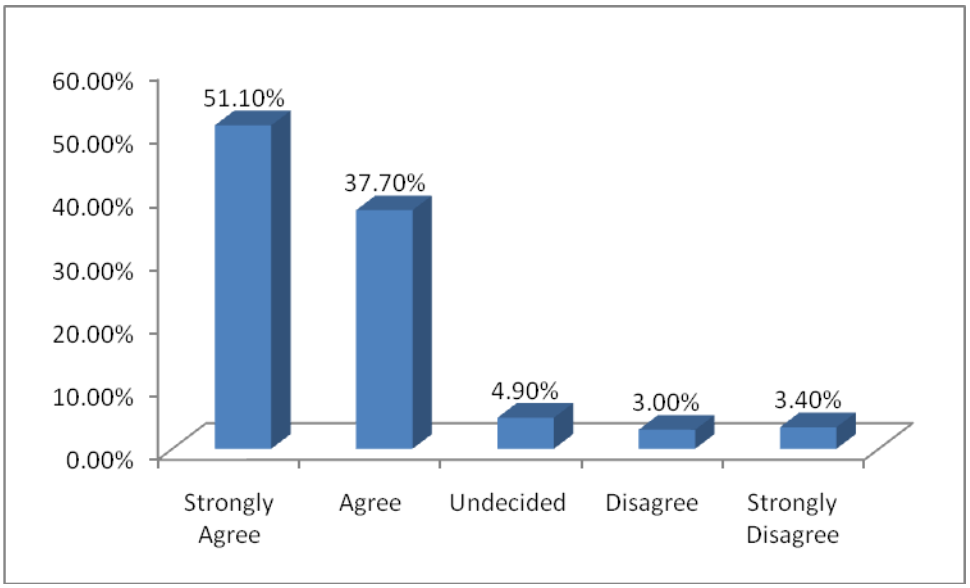


Figure 4.4(a): Public subsidy increases student retention

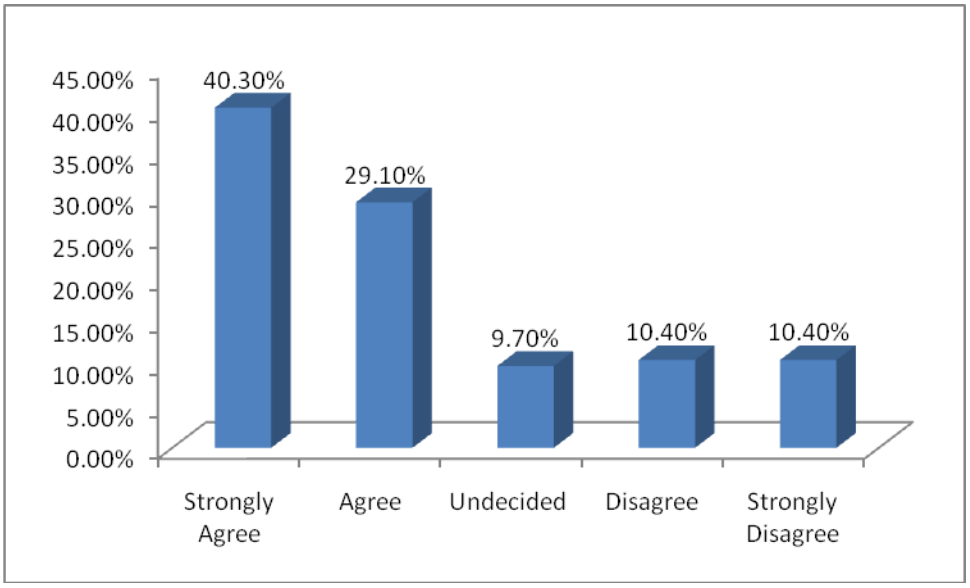


Figure 4.4(b): There is need to streamline public subsidization programme to bring the desired outcome in terms of student retention

Figure 4.4(a) indicate that majority of the respondents (51.1%) strongly agree that public subsidy increases student retention while another 37.7% agree to the statement. This implies that public subsidy increases student retention in schools. Figure 4.4(b) show that majority of the respondents (40.3%) strongly agree that due to the inherent challenges facing the public subsidization programme in the country, there is need to streamline it to bring about the desired outcome in terms of student retention. Table 4.17 presents the influence of public subsidy on student retention.

Table 4.17: Influence of Public Subsidy on Student Retention

Statement	SA		A		U		D		SD	
	F	%	f	%	f	%	f	%	F	%
Public subsidy increases student retention	137	51.1	101	37.7	13	4.9	8	3	9	3.4
Government subsidy doesn't affect in any way student retention	55	20.5	24	9	17	6.3	85	31.7	87	32.5
There is need to streamline public subsidization programme to bring the desired outcome in terms of student retention	108	40.3	78	29.1	26	9.7	28	10.4	28	10.4

Table 4.17 shows that majority of the respondents either strongly agreed (51.1%) or agreed (37.7%) that public subsidy increases student retention in secondary schools. This is supported by another 32.5% who strongly disagreed and 31.7% who disagreed to the statement that government subsidy doesn't affect in any way student retention in secondary schools. This implies that there is a positive relationship between government subsidy and retention. These findings support the position of World Bank (2008), Lewin (2008) and UNICEF (2008) that investment in basic education would guarantee steady retention of students in school. UNESCO (2005) in a study in Cameroon added that a sustained effort by the government to raise student retention in schools call for a re examination of budgetary allocation in favour of basic education.

On the need to streamline the subsidy, majority of the respondents (40.3%) strongly agreed and another 29.1% agreed that there is need to streamline the programme in the

country to bring out the desired outcome in terms of student retention. This implies that whereas the subsidy has the potential of enhancing student retention, there are certain hurdles that hinder the realization of maximum student retention in the light of the subsidy.

To determine the per county response, the researcher cross-tabulated these results. Appendix vii, gives the per county response on the influence of FDSE subsidy on retention. From table 4.22, it is observed that majority of the respondents in all the counties either strongly agreed or agreed to the statement that public subsidy increases student retention. In Trans-Nzoia, Nandi and Turkana counties majority 63.2%, 60.8% and 50% respectively strongly agreed that the subsidy increases retention. In Elgeiyo Marakwet, West Pokot and Uasin-Gishu counties, majority, 62.8%, 55.6% and 41% agreed that there is a positive and significant relationship between the subsidy and retention. However, a significant proportion (38.9%) in Turkana county strongly disagreed that the subsidy increases student retention. This may be accounted for by the fact, despite the high number of public subsidy providers in the county since independence, retention has posed a serious challenge to the people of Turkana county. This is compounded by the high poverty index characterizing the county. These findings agree with that of KIPPRA (2008) that revealed that in the ASAL districts of Kenya, despite the high number of subsidy providers like the NGOs, the church and the government student retention still remains the biggest challenge facing schools. This may be accounted for by the high indirect cost of education in these poorer districts GOK (2005).

A majority of the respondents in all the counties either strongly disagreed or disagreed to the statement that government subsidy doesn't affect in any way student retention. In Turkana county 50% strongly disagreed while in West Pokot and Elgeiyo Marakwet 55.6% and 46.5% respectively disagreed to the statement. These findings reinforce the earlier findings that there is a positive and significant relationship between public subsidy and student retention.

On the need to streamline public subsidy so as to improve retention in secondary school, majority of the respondents either strongly agreed or agreed that there is such an urgent need. To be significantly noted is Turkana county where majority 83.3% strongly agreed that the subsidy need to be streamlined. From the interviews conducted by the researcher, it was noted that Turkana county, being an ASAL county has unique needs. The policy makers are therefore required to streamline the public subsidy programme to target the unique needs of the diverse regions in the country. The interviews further revealed that comparatively, Turkana county has the lowest student retention rate among the six counties. Table 4.18 presents a summary of the effects of subsidy on retention in the six counties. In the table, a mean of 1 represent strongly agree, 2 agree, 3 undecided, 4 disagree and 5 strongly disagree.

