

Relationship between Education Financing and Human Capital Investment: a survey of Public secondary schools in Kimilili-Bungoma Sub- County

Boaz Wamalwa Khaemba

Department of Commerce and Economics Studies
Jomo Kenyatta University of Agriculture and Technology, Kenya
Kitale CBD Campus, P.O. Box 3347- 30200, Kitale, Kenya
Email- wboaz@yahoo.com

Dr. Maurice Sakwa (PhD)

Department of Commerce and Economics Studies
Jomo Kenyatta University of Agriculture and Technology, Kenya
P.O. Box 62000, 00200, Nairobi, Kenya

Lewis Wakoli Wachilonga (PhD Student)

Department Of Commerce and Economics Studies
Jomo Kenyatta University of Agriculture and Technology, Kenya
Kitale CBD Campus, P.O. Box 3347- 30200, Kitale, Kenya

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Abstract

The purpose of this study was to investigate the relationship between Education financing and human capital investment in Kimilili-Bungoma sub- County. The objectives of the study were: To establish the performance of students who got public financing; to establish the performance of students who got private financing; to establish the performance of students who got religious financing; to establish the challenges to financing education on human capital investment. The study was guided by the Human Capital theory. The study focused on the financing options available for human capital investment. The secondary school level of education was studied as it has been discovered that middle level countries benefit most from this level as it is mainly knowledge base which is a requirement for attainment of skills at a higher level. Kenya hopes to become a middle level country by the year 2030. Improving the quality and access to secondary education would be a pre-requisite to achieving this objective. The descriptive survey design was adopted, which enabled the researcher collect data from a wider area in a short time. The study population constituted 20 secondary schools. All the 20 secondary schools were studied because the number was small and manageable. Questionnaires were used to collect data which was analyzed descriptively using measures of central tendencies. Correlation analysis was used to determine the relationship between education financing and human capital investment. Analyzed data was presented in form of frequency diagrams and tables. The study revealed that private funding had the highest

contribution to human capital investment in secondary schools compared to other forms of funding. The study also revealed that voluntary organizations contributed the least to human capital investment and their contribution was largely inadequate and lacking altogether in some schools. The study recommended that the government should continue to support secondary education through timely remittance of funds and employment of teachers to realize increased human capital investment.

Keywords: Education, Financing, Human Capital, Investment, Performance

1.0 Statement of the problem

Secondary education provides a link between basic education and the world at work on one hand, and further training on the other. It is an important sub-sector of education in the preparation of human capital for development and provision of life opportunities. Despite the importance of secondary education in the process of development, the cost of provision and expansion of quality have been escalating while resources for secondary education have been dwindling. Secondary education has been transformed from an elite system to a mass system and has been faced with many challenges. First, with the introduction of free primary education, the number of pupils completing primary school is bound to increase in the near future. Second, doing nothing on transition rates into and access to secondary education may have adverse consequences for primary completion rates, as students lose hope of joining secondary school. Third, failure to expand secondary education will compromise human capital accumulation and therefore jeopardize economic recovery and development. Forth, in Kenya, economic recovery and growth will prove elusive with small proportions of the labour force completing secondary education. (Onsonu, et al, 2006).

The accelerated costs of expanding educational system compete with other sectors of respective societies for finite resources. As mass primary education is attained, expansion shifts to secondary and tertiary levels as they too are gradually transformed into mass systems. This pressure ultimately create dilemma for governments who must realistically assess and determine spending priorities for scarce economic resources (Oluniyan & Okemakinde, 2008). Lack of adequate financing, institutional structures, and effective delivery systems have been associated with low participation rates observed in developing countries (Gropello, 2006) . Following the World Education Forum (Dakar, 2000) and the adoption of the Education for All (EFA) and the Millennium Development Goals (MDGs), primary enrolment has been increasing rapidly in many African countries.

