Unit One

Introduction to the Economics of Education

1.2 The Meaning of Economics of Education

Economics of education is concerned with the analysis of the ways in which scarce resources are used to provide education which satisfies individuals' educational needs and also contributes to national development. Like any other resources, educational resources are scarce yet educational needs are ever increasing both for the individuals and for nations. This scarcity of resources means that policy makers must decide on the fundamental questions of:

1. What to produce (i.e. How much to spend on each stage of education?)
2. How to produce (i.e. How to provide education efficiently?)
3. For whom to produce (i.e. who will benefit from the given level and type of education?)

Economic theory is therefore able to guide educational policy makers and planners by providing both facts about the education system and values to inform decision making. The part of economics that is concerned with establishing facts about the world is called **positive economics**. It asks questions such as 'can we improve the quality of teachers by increasing pay' or 'will smaller class sizes raise pupil attainment'? On the other hand **normative economics** asks questions that require value judgments such as 'is it fair to charge higher education students tuition fees', of what value is increasing expenditure on primary education?

Individuals and governments often face hard choices because of the scarce resources they possess. For example, expanding higher education and increasing provision of basic education might both appear to be policies that have the potential to improve the well-being of society, but which of the two should the government prioritize? This causes the economic problem in education which is characterised by scarce resources, unlimited wants, choice and opportunity cost.

- **Educational resources are scarce** because they are competed for by other sectors and also within the education sector itself there is competition for these same

resources. At the household level, educational resources are also competed for by other family wants like health, shelter, food and investment.

- **Educational wants/needs are insatiable/un-limited** because they are complementary and recurrent. Complementary means one educational need supports the acquisition of another need. Recurrent means acquisition of one educational need raises the appetite/desire to acquire/provide another. This is also due to increased technological changes and globalization.

- **Choice in education** means that households and governments have to select the best educational alternatives that satisfy their educational needs. Choice has to be done in education because of the many educational wants and the limited educational resources both at household and national/society level.

- **Opportunity cost in education** is the best alternative foregone by individual household and government when they choose to invest in one type/level of education instead of the other. Opportunity cost also means the alternative foregone by households and government when they choose to commit resources to education other than investing these resources in something else.

Economists describe the costs of taking a particular action as opportunity costs, because for example, the greatest cost of expanding higher education might be the lost benefits of not undertaking the next best alternative policy, such as increased provision of early years care (cf. LeGrand *et al*, 1992; Barr, 2004). Scarcity of educational resources coupled with unlimited educational wants compels households and government to make choice, and in the process of choosing there is the best alternative foregone which is the opportunity cost and these constitute the economic problem in education.

The subject of economics of education is also important because globally education is given special recognition as a vehicle to the development process. Whereas developed nations are strengthening their education systems, developing nations are urged by the World Bank, IMF and other donor agencies to invest in certain types and levels of education which are relevant to development objectives. As a result, there is tremendous growth in school enrolment globally and significant proportions of national budgets are allocated to the

education sector by most nations. The United nations development report, (2000) indicated that while there were still about 875 million illiterate people aged 15 or older in the world 80% were literate compared to just 63% in the 1970s.

This indicates the tremendous efforts which have paid to education due to the recognition of the fact that education is an important factor in social and economic development. Therefore, when individuals and governments invest in education, there is need to assess the viability and profitability of the investment. If this is not done, there is likely to be a waste in the allocation of resources which justifies the economics of education.

1.3 Origins of Economics of Education

Economics of education has a long history dating back from the days of classical economists like Adam Smith, Alfred Marshal and John Stuart Mill who focused attention on education as a form of investment. In the early 1960s, education was considered a 'basic human right' associated primarily with consumption but its economic benefits were ignored. Given this consideration, education as a right would not need to be subject to economic debate. Subjecting education to principles of economic analysis like the cost benefit analysis would exclude some individuals from getting what is considered their fundamental right. Besides this, educational institutions, most especially those owned by government are considered to be non-profit making organizations and as such they fall outside the economic arena.