Table 4.18:Summary Table On The Influence Of Public Subsidy On Retention

STATEMENT	COUNTY	MEAN	STD. DEV.
Public subsidy increases transition rate from primary to secondary schools	Elgeiyo marakwet	1.8372	.84319

	Trans-Nzoia	1.4265	.65372
	Nandi	1.8235	.79261
	Uasin-Gishu	1.8197	1.02483
	West Pokot	1.2593	.44658
	Turkana	2.7222	1.90373
Government subsidy doesn't affect in any way student transition from grade to grade and from level to level	Elgeiyo marakwet	3.4884	1.35176
	Trans-Nzoia	2.8824	1.77486
	Nandi	3.1176	1.25932
	Uasin-Gishu	2.9836	1.53288
	West Pokot	4.4444	.50637
	Turkana	4.0000	.97014
There is need to streamline public subsidization programme in the country to bring the desired outcome in terms of student transition	Elgeiyo marakwet	2.3256	1.24825
	Trans-Nzoia	2.3235	1.53021
	Nandi	2.2941	1.46006
	Uasin-Gishu	2.3279	1.43436
	West Pokot	1.6296	.49210
	Turkana	2.8333	1.91741

4.2.3: Influence of FDSE Subsidy on Transition

Transition rate from primary to secondary level has been the concern of all education stakeholders in the country (KIPPRA, 2005). The researcher investigated the influence of FDSE subsidy on transition in the six counties of North-Rift. Figure 4.5(a) and (b) gives a summary of the findings.

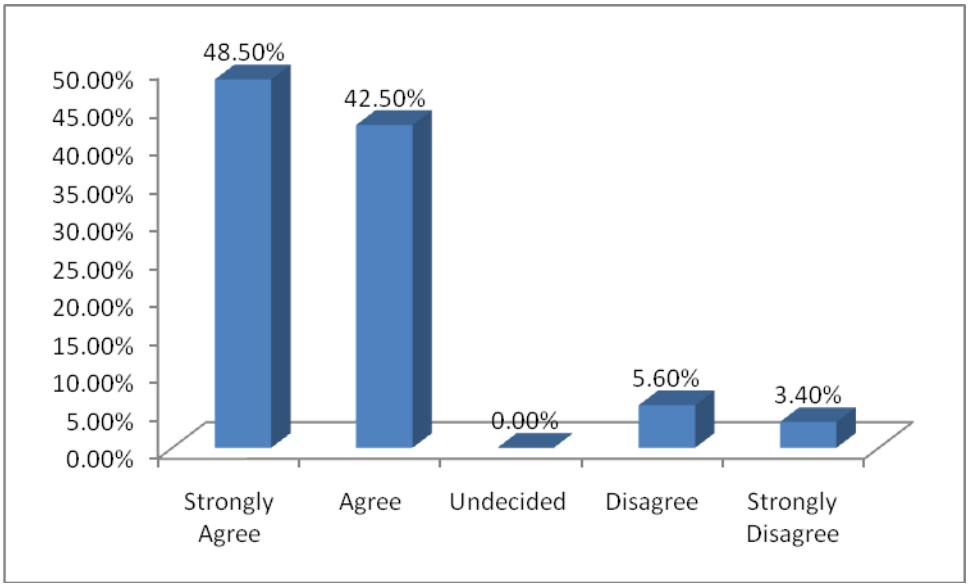


Figure 4.5(a): Public subsidy increases transition rate

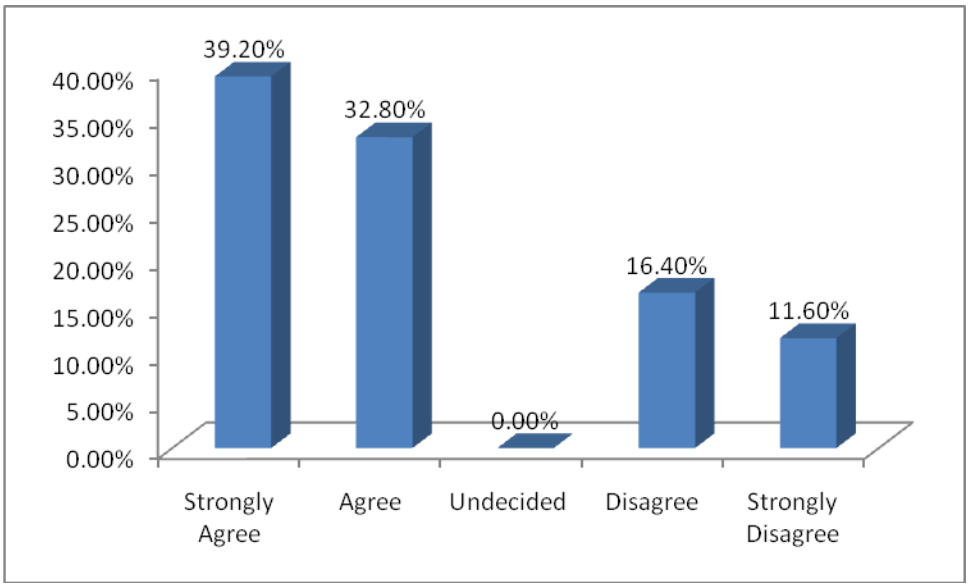


Figure 4.5(b): There is need to streamline public subsidization programme to improve student transition

Figure 4.5 (a) indicate that majority of the respondents (48.5%) strongly agree that public subsidy increases transition rate from one level to the next while another 42.5% agree to the statement. This implies that in the opinion of the respondents public subsidy positively influences transition rate. Figure 4.5 (b) on the other hand shows that majority of the respondents (39.2% and 32.8%) respectively strongly agree and agree that there is need to streamline public subsidization programme in the country to improve student transition. Table 4.19 presents data on the influence of government subsidy on transition.

Table 4.19: Influence of Government Subsidy on Transition

Statement	SA		A		U		D		SD	
	f	%	f	%	f	%	f	%	F	%
Public subsidy increases transition rate	130	48.5	114	42.5	0	0	15	5.6	9	3.4
Government subsidy doesn't affect in any way student transition	52	19.4	41	15.3	29	10.8	72	26.9	74	27.6
There is need to streamline public subsidization programme to improve student transition	105	39.2	88	32.8	0	0	44	16.4	31	11.6

Table 4.19, shows that majority of the respondents (48.5%) strongly agreed and another (42.5%) agreed that public subsidy increases transition rate from primary to secondary level and from one grade to the next. This is supported by the majority of the respondents (27.6%) who strongly disagreed and (26.9) who disagreed to the statement that government subsidy doesn't affect in any way student transition from grade to grade and from level to level. These findings are in line with those of World Bank (2005) that established that the attainment of MDGs and EFA goals is dependent on the degree with which governments subsidize basic education and the effect of this subsidy on transition, especially from primary to secondary levels. These findings were reinforced by that of Williams (2006) that found that in Tanzania, the government's decision to subsidize secondary education in 2002 led to a rise in primary to secondary transition rate from 42% to 63%.

On the need to streamline the public subsidy programme to raise transition, respondents were almost unanimous that there is such an urgent need. Majority of the respondents 39.2% and 32.8% strongly agreed and agreed respectively that for the subsidy to raise transition rate from primary to secondary, public subsidization programme need to be streamlined. The policy makers therefore have a duty to look into the programme and address all the concerns that have been raised by the key players in education.

To get the county response on the influence of public subsidy on transition, the researcher cross-tabulated the findings. Appendix viii shows the county responses.

Appendix viii shows that majority of the respondents in all the six counties either strongly agree or agree to the statement that public subsidy increases transition rate from primary to secondary. In Trans-Nzoia, Uasin-Gishu, West Pokot and Turkana, majority 63.2%, 47.5%, 74.1% and 44.4% respectively strongly agreed while 55.8% and 66.7% in Elgeiyo Marakwet and Nandi respectively agreed to the statement that public subsidy increases transition rate from primary to secondary. However, a significant 38.9% of the respondents in Turkana county strongly disagree to the above statement. From the interviews conducted, this position is attributed to the fact that with a good number of subsidy providers on the ground since independence in the county, transition rate has remained alarmingly low.

A significant proportion of the respondents in Turkana (44.4%) and West Pokot (44.4%) strongly disagreed while 55.6% of the respondents in West Pokot disagreed to the statement that government subsidy doesn't affect in any way student transition from primary to secondary. This reinforces the earlier position that there is a significant

relationship between government subsidy and transition from primary to secondary. These findings are in sharp contrast with those of Huijsman et al (1986) in Netherlands, and Whitfield and Wilson (1991) that found a strong negative relationship between public subsidy and transition to post secondary level of education.

On the need to streamline government subsidy so as to raise transition from primary to secondary, majority of the respondents either strongly agreed or agreed to the statement that there is need to streamline the programme. In Trans-Nzoia, Nandi and Turkana counties, majority (45.6%, 45.1% and 44.4%) respectively strongly agreed while 44.2% and 63% of the respondents in Elgeiyo Marakwet and West-Pokot counties respectively agreed that the programme need to be streamlined if it has to strongly influence student transition from primary to secondary. This implies that the subsidy has a greater potential to strongly influence transition.