In 2002 and 2004, secondary enrolment in Sub-Saharan Africa grew by 27% (UNESCO, 2006). If transition rates between primary and secondary education remain unchanged and all that start primary school complete it, enrolments would more than triple by 2015 (Lewin, 2008). Few countries have policies that will allow them to absorb so many new students. The growth in the number of teachers has consistently lagged behind the growth in the number of students. The quality of teaching force is a further concern. The duration of training varies from one year diploma courses to four years undergraduate training. Long training courses often do not produce enough teachers to meet the requirements of an expanding system (World Bank, 2007)

The current situation of secondary education in Kenya suggests that things will worsen unless urgent measures are taken to address the problem (Onsomu, et al, 2006). There are still high rates of school dropouts in Kimilili-Bungoma sub-county emanating from limited finance. If this problem is not addressed immediately, the outcome will negatively affect the human capital of this nation. Few researchers have focused on the relationship between secondary education financing and human capital investment in Kimilili- Bungoma sub-county. Therefore, the study focused on this.

2.0 Theoretical Framework

Secondary education financing for human capital investment and economic growth has been given justification by the human capital theory as given below:

Human Capital Theory: The theoretical framework most responsible for the wholesome adoption of education and development policies has come to be known as human capital theory. Becker (1994), a proponent of the human capital theory, states that human capital theory offers an explanation of a wide range of empirical phenomena which have either been given ad hoc interpretation or have baffled investigators. One phenomenon is that unemployment rates tend to be inversely related to the levels of skills. Two, the distribution of earnings is positively skewed especially among professionals and other skilled workers. Three, abler persons receive more education and other kinds of training than others. The belief that education is an engine of growth rests on the quality and quantity of education in any country.

As the global economy shifts towards more knowledge based sectors, skills and human capital investment becomes a central issue for policy makers and practitioners engaged in economic development, both at the national level and regional levels (OECD, 1996). Human capital theory views schooling and training as investment in skills and competencies (Schultz, 1988). This theory shows how education leads to increase in productivity and efficiency of workers by increasing their level of cognitive skills. Olaniyan and Okemakinde (2008) introduced the notion that people invest in education to increase their stock of human capabilities which can be formed by combining innate abilities with investment in human beings. Examples of such investment include expenditure on education, on- the -job training, health and nutrition. Human capital theorists have established that basic literacy enhances the productivity of workers in low skill occupations while additional education provides technical and specialized knowledge that increases marginal productivity of workers.

The human capital theory has been criticized on several grounds. At the individual level, it has become controversial whether or to what extent education or other forms of human capital investment are directly related to improvement in occupation and income. Bronchi (2003) assert that raising the level of education in a society can under certain instances increase the inequalities in income distribution. Fergalind and Saha (1997) asserts that while governments may adopt educational plans consistent with specific development goals and strategies, they can only be partially certain that the outcomes of these will correspond to original intentions; the more political the goals of education, the more problematic the outcomes. In light of this, to view education as a panacea for the attainment of development objectives is risky. Thus, education in general and schooling in particular, cannot on its own achieve the desired societal goals without structural reforms. Another major problem in the

application of the theory is its failure to account for a growing gap between people's increasing learning efforts and knowledge base and the diminishing number of commensurate jobs to apply their increasing knowledge investment, especially in developing nations. To this, some advocates of the theory Bronchi (2003), Castronova (2002), Crepaz and Morse (2004) assert that great increases in learning efforts have not led to commensurate economic gains because of the declining quality of education, lopsided and politically motivated system of education.

2.1 Empirical framework

2.1.1 Public Financing

Contributing to the discussion of the relationship between human capital and economic growth, Lucas (1988) measures the relationship and discovered that human capital reveals increasing returns to scale and thus make economic growth sustainable. Human capital became the key element of economic growth. Uwatt (2002) empirically examines the impact of human capital on economic growth by linking labour and human capital provided by total enrollment in education system to real GDP. The results showed that human capital from primary school education statistically very significantly on the growth of the Nigerian economy. In the case of tertiary education, the results failed to tally with expectations. One of the reasons advanced by Uwatt (2002) was that Nigerian tertiary education institutions produce more graduates in humanities than in mathematics and sciences. Barro (1991) investigates the relationship between education, human capital and economic growth and verified the capability to explain economic phenomenon of growth models; what's more, Barro (2000) also make studies on these aspects although this research has paid much attention to the combination of human capital externality and research and development.