This kind of debate went on until the late 1960s when Theodore Schulz, (1961) and Denison (1962), showed that education contributes directly to the growth of national income by improving the skills and productive capacities of the labour force. To demonstrate this, Schultz did a study in the USA between 1929 and 1957. He calculated the total value of the stock of education and obtained the figure for the increase in stock. He then made estimates of the rates of return on the investment in education and combined the calculations to give the figure for the growth in national income from schooling. His results suggested that between 16.5% and 20% of the total growth in the American economy was caused by the additional schooling of the labour force (cf. Atkinson, 1983). Although this approach may have its own shortcomings, it suggests that besides the social benefits, education also has economic benefits both to the nation and to the individuals who attain it.

Besides the fact that education has national/societal economic benefits, there are also costs incurred by individuals and nations in the process of acquiring and providing education. For example, Education planners and policy makers have a task of satisfying the demands of teachers, parents, administrators and the government. In doing this, they have to ensure that minimal resources are efficiently used to attain the best in education without compromising its quality. This also means that planners and policy makers have to set priorities and select the best alternatives in order to ensure that the scarce resources are well allocated among the competing educational needs.

Nations also have to select that type of education which has economic benefits for individuals but also addresses national development needs. This would help nations to train the work force which is relevant to their labour market which will in turn boost the production of the required goods and services and reduce on the problem of unemployment with its related vices. Therefore, economics of education provides a good basis for developing education policy ideas from the application of economic theory. Economic analysis of educational matters would also ensure that maximum benefits are attained by the nation at the lowest cost of inputs.

Unit Two

The Market Theory of Education

2.1 The Concept of the Market

A market can be described as a situation in which buyers and sellers or producers and consumers interact in the exchange of goods and services. Economic decisions (*on what, how and for whom to produce*) in the market situation are determined by the forces of demand and supply in relation to price and this happens in a perfect market. Economists define a perfect market as one characterized by many buyers and many sellers dealing in a homogeneous product (cf. Barr, 2004; Douma and Schreuder, 2002). In a perfect market, there is perfect information for both the buyers and the sellers and there is free entry and exit with no limitations.

A perfect market is in equilibrium or is achieving an efficient level of output when demand is equal to supply. This means that producers are able to sell all their products and consumers are able to get all that they want and there is no excess demand and excess supply. In education, this efficient condition is achieved when the demand for school places is equal to their supply. This means that all learners are able to get the level and type of education that they need and education providers are able to supply this education and there is no excess or shortage of school places.

2.2 Costs and Benefits in the Education Market

This equilibrium condition is also determined by the costs and benefits in the context of education. The total social costs (TSC) of education are all the expenses which society incurs to provide a given type and level of education. On the other hand, the total social benefits (TSB) represent total utility derived by consumers of education as well as the benefits derived by society in terms of economic development. Such benefits also include positive *externalities* which are the spillover effects of education for which no money is paid by the beneficiaries.

The marginal social costs (MSC) in education are the extra costs for producing an extra unit of education for example the extra cost of enrolling one more student in the school which has an effect on the cost per student. The Marginal social benefits (MSB) are the extra utility

to society derived from individuals consuming extra units of education. The total social costs (TSC) and the marginal social costs (MSC) increase as the level of output increases and in the same way the total social benefits (TSB) and the marginal social benefits (MSB) increase as more output is consumed until a point where they begin to decrease following the economic principle of diminishing returns.

Therefore, an efficient education system is achieved according to market conditions when the marginal social benefits are equal to the marginal social costs also meaning that demand for education is equal to supply. This is what (Ghosh, 2001:19) calls 'the marginal condition of efficient resource allocation' which is the same as the equilibrium level of output. The above scenario is illustrated in Figure 1.