4.2.4: Influence of Government Subsidy on Equity

Equity has remained a central concern to most education stakeholders. The Kenya government, while formulating any policy, places equity considerations first (KIPPRA, 2005). The researcher investigated the influence of government subsidy on equity in education. Figures 4.6 (a), (b) and (c) presents data on the influence of government subsidy on equity.

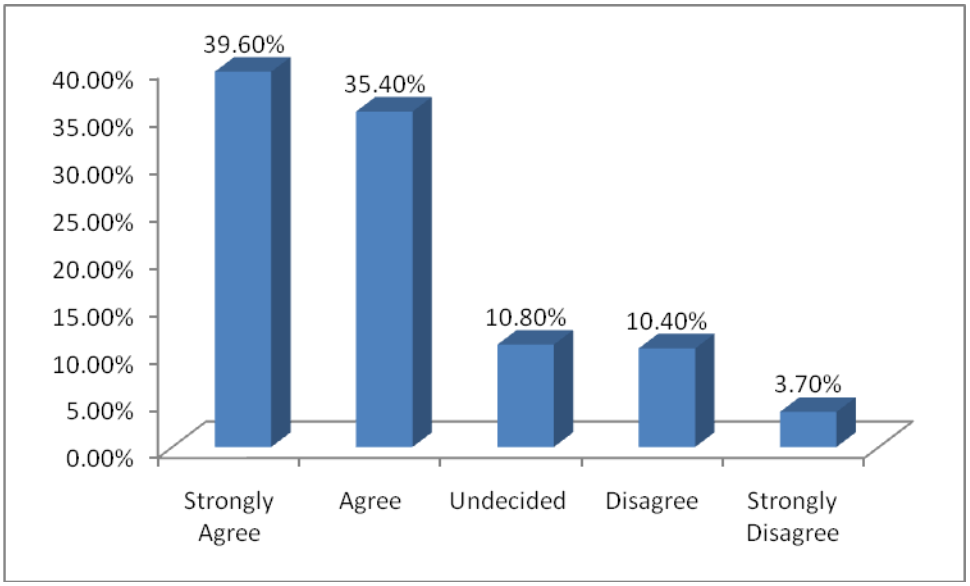
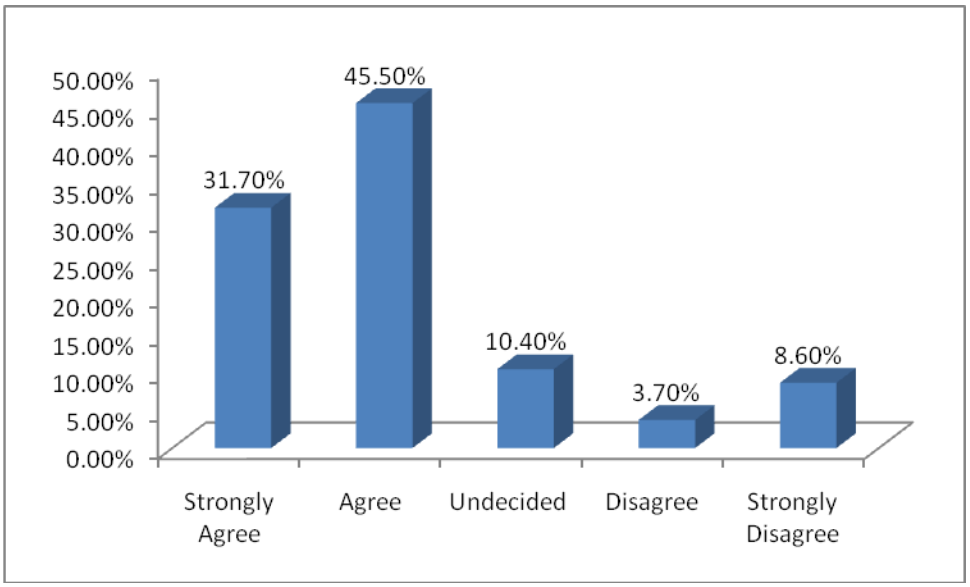
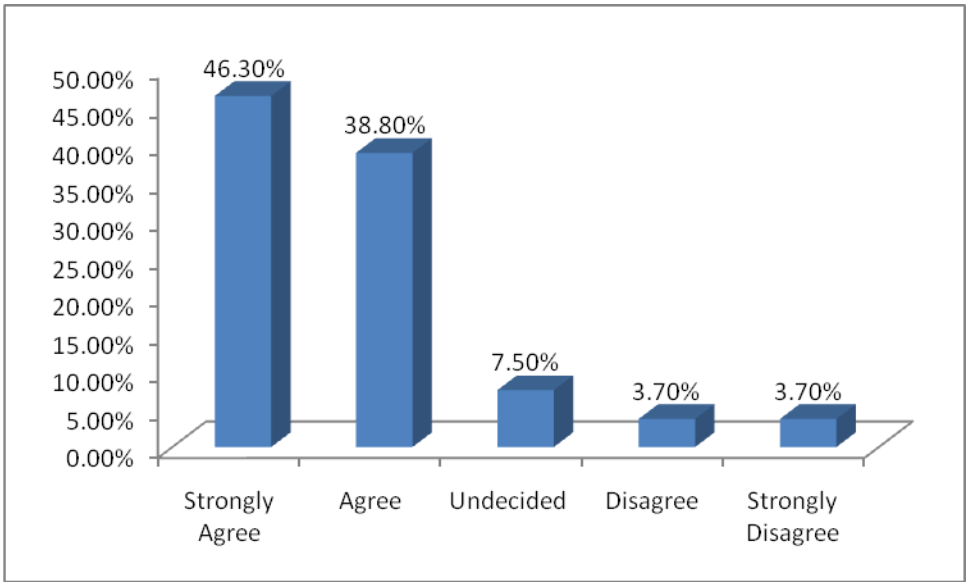


Figure 4.6 (a): Public subsidy ensures all students from poor households get enrolled and retained in school



4.6 (b): Public subsidy ensures students in ASAL areas benefit in education



4.6(c) Public subsidy ensures both males and females and children with special needs receive education

Figure 4.6(a) show that majority of the respondents in the study area (39.6 and 35.4) respectively strongly agree and agree to the statement that public subsidy ensures all students from poor households get enrolled and retained in schools. Figure 4.6 (b) indicate that majority of the respondents (45.5% and 31.7%) agree and strongly agree respectively to the statement that the subsidy ensures students in ASAL areas benefit from education. Figure 4.6 (c) show that majority of the respondents (46.3% and 38.8%) strongly agree and agree respectively to the statement that the subsidy ensures both males and females and children with special needs receive education. The implications of these findings are that the subsidy has achieved its original mission and objective of ensuring equity and fairness in the provision of education in the country. Table 4.20 presents data on the respondents opinion on the influence of government subsidy on equity.

Table 4.20: Influence of Government Subsidy on Equity

Statement	SA		A		U		D		SD	
	F	%	f	%	f	%	f	%	F	%
Public subsidy ensures all students from poor households get enrolled and retained in school	106	39.6	95	35.4	29	10.8	28	10.4	10	3.7
Public subsidy ensures students in ASAL areas benefit in education	85	31.7	122	45.5	28	10.4	10	3.7	23	8.6
Public subsidy ensures both males and females and children with special needs receive education	124	46.3	104	38.8	20	7.5	10	3.7	10	3.7

From table 4.20, it can be observed that majority of the respondents (39.6% and 35.4%) strongly agreed and agreed respectively that public subsidy ensures all students from poor households get enrolled and retained in secondary schools. This finding is in line with EFA and MDG goals. Ideally, the purpose of any subsidy is to target the child from poor socio-economic background and ensure that, that child get enrolled and retailed in school (G.O.K, 2005).

It was established further that majority of the respondents (31.7% and 45.5% strongly agreed and agreed respectively that public subsidy ensures students in ASAL areas benefit in education. This also is in line with Kenya's vision 2030, EFA and MDGs. The underlying goal of any public subsidy is to ensure equity in the provision of education (KIPPRA, 2005).

On gender equity, it was established that majority of the respondents, 46.3% and 38.8% strongly agreed and agreed respectively that public subsidy ensures both males and

females and also children with special needs receive education. This is in line with the gender policy (G.O.K, 2006) that states that no one should be discriminated against, in the provision of education on the basis of gender.

To determine the county responses on the above relationship, the researcher cross-tabulated the findings. Table 4.21 shows the per county responses on the influence of public subsidy on equity.