As for the aspects of government education expenditure, human capital and economic growth, Cronovich (1998) explore the theoretical possibility of effects that government expenditure made on technological improvement and economic growth. He constructs a model whose human capital was accumulated through government public education expenditure, and explores the relationship between education taxation, human capital accumulation and economic growth. The research conducted by Gupta and Verhoeven (2001) reveals that the scale and efficiency of government education investment play a very important role in the process of promoting society's economic performance. Lim (2001) studies the effects of different kinds of taxation made on human capital accumulation and economic growth. Although this literature recognized that government expenditure indeed made contributions to economic growth, little attention has been paid to the functioning mechanisms between government education investment and quality growth of human capital through improved grades of students. Addressing the question of what causes high levels of human capital in some countries but not others, Meng and Azhong (2009) points to the role of governments in protecting and enforcing property rights and contracts, enhancing market transactions, reducing corruption and confiscation and generally providing an effective rule of law. They add that such good Governments will also tend to provide the highest levels of human capital to their populations.

Meng and Azhong (2009) push our understanding of the connection between education and governance thereby inviting new research direction. Romer (1986) further illustrates the

power of sociologically informed economic reasoning in clarifying educational theory. Using a standard model to illustrate the effects of trade growth and technological development, increasingly crucial features of the knowledge economy of today and tomorrow, Romer (1986) argues that both factors are likely to increase social welfare but also income inequalities. He also shows that traditional tax and transfer redistribution methods to mitigate inequalities are likely not just inefficient because of incentive effects, but also increasingly costly over the long-run. In line with the evidence on the high returns to education (Becker, 1994; Psacharopoulos, 1994), Romer(1986) then goes on to point to an alternative strategy for governments in the future knowledge economy. By trying to correct the rising inequalities produced by technological progress, through massive investments in education that reduce the supply of low-skilled workers in the labour markets, governments can reap the social benefits of progress while simultaneously mitigating inequalities in a cost-effective way. Incidentally, the educational strategies pursued by successive South Korean governments in the past forty years are a textbook example of how this kind of intelligent governance can contribute to economic development for all. By gradually shifting educational spending priorities between the 1950s and the 1980s in line with the needs created by changing industrial and macro- economic circumstances, governments made education a cornerstone of human development. This helped drag the South Korea out of abject poverty that continued to characterize many of its neighbors improving both the quality and availability of Korean education in the process (Mingat, 1998).

2.1.2 Private Education Financing

Psacharopoulos (1994), Bray (2002) and contributions by Meng and Azhong(2009), Barro(2000) and Romer(1986) show evidence on the positive effects of education in improving the welfare worldwide. Human capital theory examines how people can get high returns out of education because it increases their future earnings in the labour market. At the macro level, the theory studies how over and above these private returns, education also has social returns; advantages for countries as a whole. A more educated population may contribute to higher social welfare by being better able to invest, adopt and defuse new ideas and technologies, or to produce a higher level of output per unit of time. Barro (1991) finds that both the quantitative aspects and the qualitative aspects as measured by the scores of education have strong and significant effects on growth rates. Becker points out that while the private costs of education are likely to be significantly reduced in future years as online learning becomes more widespread, the private returns to education have already increased massively over the past few decades. Thus earnings gap between high-school graduates and college graduates has grown from about 50% in the late 1960s to 75% in the late 1990s, amounting to probably the largest increases in US history.