Figure 1a: Maximum net benefit

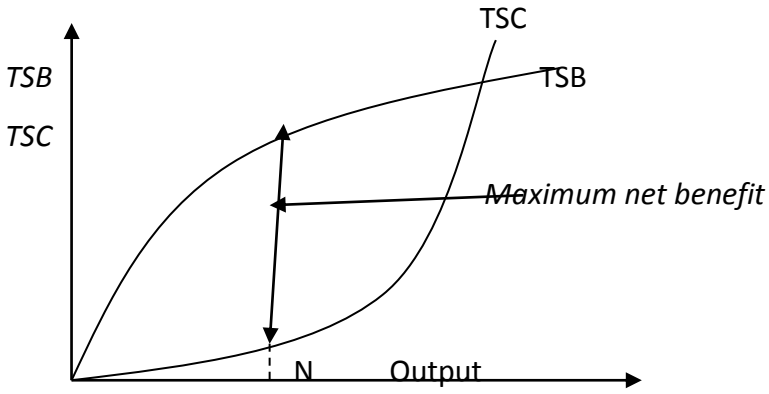
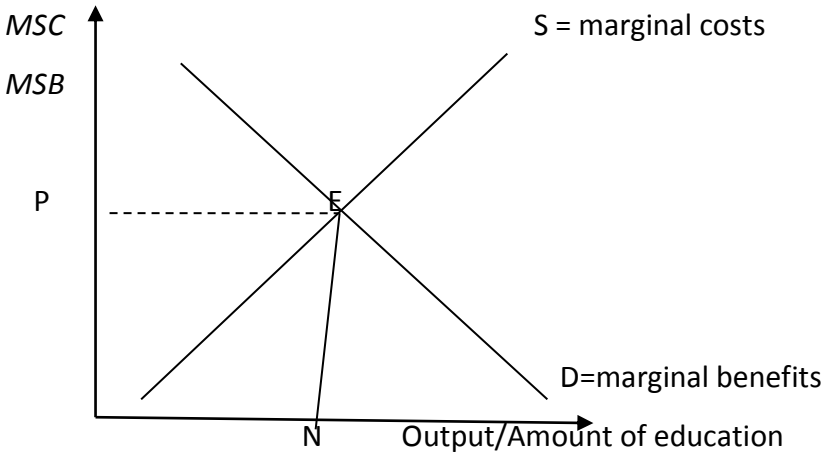


Figure 1b: Efficient level of output



From Figure 1a, the efficient level of output is attained at a point where there is an excess of TSB over TSC that is the point of Maximum net benefits. In the corresponding MSC/MSB

curve the efficient level of output is attained at point E where the MSB=MSC. At the equilibrium point E, educational resources are efficiently allocated.

Therefore, an education market exists whenever parents are able to choose between schools and where parents have a choice, they will have preference for schools with a higher ranking in terms of quality measured by students' grades in national exams. Naturally high quality schools charge high fees which mean that the cost of education will be high for parents depending on their levels of income which affects the demand for education. If we can use the case of Uganda as an example to illustrate this point of change in demand for education as a result of changes in costs for education; when primary education was paid for by parents before the introduction of universal primary education the cost of primary education was high and as such its demand was law. For example, by 1997 when UPE was introduced only 2.5 million children were enrolled in primary schools but after the introduction of UPE, primary school enrolment grown to about 7.7 million children by 2008 (cf. Uganda Ministry of Education and Sports, 2008). This is an indicator that subsidizing the cost of primary education by the public sector could have increased its demand in Uganda. On the contrary, when the private cost of tertiary education increased with the gradual withdrawal of government scholarships for university students, the demand for University places kept on increasing. This trend is illustrated in Table 1:

Table 1: Growth in tertiary enrolment in Uganda between 2000 and 2005

	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006/2007**
Male	34,441	40,366	49,179	53,932	40,400	69,558	79,469
Female	20,003	23,850	30,678	34,990	63,574	50,587	57,721
Total enrolment	54,444	64,216	79,857	88,922	108,295	124,313	137,190

Source: Uganda Ministry of Education and Sports, (2008)

Table 1 shows that tertiary enrolment in Uganda grew from 54,444 students to 137,190 students in a period of just seven years yet this is the period when the government reduced

sponsorship for university students and encouraged private sponsorship. This means that the private cost of tertiary education went high with the reduction of government scholarships but its demand also kept on increasing. This suggests that like in the market for other goods and services the demand for education is affected by other factors besides changes in the cost for education. Factors such as the value attached to education by the society, employment opportunities available for the educated, government policies like the liberalization of the education sector, demographic characteristics including growth in population, and changes in the levels of income in the population also affect changes in the demand for education.