Table 4.21: Influence of Government Subsidy on Equity Per County

Statement	Response		County						
			Elgeiyo Marakwet	Trans - Nzoia	Nandi	Uasin-Gishu	West Pokot	Turkana	Total
Public subsidy ensures all students from poor households get enrolled and retained in school	Strongly Agree	Count	15	27	13	28	14	9	106
		%within county	34.9%	39.7%	25.5%	45.9%	51.9%	50%	39.6%
		% of total	5.6%	10.1%	4.9%	10.4%	5.2%	3.4%	39.6%
	Agree	Count	25	16	23	27	3	1	95
		%within county	58.1%	23.5%	45.1%	44.3%	11.1%	5.6%	35.4%
		% of total	9.3%	6%	8.6%	10.1%	1.1%	0.4%	35.4%
	Disagree	Count	1	6	9	1	10	1	28
		%within county	2.3%	8.8%	17.6%	1.6%	37%	5.6%	10.4%
		% of total	0.4%	2.2%	3.4%	0.4%	3.7%	0.4%	10.4%
	Undecided	Count	2	13	4	3	0	7	29
		%within county	4.7%	19.1%	7.8%	4.9%	0%	38.9%	10.8%
		% of total	0.7%	4.9%	1.5%	1.1%	0%	2.6%	10.8%
	Strongly Disagree	Count	0	6	2	2	0	0	10
		%within county	0%	8.8%	3.9%	3.3%	0%	0%	3.7%
		% of total	0%	2.2%	0.7%	0.7%	0%	0%	3.7%
TOTAL		Count	43	68	51	61	27	18	268
Public subsidy ensures students in ASAL areas benefit from education	Strongly Agree	Count	14	14	16	18	14	9	85
		%within county	32.6%	20.6%	31.4%	29.5%	51.9%	50%	31.7%
		% of total	5.2%	5.2%	6%	6.7%	5.2%	3.4%	31.7%
	Agree	Count	27	29	17	38	3	8	122
		%within county	62.8%	42.6%	33.3%	62.3%	11.1%	44.4%	45.5%
		% of total	10.1%	10.8%	6.3%	14.2%	1.1%	3%	45.5%
	Undecided	Count	2	14	10	1	0	1	28
		%within county	4.7%	20.6%	19.6%	1.6%	0%	5.6%	10.4%
		% of total	0.7%	5.2%	3.7%	0.4%	0%	0.4%	10.4%
	Disagree	Count	0	0	0	0	10	0	10
		%within county	0%	0%	0%	0%	37%	0%	3.7%
		% of total	0%	0%	0%	0%	3.7%	0%	3.7%
	Strongly Disagree	Count	0	0	0	0	4	19	23
		%within county	0%	0%	0%	0%	17.4%	82.6%	8.6%
		% of total	0%	0%	0%	0%	0%	0%	8.6%
TOTAL		Count	43	68	51	61	27	18	268
Public subsidy ensures both males and females and children with special needs receive education	Strongly Agree	Count	19	37	18	27	14	9	124
		%within county	44.2%	54.4%	35.3%	44.3%	51.9%	50%	46.3%
		% of total	7.1%	13.8%	6.7%	10.1%	5.2%	3.4%	46.3%
	Agree	Count	22	12	29	29	3	9	104
		%within county	51.2%	17.6%	56.9%	47.5%	11.1%	50%	38.8%
		% of total	8.2%	4.5%	10.8%	10.8%	1.1%	3.4%	38.8%
	Undecided	Count	2	13	2	3	0	0	20
		%within county	4.7%	19.1%	3.9%	4.9%	0%	0%	7.5%
		% of total	0.7%	4.9%	0.7%	1.1%	0%	0%	7.5%
	Disagree	Count	0	0	0	0	10	0	10
		%within county	0%	0%	0%	0%	37%	0%	3.7%
		% of total	0%	0%	0%	0%	3.7%	0%	3.7%
	Strongly Disagree	Count	0	6	2	2	0	0	10
		%within county	0%	8.8%	3.9%	3.3%	0%	0%	3.7%
		% of total	0%	2.2%	0.7%	0.7%	0%	0%	3.7%
TOTAL		County	43	68	51	61	27	18	268

Table 4.21 shows that majority of the respondents in all the counties either strongly agreed or agreed to the statement that public subsidy ensures all students from poor households get enrolled and retained in school. Majority in West Pokot (51.9%), Turkana (50%), Uasin-Gishu (45.9%), and Trans-Nzoia (39.7%) strongly agreed while majority in Nandi (45.1%) and Elgeiyo Marakwet (58.1%) agreed that there is a significant relationship between public subsidy on the one hand and enrolment and retention of students from poor households on the other.

On the influence of public subsidy in ASAL areas, majority of the respondents in all the counties acknowledged that the subsidy has indeed allowed students in ASAL areas to benefit from education. In Turkana county, a region described as purely ASAL, 50% of the respondents strongly agreed and another 44.4% agreed that the subsidy has ensured students in that county benefited from education. In the neighbouring West Pokot county, also described as partially ASAL, 51.9% strongly agreed that the subsidy has enabled students in ASAL areas to benefit from education. These findings agree with those of GOK (2005), World Bank (2008), UNICEF (2008) and Lewin (2008). All these studies acknowledge the need to give targeted support to disadvantaged groups and regions for them to also benefit from education.

On gender equity, the respondents in all the six counties were almost unanimous that the public subsidy has ensured both males and females and also children with special needs receive education in Trans Nzoia and Elgeiyo Marakwet counties for instance, majority of the respondents (54.4% and 51.2%) strongly agreed and agreed that the subsidy has

brought equity in terms of gender and also children with special needs. KIPPRA (2008) reinforces these by noting that the attainment of education-related MDGs and EFA goals together with Kenya's vision 2030 is dependent on how the government subsidizes education and how this subsidy would impact on equity.

4.3: Policy Implications of the Subsidy in View of Cost Effectiveness

In view of the important role played by the public subsidy in the attainment of educational goals and purposes, with the inherent challenges faced, the researcher in an interview, ask the respondents the policy implications of achieving relevant EFA and MDG goals by the 2015 in Kenya in the light of cost-effectiveness of the subsidies. Table 4.22 gives a summary of these implications.

Table 4.22: Policy Implications

Policy Implication	f	%
1. Since the ASAL areas have unique needs, the government should develop a comprehensive programme that targets their unique needs.	260	97
2. Because of the rising poverty level in the country the subsidy should be enhanced.	241	89.92
3. Future allocations to schools should factor in inflation.	233	86.94
4. To attain relevant EFA and MDG goals, the government should consider supporting low cost-private schools.	202	75.37
5. Relevant training programmes should be developed to support implementation of the subsidy	214	79.85
6. The subsidy should target raising the quality of education at the secondary level.	196	73.13
7. The policy on public subsidy need to be streamlined to reduce future implementational challenges	141	52.61
8. Since the subsidy is not as cost-effective in certain counties as others, its suggested that the FDSE subsidy should consider the unit cost in every school, not a uniform figure for all schools	132	49.25
9. FDSE subsidy should consider the orphaned and most vulnerable groups	129	48.13

From Table 4.22, it can be observed that majority of the respondents (97%) strongly suggest that the policy makers should consider the uniqueness of ASAL areas while allocating the subsidy. This is within the scope of MDGs and EFA goals. On the issue of rising poverty in the county (89.93%) of the respondents suggest that policy makers should consider this and the rising inflation (86.94%) if EFA goals are to be attained. The training programmes offered should be relevant (79.88) and the quality of education should be maintained (73.13%) of relevant MDG goals are to be achieved. Another 52.61% of the respondents argue that the policy on public subsidy needs to be streamlined to reduce future implementational challenges and make it more cost effective.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter is divided into three major sections, namely the summary, conclusions and recommendations. These divisions were informed by the purpose of the study and the results.

5.1 Summary

This section presents the summary of the research process starting with purpose problem statement objectives literature review, methodology data analysis and interpretation. The chapter also contains conclusion and recommendation. The purpose of the study was to assess the impact of public subsidy on determinants of educational attainment; enrolment, retention, transition and equity. This purpose was informed by the massive investment in education by the government since independence and yet there is still a growing regional disparities in the attainment of critical educational indices like enrolment, retention, transition and equity. The following objectives were used to address the intention of the purpose;

1. To evaluate specific public subsidy interventions undertaken in terms of implementational challenges and successes.
2. To determine the influence of inputs (subsidies) on the outcome (indices) of educational attainment.
3. To determine the policy implications of achieving relevant EFA and MDG goals by 2015 in Kenya in view of cost-effectiveness of subsidies.