He further points out that over the last two decades, human capital has grown to become the single most important part of the American economy, to the point that our present times can be aptly labeled the 'age of human capital'. For instance, after the 1987 New York stock exchange crash, the US economy was not affected in a major way despite equity wealth loses of 22%, because human capital was largely untouched. Lazear (2002), attempts to provide new insights into longstanding empirical puzzle in quantitative studies of educational inputs. Despite much firsthand testimony and experimental evidence to the contrary, large-scale

studies have consistently failed to find evidence of a positive effect of reducing class sizes on students' achievement (Coleman and Hoffer, 1987). For instance, in an analysis of 276 US studies, Hanushek (2003) found that there was no statistically significant relationship between teacher/pupil ratios and student achievement in 725 of cases, with the additional 14% of cases displaying a significant relationship in the negative direction. Lazear (1999) argues that these findings can be better understood by viewing a conducive learning environment in the classroom as a public good. While every student benefits from a non-disruptive classroom, one single disruptive student suffices to reduce the benefits of learning for all. Given this setting, headmasters and teachers can try to reduce the likelihood of classroom disruption by putting better behaved or better performing students in large classes and more troublesome students in smaller classes.

Meng and Azhong's (2009) study of the value of education around the globe starts by presenting evidence of the substantial private returns that accrue to individuals for earning extra educational qualifications and the positive and strong correlation of educational levels with national productivity levels. Romer (1986) breaks ranks with a large number of economists and policy makers who advocate vouchers on grounds of economic efficiency and freedom of choice. He says that school choice seems to be part of an increasing policy convergence across many advanced market democracies, whereby state responsibilities for funding education are being weakened, while state control is being tightened through performance indicators and curricular specifications. Furthermore, some literature explores the relationship between income distribution equality, human capital and economic growth, such as Glomm and Ravikumar (1992); Bovenberg and Jacobs (2005). Besides, some paper studies the relationship between institution and economic growth, for example, Acemoglu (2007). Wilson and Briscoe (2004) made a very comprehensive and elaborate review on the empirical literature about the interactions between education investment, human capital accumulation and economic growth. These empirical literatures study the short-run relationship between education, human capital accumulation and economic growth, but ignore to analyze the long-term dynamic effect.

2.1.3 Voluntary Investment in Education

Vanhuyse and Sabbath (2004) offers a useful and elaborate survey of the impressive body of knowledge that has been gathered on the role of social capital in influencing the educational attainments since the pioneering contributions by Coleman (1961, 1988, 1990) and Coleman and Hoffer (1987). Vanhuyse and Sabbath (2004) looks at the unique constellation of Dutch education, predominantly privately produced but publicly financed, does report results on the influence of religious schooling that strongly support the earlier findings of Coleman and Hoffer (1987). Crepez and Morse (2004) make a contribution on the role of families in promoting educational achievements. She presents an overview of recent empirical findings that confirms the importance of social capital and particularly of two-parent families, in promoting children's cognitive and emotional development and their school achievement. The evidence gathered by Morse is convincing. Children from single-parents families and those from step families complete fewer years of education and are more likely to repeat grades or drop-out of school, to commit crimes and use drugs.

Similarly, Bogenschneider, (1997), offers compelling evidence on the effect of various dimensions of active parental involvement with children's school and school work on

educational outcomes. Crepez and Morse (2004) believes that the evidence of the superiority in terms of educational achievements of biological two- parent families provides urgent reasons to encourage two-parent involvement in their children's education. Being from a single- parent family not only, lowers a child's own mathematics scores, but students from schools with high proportion of single- parent children had significantly lower mathematics and reading scores than those from schools with more two- parent children. Moreover, the number of social interactions between parents had a positive effect on their children's school's mathematics and reading scores.