The other important factor to note is that the market for schooling is generally described as '*a quasi-market*' because in most countries the world over the public sector controls the supply side of education with regulated intervention of the private sector. This means that education matters are not entirely determined only by the market forces of demand and supply much as these play a key role. There is always market failure in education production which requires the intervention of government.

2.3 Causes of Market Failure in Education Production

Ideally, perfectly competitive markets would be efficient in allocating resources to education. However, in the education sector markets fail because:

In the first place, education is ***a quasi-public good*** (Barr, 2004; Ghosh, 2001) which implies ***non-rivalry*** such that its being consumed by one individual does not diminish the benefit to others for example one extra student in the classroom may not diminish the benefits derived by other students. Education is also partly ***non-exclusive*** because once it has been provided to a few individuals its benefits may spill over to other members of the community who may not have paid for it. For example, studies have found out that workers are more productive when they learn from their more educated co-workers (cf. Barth, 2002); and that children who have not attended early childhood education programmes may benefit from these programmes through peer interaction with those who have attended (cf. Waldfogel and Neidell, 2006).

The issue of ***non-exclusiveness*** may therefore lead to the ***free raider*** problem where there are individuals who benefit from education without necessarily paying for it and this certainly makes the marginal social benefits (MSB) to be higher than the marginal social costs (MSC).

At the same time education may also have negative externalities (negative spillover effects) in terms of the opportunity cost which may also make the marginal social costs (MSC) to be higher than the marginal social benefits (MSB) (cf. Ghosh, 2001; Levacic, 1993) also making market operations inefficient. Education is also heterogeneous because there are different levels and types of education and besides that there is usually no perfect information for both the students and the producers of education (schools) which makes assumptions of perfect markets unrealistic in the context of education. Therefore, even if markets can provide education efficiently there are imperfections because of the above shortcomings which will require government intervention.

2.4 Government intervention for efficiency reasons

Because of the imperfections in the market to ensure full efficiency in education governments intervene in the following ways:

In the first place, governments often intervene by setting maximum prices or ***price ceilings*** (Bellinger, 2007) which in education include school fees and tuition. Price ceiling ensures that the price of education is not over and above the marginal benefit to the learners who are the consumers of education.

Secondly, governments may also set minimum prices for education or ***price floor*** which is intended to protect schools. Minimum prices are set to ensure that the fees or tuition paid by students is not far below the marginal cost of providing that education.

Finally, governments may give subsidies to educational institutions which offer education which is in short supply like in the areas of science and technology. It may levy tax to institutions which offer courses which have less demand in the labour market leading to excess supply of graduates and eventually causing unemployment. These measures are intended to increase productive and allocative efficiency.

Unit Three

Economic Analysis of Education

3.1 The concepts of Investment and Consumption

Individuals spend on goods and services with the objective of present and future utility or satisfaction. Goods and services which yield immediate satisfaction are called consumer goods. There are two types of consumer goods which include the durable and non-durable consumer goods. The durable consumer goods yield satisfaction both in the present and in the future. On the other hand non-durable consumer goods yield immediate and short lived utility or satisfaction.

Investment goods are those used in the production of other goods and services in future. Whereas consumer goods are an end in themselves, investment goods are a means to an end because they facilitate the production of other goods and services from which the producer derives satisfaction. The difference between durable consumer goods and investment goods is that investment goods yield satisfaction through their ability to influence consumption in the future; durable consumer goods yield direct satisfaction and they are an end in themselves. Therefore, investment expenditure refers to the acquisition of assets which yield benefits over a long period of time and economists consider expenditure on education to be an investment because through education individuals acquire skills and knowledge which increase their value in the labour market (cf. Joint Economic Committee U.S. Congress, 2000). Generally, investment is characterised by:

1. Increase in the stock of capital assets which are used in the production of other goods and services. For example, a business man who buys a truck does not necessarily derive immediate satisfaction from the truck but rather from the use of the truck to deliver his goods.