The study reviewed literature on enrolment, retention transition and equity (dependent variables), public subsidy(independent variable), the relationship between public subsidy and the dependent variables and a summary of the literature. The research adopted mixed method design. The target population was secondary school principals and senior ministry of education officials. The sample was 270 secondary school principals from six North-Rift counties with a total secondary school population of 493. Data was collected using questionnaires for secondary school principals and structured interviews for senior ministry officials. The analysis involved descriptive and inferential statistics namely; ANOVA and paired sample t-test. Data was presented in form of tables, figures and charts. The analysis of data revealed the following; First, the specific public subsidy interventions included those touching on school infrastructure and processes and the implementational challenges included logistical, technical, political and financial related challenges. These findings relate to the first objective of this study. In relation to the influence of public subsidy on the outcome of educational attainment, the analyzed data revealed that there is a positive relationship between these inputs and outcomes. The last objective of this study was on policy implications for achieving relevant global imperatives of EFA and MDG goals. Data revealed that economic, political, technical and social considerations should be made by policy makers in order to streamline the public subsidization programme to meet its goal of enhancing the attainment of educational outcomes in Kenya.

5.2 Conclusion

Based on the findings presented and discussed above, the following conclusions are made: first, there is a relationship between educational attainment and provision of public

subsidy. This implies that any change in the provision of public subsidy would have a definite effect on educational attainment.

Secondly, there is a relationship between public subsidy interventions on classrooms, toilets, sanitation facilities, teachers' furniture, desks and chairs and number of school buildings in all the five counties except the ASAL Turkana county where the subsidy seem to have had less influence on the intervention targets. However, in all the six counties, the subsidy positively influenced enrolment, KCSE performance, school supplies and learning achievement.

Thirdly, there is a relationship between the FDSE subsidies and outcomes of educational attainment viz a viz enrolment, retention, transition and equity. However, in the ASAL Turkana County, the subsidy has had minimal impact on equity.

5.3 Recommendations

1. To attain the EFA and MDG goals by the year 2015 in Kenya, it is recommended that the government should streamline the FDSE policy to be sensitive to the needs of ASAL areas and other most-vulnerable groups in the society.

2. Since it has been established that FDSE subsidy influences indices of educational attainment, FDSE subsidy allocation by the government should be cognizant of rising inflation that is accompanied by the rising cost of education.
3. The government should develop a comprehensive training programme for all direct-line service provides in education (teachers, principals, education officers,

QUASOs, PDEs etc) to equip them with implementational skills to aid in the realization of FDSE subsidy goals.

5.4 Suggestion For Further Research

There are important issues that this study was unable to address due to its scope. In view of this, the following are recommended for further research;

1. A similar study be conducted on the effect public subsidy on the enrolment and retention of the most vulnerable groups in the society.
2. A comparative study on the effect of public subsidy on enrolment and retention between the urban and the rural settings

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APPENDICES

Appendix I: Interview Schedule For Head Teachers

Interviewer: _____ Date: _____

1. School_____

District:_____

2. Name of Head Teacher: _____ Sex: Male/Female:

1. The following statements describe the situation of your school in terms of buildings and infrastructure before 2008. Use the key: 5-strongly agree (SA) 4-agree (A) 3-undecided (U) 2-disagree (D) and 1-strongly disagree (SD), to describe your school.

STATEMENT	**5**	**4**	**3**	**2**	**1**
Before 2008 there were adequate number of classrooms than now					
Before 2008 there were adequate number of toilets than now					
Before 2008 there were adequate number of sanitation facilities than now					
Before 2008 teachers' furniture was adequate					
Before 2008 there were adequate number of desks and chairs					
Before 2008 there were adequate number of buildings in school					

2. How did the school benefit in terms of support from either the government or N.G.Os or the local community following Free Day Secondary Education (FDSE)? List all interventions. Explain type and amount of support. ……..

……..

……..

……..

3. Still on the support mentioned in 2 above use the key 5 SA,4 A, 3 U, 2 D, and 1 SD, to describe the effect of such support on enrolment and student performance in KCSE?

STATEMENT	5	4	3	2	1
The support raised student enrolment					
The support improved KCSE performance					
The support did not have any effect on enrolment					
The support did not have any effect on KCSE performance					
The support lowered student enrolment					
The support negatively influenced KCSE performance					

4. Using the key provided in question 3 above, describe the support your school received prior to FDSE and after.

STATEMENT	5	4	3	2	1
Before FDSE my school had not receive any support from the government or any other agency					
FDSE led to increase in school resources					
School supplies was improved by FDSE					
Many organisation supported the government after FDSE.					
My school got more support after FDSE than before FDSE					

5. Still use the key provided in question three (3) above to describe the effect of FDSE on learning achievement.

FDSE has a positive effect on learning achievement	5	4	3	2	1
FDSE has no effect on learning achievement					
FDSE has a negative effect on learning achievement					
FDSE has a negative effect on learning achievement					
There is no relationship between FDSE and learning achievement					

7. Take a position/stand on the following statements. The key is 1**. Strongly Agree. 2. Agree. 3. Undecided 4. Disagree 5. Strongly Disagree**

	Statement	**1**	**2**	**3**	**4**	**5**
	A. Enrolment					
1.	Public subsidy increases class enrolment in secondary schools					

2.	Government subsidy doesn't affect in any way enrolment.					
3.	There is need to streamline public subsidized programme in the country in terms of enrolment					
	B. Retention					
1.	Public subsidy increases student retention in secondary schools					
2.	Government subsidy doesn't affect in any way student retention in secondary schools.					
3.	There is need to streamline public subsidization programme in the country to bring the desired income in terms of student retention.					
	C. Transition					
1.	Public subsidy increases transition rate from primary to secondary schools					
2.	Government subsidy doesn't affect in any way student transition from grade to grade and from level to level					
3.	There is need to streamline public subsidization programme in the country to bring the desired outcome in terms of student transition					
	D. Equity					
1.	Public subsidy ensures all students from poor households get enrolled and retained in school					
2.	Public subsidy ensures students in ASAL areas benefit in education.					
3.	Public subsidy ensures both males and female and children with special needs receive education					

A. SCHOOL STRUCTURE AND INFRASTRUCTURE

Item	**Before FDSE Intervention**	**After FDSE Intervention**
Number of Buildings		
Number of Classrooms		
School Toilets Water & Sanitation Facilities		
State of Buildings		
Teachers' Furniture-adequacy • None • One set/ Teacher		
Pupils/Furniture ratio - Number of Desks - Number of Chairs		
Type of Civil Works - Rehabilitation - Reconstruction - Construction		

B: FDSE Project Intervention

1. What year did the FDSE project begin intervention in this school? _____

2. What specific projects were implemented since 2008? (*List all)*

Number	Project Title	Estimated Funding (Le)	Current Status

C: Parent/Teacher Association

1. How functional is school PTA? (a) Very functional

(b) Less Functional

(c) Not Functional at all

Use the Key 5 – Strongly agree (SA) 4 – Agree (A) 3 – Undecided (U 2 – Disagree (D)

And 1 – Strongly Disagree (SD) to answer the question below;

2. What decisions did the PTA participate in since FDSE

ITEM	5	4	3	2	1
Staff hire/staff transfer					
Staff Housing					
Staff Discipline					
School Budget					
Curriculum Matters					
Infrastructure Development					
Labor Support					
Others (specify)					

D: Pedagogical support

In the past three years, how many in-service training sessions have you attended (use the table below).

Organizer	Number of Sessions	Total Number of hours
Ministry of Education (MOE)		
D.E.Os office		
Inspectorate		
Head teachers/Schools		
NGOs (specify)		
PTA		
Any other (specify)		

Appendix ii: Interview Schedule for Senior Ministry Officials

1. Official status ……

2. years of experience in this capacity…….