Crepez and Morse (2004) argue that parents similarly have a better tacit knowledge to raise their children than any other entity. Morse remains silent on the large question of how to help families and especially mothers, in combining their household duties with their jobs in today's increasingly flexible and competitive labour markets, where one-earner families are at high risk of poverty. In describing the bliss of parental love with the abstract logic of states, she sets up a comparison that omits the superior overall performance in terms of family welfare of models of market capitalism other than the American one. Esping- Anderson (2002), shows how Scandinavian states such as Sweden and Finland take on a much greater role in helping mothers to square the work- family circle by increasing the supply and reducing the cost of public daycare facilities and by generous conditions of maternity leave and family allowances. These countries also boast high female labour market participation rates and singularly low child poverty rates as well as comparatively good student achievement across tests and age groups (Hanuskek & kimko, 2000). These studies stress the role of discipline, hard work and great expectations on the part of teachers and school administrators but do not measure the relationship between the contributions from the society on human capital investment

3.0 Research Design

The study adopted the descriptive survey design. According to Kothari (1990), this method is preferred in the study because it enables a researcher to collect data from a wider area in a short time. Kerlinger (1973) points out that descriptive studies are not only restricted to fact findings, but may often result in formulation of important principles of knowledge and solutions to significant problems. They involve measurement, classification, analysis, comparison and interpretation of data. Descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2003). Kerlinger (1973) says that surveys are useful for educational fact-finding and provide a great deal of information that is accurate.

3.1 The Target Population

The population from which the sample was drawn consists of 20 secondary schools which consist of 3 boys' schools, 5 girls' schools and 12 are mixed (D.E.Os office statistics, Kimilili-Bungoma District, October, 2011). The target population constituted all the secondary schools in Kimilili- Bungoma Sub-county which is found in Bungoma County. It is bordered by Mt. Elgon, Bungoma North, Bungoma East and Bungoma West Sub-Counties. It is found in Western part of Kenya. The public schools sampled have a fraction of funding from the government, households, the church and NGOs.

3.2 The Sampling Design and Sample Size

All the twenty (20) secondary schools in the District were selected using cluster sampling technique and were categorized into boys, girls and mixed schools. This provided a sample that was representative to get enough data to make generalizations as recommended by Kerlinger (1973). Mugenda and Mugenda (1999) argue that at least 30% of the sample population enables the researcher to source enough data to warrant valid and informed generalizations and conclusions.

4.0 Research Findings

The main objective of the study was to determine the relationship between education financing and human capital investment in Kimilili-Bungoma sub-county. Four specific objectives were formulated to address the study. The first objective evaluated the effects of public funding on human capital investment, objective two evaluated the effects of private financing of education on human capital investments, objective three evaluated the effect of voluntary organizations financing on human capital investment while objective four evaluated the challenges to financing education on human capital investment.

4.1 The effect of public funding on human capital investment in public secondary schools.

The first objective of the study was to evaluate effects of public funding on human capital investment. The findings of the study indicated that there was no significant difference in mean human capital investment between those schools adequately funded and those not ($t=1.486$, $p=0.157$). Many of the developing nations invest huge amounts of money on education not only as an attempt to impart knowledge and skills to individuals but also to impart values, ideas, attitudes and aspirations which may be in the nation's best interests (Olaniyan & Okemakinde, 2008). Despite the government funding being low, some schools through their boards have agreed to levy an extra fee that can support academic programmes to avoid tremendous effects from delayed or low public funding. Public financing is unable to meet the demands for additional places. Given the numerous competing demands on constrained public resources, many governments find it impossible to mobilize sufficient funds to accelerate the development of secondary education, while fees and other private cost impede enrollment of financially disadvantaged students (Ngware, Onsomu and Muthaka, 2007).

4.2 The effect of private funding on human capital investment in public secondary schools.

The second objective of the study evaluated the effects of private funding on human capital investment. The findings of the study revealed that most schools (83%) were funded by private financing and that it was adequate. The policy of cost sharing by the government had really encouraged fee payment. Parents are now able to pay subsidized amount regardless of their socio economic status. Less than 16% of the respondents reported inadequacy and this could represent parents with humble backgrounds. This level of financial adequacy is reflected in the higher output in human capital investment by privately funded students. This finding is in agreement with findings in a study by Lewin (2008) who revealed that in public secondary schools in Kenya, Uganda, Tanzania and Zambia more than a half the total costs per student are financed through fees and other contributions. He observed that parents are increasingly using

private tutoring to enhance the chances of their children to pass the secondary entrance examination and improve their performance once admitted.