2. Secondly, investment enhances ‘productive capacity’ which is the ability to produce goods and services by the individual or society as a whole. This improved productive capacity is reflected by the increased output of various goods and services.

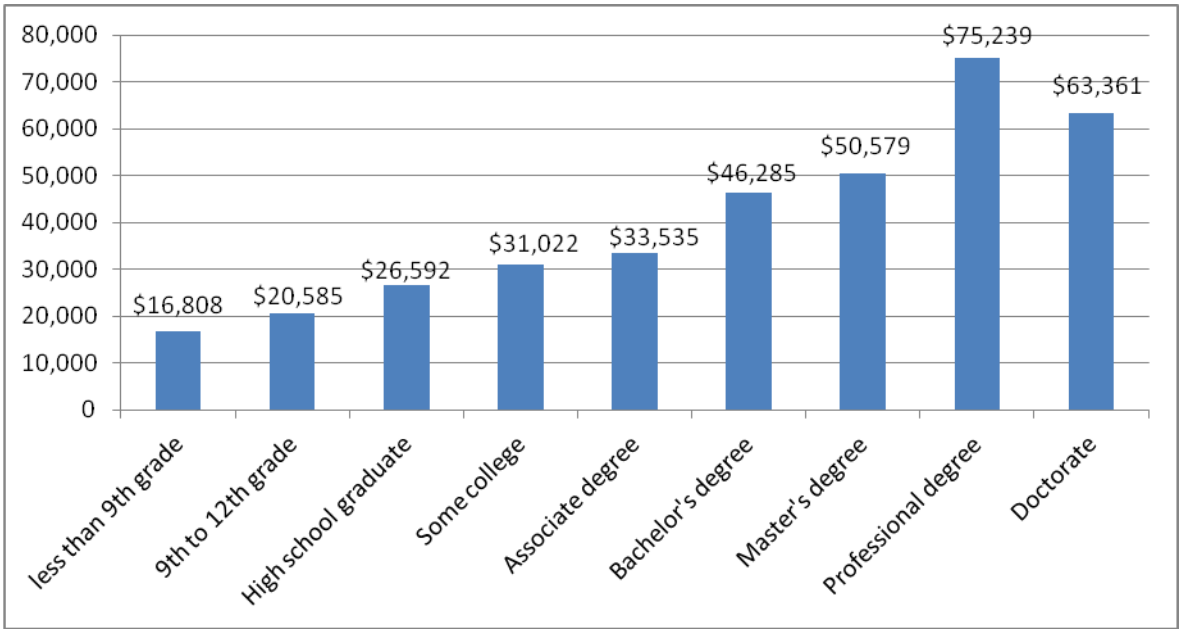
3. Thirdly, investment leads to increased aggregate demand for other goods and services. This is because with increased production individuals earn extra income which they can spend on other consumer goods thus stimulating further demand.

3.2 Education as an Investment for the Individual

Like any other investment, education helps to create income in the future by providing educated workers with skills and knowledge which enable them to increase their productive capacities and thus receive higher earnings. The specific attributes that make education an investment for the individual include the following:

In the first place, education increases the level of earnings for the individual who has gone through formal schooling. Economists like Shultz, (1961); Becker, (1964); Bartel and Lichtenberg, (1991), agree that the amount of education acquired by workers has an important impact on their labour market experience. The most direct way that education affects the labour market experience of workers is by increasing their productivity, thus increasing their demand in the labour market and their earnings. The more education individuals acquire, the better they are able to absorb new information, acquire new skills and are receptive to new technologies which increases their value in the labour market.

There is evidence to suggest that a positive relationship exists between educational attainment and earnings. For example, the U.S. Census Bureau collected data on the earnings of all persons by educational attainment and earnings (cf. United States Congress, 2000), and their findings suggest that individuals with higher qualifications earn higher than their counterparts who have lower qualifications. Statistics of the findings in that study are presented in Figure 2.