3. your views on FDSE

……

……

……

……

4. What are the critical success indicators of FDSE?

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……

5. What are the major Implementational challenges?

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……

……

6. Which Policies supported the FDSE programme?

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……

……

7. Which extra policies are required to make the programme more successful?

……

……

……

8. What is the effect of FDSE in your view on:-

(a) Enrolment

……

……

……

(b) Retention

……

……

……

(c) Transition

……

……

……

(d) Equity

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……

……

……

9. Among the key players in the Implementation of FDSE who require training?

……

……

……

……

10. What are the policy implications for attaining EFA and MDGs in the light of public subsidy?

……

……

……

……

Appendix iii: School Situation in terms of Infrastructure and Furniture Before the Subsidy in the Six Counties

Statement	Response		County						
			Elgeiyo Marakwet	Trans - Nzoia	Nandi	Uasin-Gishu	West Pokot	Turkana	Total
Before 2008, there were adequate number of classrooms than now	Strongly agree	Count	1	3	2	2	0	8	16
		%within county of respondent	2.3%	4.4%	3.9%	3.3%	0%	44.4%	6.0%
		% of total	4%	1.1%	0.7%	0.7%	0%	3.0%	6.0%
	Agree	Count	1	12	9	5	0	1	28
		%within county of respondent	23%	17.6%	17.6%	8.2%	0%	5.6%	10.4%
		% of total	0.4%	4.5%	3.4%	1.9%	0%	0.4%	10.4%
	Disagree	Count	33	18	14	31	4	2	102
		%within county of respondent	76.7%	26.5%	27.5%	50.8%	14.8%	11.1%	38.1%
		% of total	12.3%	6.7%	5.2%	11.6%	1.5%	0.7%	38.1%
	Strongly Disagree	Count	8	35	26	23	23	7	122
		%within county of respondent	18.6%	51.5%	51.0%	37.7%	85.2%	38.9%	45.5%
		% of total	3.0%	13.1%	9.7%	8.6%	8.6%	2.6%	45.5%
TOTAL		Count	43	68	51	61	27	18	268
Before 2008, there were adequate number of toilets than now	Strongly agree	Count	1	3	2	2	0	8	16
		%within county of respondent	2.3%	4.4%	3.9%	3.3%	0%	44.4%	6.0%
		% of total	0.4%	1.1%	0.7%	0.7%	0%	3.0%	6.0%
	Agree	Count	0	9	2	3	0	0	14
		%within county of respondent	0%	13.2%	3.9%	4.9%	0%	0%	5.2%
		% of total	0%	3.4%	0.7%	1.1%	0%	0%	5.2%
	Undecided	Count	0	6	0	4	0	0	10
		%within county of respondent	0%	8.8%	0%	6.6%	0%	0%	3.7%
		% of total	0%	2.2%	0%	1.5%	0%	0%	3.7%
	Disagree	Count	36	9	12	33	7	2	99
		%within county	83.7%	13.2%	23.5%	54.1%	25.9%	11.1%	36.9%
		% of total	13.4%	3.4%	4.5%	12.3%	2.6%	0.7%	36.9%
TOTAL		Count	43	68	51	61	27	18	268
Before 2008, there were adequate number of sanitation facilities than now	Strongly Agree	Count	1	3	2	2	0	8	16
		%within county	2.3%	4.4%	3.9%	3.3%	0%	44.4%	6.0%
		% of total	0.4%	1.1%	0.7%	0.7%	0%	3.0%	6.0%
	Agree	Count	0	15	2	7	0	0	24
		%within county	0%	22.1%	3.9%	11.5%	0%	0%	9.0%
		% of total	0%	5.6%	0.7%	2.6%	0%	0%	9.0%
	Disagree	Count	35	20	22	32	12	3	124
		%within county	81.4%	29.4%	43.1%	52.5%	44.4%	16.7%	46.3%
		% of total	13.1%	7.5%	8.2%	11.9%	4.5%	1.1%	43.3%
	Strongly Disagree	Count	7	30	25	20	15	7	104
		%within county	16.3%	44.1%	49%	32.8%	55.6%	38.9%	38.8%
		% of total	2.6%	11.2%	9.3%	7.5%	5.6%	2.6%	38.8%
TOTAL		Count	43	68	51	61	27	18	268
Before 2008, teachers' furniture were adequate	Strongly agree	Count	1	3	2	2	0	8	16
		%within county	2.3%	4.4%	3.9%	3.3%	0%	44.4%	6.0%
		% of total	0.4%	1.1%	0.7%	0.7%	0%	3.0%	6.0%
	Agree	Count	0	6	2	4	0	7	19
		%within county	0%	8.8%	3.9%	6.6%	0%	38.9%	7.1%
		% of total	0%	2.2%	0.7%	1.5%	0%	2.6%	7.1%
	Undecided	Count	2	11	10	4	0	1	28
		%within county	4.7%	16.2%	19.6%	6.6%	0%	5.6%	10.4%
		% of total	0.7%	4.1%	3.7%	1.5%	0%	0.4%	10.4%
	Disagree	Count	29	20	12	34	15	2	112
		%within county	67.4%	29.4%	23.5%	55.7%	55.6%	11.1%	41.8%
		% of total	10.8%	7.5%	4.5%	12.7%	5.6%	0.7%	41.8%

	Strongly Disagree	Count	11	28	25	17	12	0	93
		%within county	25.6%	41.2%	49.0%	27.9%	44.4%	0%	34.7%
		% of total	4.1%	10.4%	9.3%	6.3%	4.5%	0%	34.7%
TOTAL		Count	43	68	51	61	27	18	268
Before 2008, there were adequate number of desks and chairs	Strongly Agree	Count	1	3	2	2	0	8	16
		%within county	2.3%	4.4%	3.9%	3.3%	0%	44.4%	6.0%
		% of total	0.4%	1.1%	0.7%	0.7%	0%	3.0%	6.0%
	Agree	Count	0	6	3	4	0	0	13
		%within county	0%	8.8%	5.9%	6.6%	0%	0%	4.9%
		% of total	0%	2.2%	1.1%	1.5%	0%	0%	4.9%
	Disagree	Count	32	32	21	30	0	2	117
		%within county	74.4%	57.1%	41.2%	49.2%	0%	11.1%	43.7%
		% of total	11.9%	11.9%	7.8%	11.2%	0%	0.7%	43.7%
TOTAL		Count	43	68	51	61	27	18	268
Before 2008, there were adequate number of buildings in schools	Strongly Agree	Count	4	3	2	4	4	9	26
		%within county	9.3%	4.4%	3.9%	6.6%	14.8%	50%	9.7%
		% of total	1.5%	1.1%	0.7%	1.5%	1.5%	3.4%	9.7%
	Agree	Count	0	6	0	4	0	0	10
		%within county	0%	8.8%	0%	6.6%	0%	0%	3.7%
		% of total	0%	2.2%	0%	1.5%	0%	0%	3.7%
	Disagree	Count	28	24	23	30	8	2	115
		%within county	65.1%	35.3%	45.1%	49.2%	29.6%	11.1%	42.9%
		% of total	10.4%	9.0%	8.6%	11.2%	3.0%	0.7%	42.9%
	Strongly Disagree	Count	11	35	26	23	15	7	117
		%within county	25.6%	51.5%	51.0%	37.7%	55.6%	38.9%	43.7%
		% of total	4.1%	13.1%	9.7%	8.6%	5.6%	2.6%	43.7%
TOTAL		Count	43	68	51	61	27	18	218

Appendix iv: Summary Table On The School Situation Before The Subsidy

STATEMENT	COUNTY	MEAN	STD. DEV.
Before 2008, there were adequate number of classrooms than now	Elgeiyo marakwet	4.0698	.70357
	Trans-Nzoia	4.0294	1.28098
	Nandi	4.0392	1.26429
	Uasin-Gishu	4.1148	1.00164
	West Pokot	4.8519	.36201
	Turkana	2.9444	1.92422
Before 2008, there were adequate number of toilets than now	Elgeiyo marakwet	4.0698	.59343
	Trans-Nzoia	4.1176	1.27583
	Nandi	4.4902	.98737
	Uasin-Gishu	4.0492	.93855
	West Pokot	4.7407	.44658
	Turkana	3.1111	1.96705
Before 2008, there were adequate number of sanitation facilities than now	Elgeiyo marakwet	4.0930	.60999
	Trans-Nzoia	3.8676	1.31472
	Nandi	4.2941	.96528
	Uasin-Gishu	4.0000	1.04881
	West Pokot	4.5556	.50637
	Turkana	3.0556	1.92422
Before 2008, teachers' furniture were adequate	Elgeiyo marakwet	4.1395	.70984
	Trans-Nzoia	3.9412	1.15749
	Nandi	4.0980	1.10009
	Uasin-Gishu	3.9836	.95728
	West Pokot	4.4444	.50637
	Turkana	1.8333	.98518
Before 2008, there were adequate number of desks and chair	Elgeiyo marakwet	4.1628	.65211
	Trans-Nzoia	4.0882	1.07530
	Nandi	4.2549	1.01672
	Uasin-Gishu	4.1803	.97482
	West Pokot	5.0000	.00000
	Turkana	3.1111	1.96705
Before 2008, there were adequate number of buildings in school	Elgeiyo marakwet	3.9767	1.05759
	Trans-Nzoia	4.2059	1.11381
	Nandi	4.3922	.85037
	Uasin-Gishu	4.0492	1.11693
	West Pokot	4.1111	1.39596
	Turkana	2.8889	1.96705