Households are shouldering a large share of the cost of running secondary institutions. In Zambia, private source of income accounted for 48% of the total expenditure at government urban high schools, 33% of total expenditure at government rural high schools and 52% and 57% in grant aided urban and rural high schools respectively. Latham (2005), estimates that in Kenya households presently contribute over 65 % of the cost of secondary education. However the findings revealed that there was no significant difference in mean human capital investment between those schools that had adequate private funding and those that did not. This revelation implies that other factors could be contributing to human capital investment apart from funding.

4.3 The effect of voluntary organizations funding on human capital investment in public secondary schools.

The third objective of the study evaluated the effect of voluntary organizations funding on human capital investment in the study. Majority of the respondents (83%) reported that voluntary organizations funding was less adequate while 17% of the respondents reported lack of support. Voluntary organizations play an insignificant role in education funding. Since the government introduced subsidies, majority of non- governmental organization have withdrawn funding. This could also be attributed to the fact that parents in the study area are economically stable as most of them engage in farming that enable them pay. Despite this scenario, non-governmental organizations should step up their support to allow more needy students who could have dropped access education and contribute to the level of human capital investment in the study area. This finding of the study contradicts the view of Ogunade (2011) that non-governmental sources of secondary level technical education and training have a significant and growing position in Africa and often eclipse public sources. In Mali they make up two-thirds of the expenditure on TVET, in Tanzania 90% and in Zambia 82%. Data from Zimbabwe, Ghana, Cameroon and Cote d'Ivoire confirm the importance of private non-profit and for profit providers for technical education and training.

4.4 Challenges to financing human capital investment in public secondary schools

The fourth objective evaluated challenges to financing human capital investment. The respondents reported various challenges that affect either the students directly or the schools. Most of the respondents reported that government delayed in remitting student financial subsidies. Most of the students had huge fee arrears which affected flow of academic programs. The respondents also noted that high number of needy students in need of financial support was a challenge. They also noted that limited sources of financing and inconsistent support from the religious organizations, Non-governmental organizations and other voluntary organizations remains a challenge.

Other challenges were school related. Shortage of infrastructure and inadequate teaching personnel, lack of commitment by students, absenteeism due to home based issues, indiscipline cases especially boy/girl relationship and over enrolment were some of the challenges noted.

5.0 Conclusion

From the finding of the study that there was no significant difference in mean human capital investment between those schools adequately funded and those not by public funding, it can be concluded that public subsidies remittances delay and therefore may not have impact on human capital investment in public secondary schools. It can also be concluded that some schools charge some levies to top up inadequate public funding. From the finding that most schools were funded by private financing and that it was adequate, it can be concluded that parents are able to afford the subsidized fees by the government which has improved the human capital investment in the study area. From the finding that majority of the respondents reported that voluntary organizations funding was either less adequate or lacked, it can be concluded that the traditional role of education funding by these organizations is diminishing gradually. From the finding that schools faced a number of challenges pertaining education funding that included delayed government remittance, huge the arrears, increased number of ready students, limited sources of financing and inconsistent support from religious organizations, NGOs and other voluntary organizations, it can be concluded that more commitment and support is needed from all stakeholders to overcome challenges for successful human capital financing in public secondary schools.

5.1 Recommendations

Based on the above conclusions the research therefore recommends the following to be adopted: The government should continue to support secondary education through timely remittance of funds and employment of teachers to realize increased human capital investment , parents being key to education funding should be encouraged to support education programmes since they stand to benefit directly when students perform better, voluntary organizations should step up the support to contribute significantly to the overall human capital investment in the county to benefit poor households and school management teams should mobilize and manage education funds efficiently for better human capital investment outcomes.

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