Source: Joint Economic Committee United States Congress, (2000)

Figure 2: Median Earnings of all Full-Time Workers in U.S. by Educational attainment 1998

Figure 2 shows that in terms of annual median income, the levels of earnings for individuals increase with their levels of qualification. From the report, the average baccalaureate earns nearly $ 20,000 more than the average high school graduate (cf. United States Congress, 2000). Although these findings seem to be incomplete because the analysis ignores the investment costs of education in terms of the individuals' contributions through direct costs and time spent acquiring additional schooling, there is evidence to suggest that earnings increase with additional schooling.

Despite the methodological and data limitations, several studies done both in the U.S. and the U.K. (see e.g. Dearden, 1999; Psacharopoulos, 1994; Bennel, 1996; Rumberger and Daymont, 1994; Alexander and Pallas, 1983; Bishop, 1996) are also consistent in their findings suggesting that returns to an extra year of schooling are high. It is reasonable to conclude that the amount of education that individuals receives directly affects their earnings and this should be a motivation for individuals' decisions when they invest in education.

Secondly, highly educated individuals have higher chances of getting gainful employment compared to their counterparts with lower education. Economists agree that increased education increases labour force participation, decreases the probability of unemployment, and decreases job turn over (cf. Mincer, 1993). Studies done in the U.S. in 1996 suggest that possession of a college degree increased the probability of being in the labour force by nearly 23 percent over high school graduates and that labour force participation is strongly associated with education even after controlling for other factors such as age and marital status (United States Congress, 2000). Individuals with higher levels of education (human capital) tend to be very efficient at their employment search, which increases their likelihood of remaining with the same firm. Workers with higher education and training are also less likely to experience involuntary job changes.

Other studies for example by Walker and Zhu, (2001) which used a Labour Force Survey dataset in the UK found out that there is a strong relationship between education, employment and earnings. Their findings also suggest that the subjects that individuals

chose to do play an important role on the time they take to get employment. The estimates found a substantial variation in employment potential between arts and humanities subjects compared to science and business subjects. These findings also concur with other studies by Eide, (1990); Kehm and Teichler, (1995); Neave and Jenkinson, (1983) which also suggest that social science and humanities graduates have lower potential for employment relative to their engineering and medicine counterparts.

Whereas there is a lot of evidence that the type of subjects students chose to do have an effect on their potential for employment and earnings, there is also evidence which suggests that the type of school, college or university where the student does such subjects also matters. For example, Brewer, Eide and Ehrenberg, 1999) used longitudinal data from the National Centre for Education Statistics of the U.S. Department of Education to estimate the effects of college quality on employment and earnings and how this varied across time in the U.S. They found evidence of large market premium to attending an elite private institution and a smaller premium to attending a middle-rated private institution relative to a bottom-rated public college.

Although available evidence is mainly from the developed world due to data limitation problems in the developing world, it is clear that formal schooling increases the potential of an individual for gainful employment whether this individual is from the developed country or the developing country. This is because employers whether from the private or the public sector consider formal schooling to be the major mechanism of developing individuals' productivity. Therefore, it is reasonable to suggest that education is an investment for the individuals and their households because it increases their potential for future gainful employment and incremental earnings.

3.3 Consumer Benefits of Education

Economists also believe that besides the market benefits of education that accrue to an individual in terms of increased probability for employment and earnings, education also has non-market benefits which are not necessarily determined by the earning of money. This is because education often affects the quality of life for an individual in ways that may not be reflected in employment or earnings. Such benefits include better health for individual with higher levels of education compared to those with lower levels. Wolfe and Zuvekas, (1995) did a study for the Institute of Research and Poverty and found considerable

evidence that higher levels of schooling increase individuals health status and that of their families. This is probably because such individuals believe that they have made an investment in themselves in form of education and as such they take preventive measures to increase the probability of better health.