Appendix v: Type of Support Schools Received Prior to and after FDSE

Statement	Response		County

			Elgeiyo Marakwet	Trans-Nzoia	Nandi	Uasin-Gishu	West Pokot	Turkana	Total
Before FDSE my school had not received any support from the government or any other agency	Strongly agree	Count	15	29	18	15	2	7	86
		%within county	34.9%	42.6%	35.3%	24.6%	7.4%	38.9%	32.1%
		% of total	5.6%	10.8%	6.7%	5.6%	0.7%	2.6%	32.1%
	Agree	Count	3	0	0	2	12	1	18
		%within county	7%	0%	0%	3.3%	44.4%	5.6%	6.7%
		% of total	1.1%	0%	0%	0.7%	4.5%	0.4%	6.7%
	Undecided	Count	4	6	2	4	0	0	16
		%within county	9.3%	8.8%	3.9%	6.6%	0%	0%	6.0%
		% of total	1.5%	2.2%	0.7%	1.5%	0%	0%	6.0%
	Disagree	Count	20	33	31	37	13	10	144
		%within county	46.5%	48.5%	60.8%	60.7%	48.1%	55.6%	53.7%
		% of total	7.5%	12.3%	11.6%	13.8%	4.9%	3.7%	53.7%
	Strongly Disagree	Count	1	0	0	3	0	0	4
		%within county of respondent	2.3%	0%	0%	4.9%	0%	0%	1.5%
		% of total	0.4%	0%	0%	1.1%	0%	0%	1.5%
TOTAL		Count	43	68	51	61	27	18	268
FDSE led to increase in school resources	Strongly agree	Count	9	36	37	22	20	8	132
		%within county	20.9%	52.9%	72.5%	36.1%	74.1%	44.4%	49.3%
		% of total	3.4%	13.4%	13.8%	8.2%	7.5%	3.0%	49.3%
	Agree	Count	27	26	11	29	7	2	102
		%within county	62.8%	38.2%	21.6%	47.5%	25.9%	11.1%	38.1%
		% of total	10.1%	9.75	4.1%	10.8%	2.6%	0.7%	38.1%
	Disagree	Count	7	4	3	9	0	8	31
		%within county	16.3%	5.9%	5.9%	14.8%	0%	44.4%	11.6%
		% of total	2.6%	1.5%	1.1%	3.4%	0%	3.0%	11.6%
	Strongly Disagree	Count	0	2	0	1	0	0	3
		%within county	0%	2.9%	0%	1.6%	0%	0%	1.1%
		% of total	0%	0.7%	0%	0.4%	0%	0%	1.1%
TOTAL		Count	43	68	51	61	27	18	268
School supplies was improved by FDSE	Strongly Agree	Count	22	55	39	29	20	16	181
		%within county	51.2%	80.9%	76.5%	45.5%	74.1%	88.9%	67.5%
		% of total	8.2%	20.5%	14.6%	10.8%	7.5%	6.0%	67.5%
	Agree	Count	20	11	9	28	7	2	77
		%within county	46.5%	16.2%	17.6%	45.9%	25.9%	11.1%	28.7%
		% of total	7.5%	4.1%	3.4%	10.4%	2.6%	0.7%	28.7%
	Strongly Disagree	Count	1	2	3	4	0	0	10
		%within county	2.3%	2.9%	5.9%	6.6%	0%	0%	3.7%
		% of total	0.4%	0.7%	1.1%	1.5%	0%	0%	3.7%
TOTAL		Count	43	68	51	61	27	18	268
Many organizations supported the government after FDSE	Strongly agree	Count	2	3	6	6	18	15	60
		%within county	4.7%	4.4%	31.4%	9.8%	66.7%	83.3%	22.4%
		% of total	0.7%	1.1%	6.0%	2.2%	6.7%	5.6%	22.4%
	Agree	Count	31	21	20	23	7	3	105
		%within county	72.1%	30.9%	39.2%	37.7%	25.9%	16.7%	39.2%
		% of total	16.6%	7.8%	7.5%	8.6%	2.6%	1.1%	39.2%
	Undecided	Count	1	25	11	10	0	0	47
		%within county	2.3%	36.8%	21.6%	16.4%	0%	0%	17.5%
		% of total	0.4%	9.3%	4.1%	3.7%	0%	0%	17.5%
	Disagree	Count	1	11	1	11	0	0	17
		%within county	2.3%	16.2%	2.0%	6.6%	0%	0%	6.3%
		% of total	0.4%	4.1%	0.4%	1.5%	0%	0%	6.3%
	Strongly Disagree	Count	8	8	3	18	2	0	39
		%within county	18.6%	11.8%	5.9%	29.5%	7.4%	0%	14.6%
		% of total	3%	3%	1.1%	6.7%	0.7%	0%	14.6%
TOTAL		Count	43	68	51	61	27	18	268
My school got more support after FDSE than before	Strongly agree	Count	13	40	21	26	20	7	127
		%within county	30.2%	58.8%	41.2%	42.6%	74.1%	38.9%	47.4%
		% of total	4.9%	14.9%	7.8%	9.7%	7.5%	2.6%	47.4%
	Agree	Count	26	11	18	27	7	3	92
		%within county	60.5%	16.2%	35.3%	44.3%	25.9%	16.7%	34.3%
		% of total	9.7%	4.1%	6.7%	10.1%	2.6%	1.1%	34.3%
	Disagree	Count	4	5	2	4	0	8	23

		%within county	9.3%	7.4%	3.9%	6.6%	0%	44.4%	8.6%
		% of total	1.5%	1.9%	0.7%	1.5%	0%	3.0%	8.6%
	Strongly Disagree	Count	0	12	10	4	0	0	26
		%within county	0%	17.6%	19.6%	6.6%	0%	0%	9.7%
		% of total	0%	4.5%	3.7%	1.5%	0%	0%	9.7%
TOTAL		Count	43	68	51	61	27	18	268

Appendix vi: Influence Of FDSE Subsidy On Enrolment Per County

Statement	**Response**		**County**						
			Elgeiyo Marakwet	**Trans-Nzoia**	**Nandi**	**Uasin-Gishu**	**West Pokot**	**Turkana**	**Total**
Public subsidy increases class	Strongly agree	Count	16	41	38	28	20	16	159

enrolment in secondary schools									
		%within county	37.2%	60.3%	74.5%	45.9%	74.1%	88.9%	59.3%
		% of total	6%	15.3%	14.2%	10.4%	7.5%	6%	59.3%
	Agree	Count	21	11	12	31	7	2	84
		%within county	48.8%	16.2%	23.5%	50.8%	25.9%	11.1%	31.3%
		% of total	7.8%	4.1%	4.5%	11.6%	2.6%	0.7%	31.3%
	Disagree	Count	6	14	1	1	0	0	22
		%within county	14%	20.6%	2%	1.6%	0%	0%	8.2%
		% of total	2.2%	5.2%	0.4%	0.4%	0%	0%	8.2%
	Strongly Disagree	Count	0	2	0	1	0	0	3
		%within county	0%	2.9%	0%	1.6%	0%	0%	1.1%
		% of total	0%	0.7%	0%	0.4%	0%	0%	1.1%
TOTAL			43	68	51	61	27	18	268
Government subsidy doesn't affect in any way enrolment	Strongly agree	Count	4	22	13	11	0	0	50
		%within county	9.3%	32.4%	25.5%	18.0%	0%	0%	18.7%
		% of total	1.5%	8.2%	4.9%	4.1%	0%	0%	18.7%
	Agree	Count	3	0	0	6	0	0	9
		%within county	7%	0%	0%	9.8%	0%	0%	3.4%
		% of total	1.1%	0%	0%	2.2%	0%	0%	3.4%
	Undecided	Count	0	0	2	0	0	7	9
		%within county	0%	0%	3.9%	0%	0%	38.9%	3.4%
		% of total	0%	0%	0.7%	0%	0%	2.6%	3.4%
	Disagree	Count	20	6	8	22	7	2	65
		%within county	46.5%	8.8%	15.7%	36.1%	25.9%	11.1%	24.3%
		% of total	7.5%	2.2%	3.0%	8.2%	2.6%	0.7%	24.3%
	Strongly Disagree	Count	16	40	28	22	20	9	135
		%within county	37.2%	58.8%	54.9%	36.1%	74.1%	50%	50.4%
		% of total	6%	14.9%	10.4%	8.2%	7.5%	3.4%	50.4%
TOTAL		Count	43	68	51	61	27	18	268
There is need to streamline public subsidization programme in the county in terms of enrolment	Strongly Agree	Count	12	20	12	15	14	16	89
		%within county	27.9%	29.4%	23.5%	24.6%	51.9%	88.9%	33.2%
		% of total	4.5%	7.5%	4.5%	5.6%	5.2%	6.0%	33.2%
	Agree	Count	22	27	13	37	13	1	113
		%within county	51.2%	39.7%	25.5%	60.7%	48.1%	5.6%	42.2%
		% of total	8.2%	10.1%	4.9%	13.8%	4.9%	0.4%	42.2%
	Disagree	Count	8	11	10	2	0	1	32
		%within county	18.6%	16.2%	19.6%	3.3%	0%	5.6%	11.9%