In the early 1960s education was considered a 'basic human right' associated primarily with consumption. Expenditure on education was not seen as having economic benefits and provision of education was viewed as a national obligation. Viewed this way, education is seen as an end in itself and beneficiaries of education would just enjoy being in school. Knowledge would be acquired for its own sake without looking at its economic value. Education may also give its consumers immediate utility just like that derived from other consumer goods. This can be demonstrated by the following examples:

1. Education improves the social status of its consumers. The possession of a higher qualification like a degree or a diploma gives the bearer social recognition and respect.

2. Education enables its consumers to enjoy a variety of other goods and services. This is because in the process of acquiring education, these individuals are exposed to a wide range of luxuries compared to their counterparts with less education.

3. Individuals who have gone through schooling enjoy a psychologically satisfying memory of their olden school days. This psychologically satisfying memory motivates individuals to be in school.

4. Finally there are individual who enjoy learning for the sake of it. There are individuals who go to school just for the sake of getting a qualification which may not necessarily be for earning them a job or earnings. The same applies to individuals who have an insatiable appetite for credentials in which case credentials become an end in themselves.

It is important to note that, economist are not so much interested in these consumption benefits of education but are interested in looking at education as an investment. Acquiring education in the present should increase the individuals' ability to earn more in the future which will necessarily influence the consumption trends and in turn induce production leading to economic development. Therefore, if viewed as a consumption

item, the supply of education can be reduced during the period of financial hardships and resources should be spent on the investment aspects of it which affect the rate of economic growth.

Unit Four

The Human Capital Theory

4.1 Background of the Theory

The human capital theory introduced by Theodore Schultz in 1961 and elaborated by Gary Becker in 1964 suggests that individuals acquire skills and knowledge to increase their value in the labour market. The theory holds that individuals and society as a whole consider prospective returns when they choose to invest in a given type or level of education. It is generally accepted that both the quantity and quality of education are important mechanisms for increasing human capital (cf. Becker, 1993; Johnes, 1993; Schultz, 1972). This is because education increases an individual's stock of knowledge and skills, leads to acquisition of new attitudes and values, and improves communication skills and critical thinking skills. These traits are thought to make individuals more productive and the individual's demand in the labour market increases which also leads to higher life time earnings. On the other hand society benefits from the individuals stock of knowledge when many individuals have higher earnings; there is increased consumption which leads to increased aggregate demand for goods and services inducing more production and eventually economic growth and development (cf. Schultz, 1972).

Besides the market effects of education on human capital development, studies have also suggested that education and training can contribute to the productivity of farmers. The most detailed analysis of education as a physical measure of productivity was carried out among farmers in low income countries by the World Bank in the 1970's (cf. Psacharopoulos and Woodhall, 1997). These studies explored the relationship between education and agricultural efficiency or productivity, measured in terms of crop production. The findings revealed that farmers who had completed four years of elementary education their productivity was on the average 8.7 percent higher than that of their counterparts with no education.

Therefore, apart from wages being considered a measure of increased productivity as a result of education or formal schooling, the above study also demonstrates productivity increase as a result of education for farmers who are not wage earners. The study also

shows that as suggested by Schultz, (1961) education is much more likely to have a positive effect in more progressive, modern agricultural environments, rather than in traditional ones.

The fact that farmers' education is positively linked with their physical productivity and choice of technology shows that education provides benefits in rural as well as in urban environments. Education as a form of investment does not depend only on the use of wages as a measure of productivity but it can also depend on other measures like the level of agricultural output for educated farmers compared to the uneducated farmers.

4.2 The Human Capital Model

Some economists agree that the human capital model suggests that an individual's decision to invest in training or education is based upon an examination of the net present value of the costs and benefits of such an investment (cf. Backer, 1964; Veum, J.R. 1995; Hansson, B.2004). This is also based on the idea that education and training makes workers more productive, they collect the returns from their investment in later periods through higher marginal products and higher wages.