		% of total	3%	4.1%	3.7%	0.7%	0%	0.4%	11.9%
	Strongly Disagree	Count	1	10	16	7	0	0	34
		%within county	2.3%	14.7%	31.4%	11.5%	0%	0%	12.7%
		% of total	0.4%	3.7%	6%	2.6%	0%	0%	12.7%
TOTALS		Count	43	68	51	61	27	18	268

Appendix vii: Influence of Government Subsidy on Retention Per County

Statement	**Response**		**County**						
			Elgeiyo Marakwet	Trans-Nzoia	Nandi	Uasin-Gishu	West Pokot	Turkana	Total
Public subsidy increases student retention in secondary	Strongly Agree	Count	15	43	31	27	12	9	137

schools									
		%within county	34.9%	63.2%	60.8%	44.3%	44.4%	50%	51.1%
		% of total	5.6%	16%	11.6%	10.1%	4.5%	3.4%	51.1%
	Agree	Count	27	20	12	25	15	2	101
		%within county	62.8%	29.4%	23.5%	41%	55.6%	11.1%	37.7%
		% of total	10.1%	7.5%	4.5%	9.3%	5.6%	0.7%	37.7%
	Undecided	Count	0	5	6	2	0	0	13
		%within county	0%	7.4%	11.8%	3.3%	0%	0%	4.9%
		% of total	0%	1.9%	2.2%	0.7%	0%	0%	4.9%
	Disagree	Count	1	0	0	7	0	0	8
		%within county	2.3%	0%	0%	11.5%	0%	0%	3%
		% of total	0.4%	0%	0%	2.6%	0%	0%	3%
	Strongly Disagree	Count	0	0	2	0	0	7	9
		%within county	0%	0%	3.9%	0%	0%	38.9%	3.4%
		% of total	0%	0%	0.7%	0%	0%	2.6%	3.4%
TOTAL		Count	43	68	51	61	27	18	268
Government subsidy doesn't affect in any way student retention	Strongly Agree	Count	3	26	13	13	0	0	55
		%within county	7%	38.2%	25.5%	21.3%	0%	0%	20.5%
		% of total	1.1%	9.7%	4.9%	4.9%	0%	0%	20.5%
	Agree	Count	9	3	4	8	0	0	24
		%within county	20.9%	4.4%	7.8%	13.1%	0%	0%	9%
		% of total	3.4%	1.1%	1.5%	3%	0%	0%	9%
	Undecided	Count	1	0	2	7	0	7	17
		%within county	2.3%	0%	3.9%	11.5%	0%	38.9%	6.3%

		% of total	0.4%	0%	0.7%	2.6%	0%	2.6%	6.3%
	Disagree	Count	20	14	18	16	15	2	85
		%within county	46.5%	20.6%	35.3%	26.2%	55.6%	11.1%	31.7%
		% of total	7.5%	5.2%	6.7%	6%	5.6%	0.7%	31.7%
	Strongly Disagree	Count	10	25	14	17	12	9	87
		%within county	23.3%	36.8%	27.5%	27.9%	44.4%	50%	32.5%
		% of total	3.7%	9.3%	5.2%	6.3%	4.5%	3.4%	32.5%
TOTAL		Count	43	68	51	61	27	18	268
There is need to streamline public subsidization programme to bring out the desired outcome in terms of student retention	Strongly Agree	Count	10	32	17	22	12	15	108
		%within county	23.3%	47.1%	33.3%	36.1%	44.4%	83.3%	40.3%
		% of total	3.7%	11.9%	6.3%	8.2%	4.5%	5.6%	40.3%
	Agree	Count	18	11	15	17	15	2	78
		%within county	41.9%	16.2%	29.4%	27.9%	55.6%	11.1%	29.1%
		% of total	6.7%	4.1%	5.6%	6.3%	5.6%	0.7%	26.1%
	Undecided	Count	4	8	9	4	0	1	26
		%within county	9.3%	11.8%	17.6%	6.6%	0%	5.6%	9.7%
		% of total	1.5%	3%	3.4%	1.5%	0%	0.4%	9.7%
	Disagree	Count	9	7	3	9	0	0	28
		%within county	20.9%	10.3%	5.9%	14.8%	0%	0%	10.4%
		% of total	3.4%	2.6%	1.1%	3.4%	0%	0%	10.4%
	Strongl	Count	2	10	7	9	0	0	28

	y Disagree							
		%within county	4.7%	14.7%	13.7%	14.8%	0%	0%	10.4%
		% of total	0.7%	3.7%	2.6%	3.4%	0%	0%	10.4%
TOTAL		County	43	68	51	61	27	18	268

Appendix viii: Influence of Government Subsidy on Transition Per County

Statement	Response		County						
			Elgeiyo Marakwet	Trans-Nzoia	Nandi	Uasin-Gishu	West Pokot	Turkana	Total
Public subsidy increases transition rate from primary level to secondary level	Strongly Agree	Count	15	43	15	29	20	8	130
		%within county	34.9%	63.2%	24.4%	47.5%	74.1%	44.4%	48.5%
		% of total	5.6%	16%	5.6%	0.8%	7.5%	3%	48.5%
	Agree	Count	24	23	34	23	7	3	114
		%within county	55.8%	33.8%	66.7%	37.7%	25.9%	16.7%	42.5%
		% of total	9%	8.6%	12.7%	8.6%	2.6%	1.1%	42.5%
	Disagree	Count	4	2	0	9	0	0	15
		%within county	9.3%	2.9%	0%	14.8%	0%	0%	5.6%
TOTAL		% of total	1.5%	0.7%	0%	3.4%	0%	0%	5.6%
	Strongly Disagree	Count	0	0	2	0	0	7	9
		%within county	0%	0%	3.9%	0%	0%	38.9%	3.4%
		% of total	0%	0%	0.7%	0%	0%	2.6%	3.4%
		Count	43	68	51	61	27	18	268
Government subsidy doesn't affect in any way student transition from grade to grade and from level to level	Strongly Agree	Count	3	27	7	15	0	0	52
		%within county	7%	39.7%	3.7%	24.6%	0%	0%	19.4%
		% of total	1.1%	10.1%	2.6%	5.6%	0%	0%	19.4%
	Agree	Count	12	8	10	11	0	0	41
		%within county	27.9%	11.8%	19.6%	18%	0%	0%	15.3%
		% of total	4.5%	3%	3.7%	4.1%	0%	0%	15.3%
	Undecided	Count	1	0	10	10	0	8	29
		%within county	2.3%	0%	19.6%	16.4%	0%	44.4%	10.8%
		% of total	0.4%	0%	3.7%	3.7%	0%	3%	10.8%
TOTAL	Disagree	Count	15	12	18	10	15	2	72
		%within county	34.9%	17.6%	35.3%	16.4%	55.6%	11.1%	26.9%
		% of total	5.6%	4.5%	6.7%	3.7%	5.6%	0.7%	26.9%
	Strongly Disagree	Count	12	21	6	15	12	8	74
		%within county	27.9%	30.9%	11.8%	24.6%	44.4%	44.4%	27.6%
		% of total	4.5%	7.8%	2.2%	5.6%	4.5%	3%	27.6%

		Count	43	68	51	61	27	18	268
There is need to streamline public subsidization programme to bring out the desired outcome in terms of student transition	Strongly Agree	Count	12	31	23	21	10	8	108
		%within county	27.9%	45.6 %	45.1 %	34.4 %	37%	44.4%	39.2 %
		% of total	4.5%	11.6 %	8.6 %	7.8%	3.7 %	3%	39.2 %
	Agree	Count	19	15	11	24	17	2	88
		%within county	44.2%	22.1 %	21.6 %	39.3 %	63%	11.1%	32.8 %
		% of total	7.1%	5.^%	4.1 %	9%	6.3 %	0.7%	32.8 %
	Disagree	Count	10	13	13	7	0	1	44
		%within county	23.3%	19.1 %	25.5 %	11.5 %	0%	5.6%	16.4 %
		% of total	3.7%	4.9 %	4.9 %	2.6%	0%	0.4%	16.4 %
	Strongly Disagree	Count	2	9	4	9	0	7	31
		%within county	4.7%	13.2 %	7.8 %	14.8 %	0%	38.9%	11.6 %
		% of total	0.7%	3.4 %	1.5 %	3.4%	0%	2.6%	11.6 %
		County	43	68	51	61	27	18	268