In this model, the stock of human capital includes: human capital investment; depreciation or losses of value; time investment needed to acquire the human capital; and investment in goods needed for human capital investment. These constitute the independent variable. On the other hand, wages earned by educated individuals are considered as dependent variables mainly because they vary according to the stock of human capital and the rate of returns to investment in human capital. The relationship is illustrated in Figure 3.

Figure 3: The Human Capital Model:

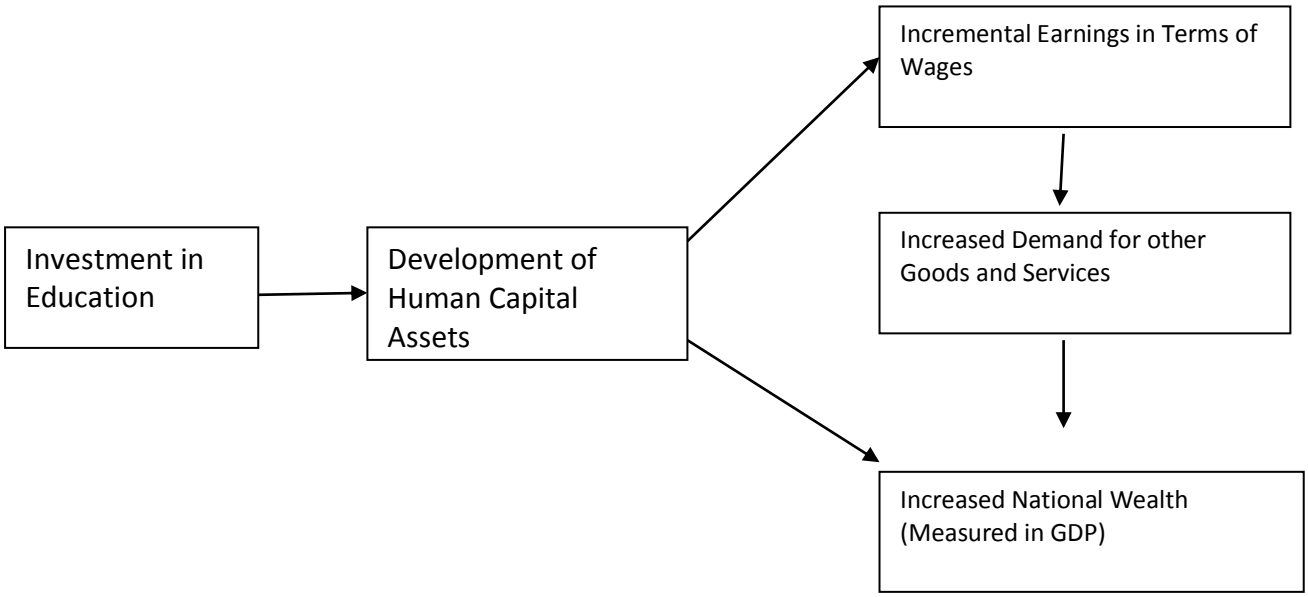


Figure 3 Indicates that individuals invest in Education with prospects of future returns. This is because investment in education leads to the acquisition and development of human capital assets in form of useful knowledge and skills. These make workers more productive which in turn leads to increased earnings by the workers. Increased productive capacity among the educated workers contributes to national development in two major ways. In the first place educated workers directly contribute to the production process by being employed in different sectors of the economy. Secondly, educated workers who are in gainful employment earn high ways which influences their consumption trends and if there are many such individuals in the population, there is likely to be increased demand for other goods and services. This induces further production and eventually increases national wealth or economic growth measured in terms of GDP. Therefore, education is potentially important both for the individual who benefits in terms of employment end better earnings and for the nation which benefits in terms of social economic development.

4.3 Assumptions of the human capital theory

The human capital theory is based on the following assumptions:

1. Expenditure on education can be clearly sub-divided into investment and consumption elements. This means that while spending on education, an individual can desegregate what are consumption elements of education and investment

elements and in the time of scarcity possibly avoid spending on consumption aspects.

2. The other assumption is that an educated population is a more productive work force. This is based on the idea that education always enhances the productive capacity of individuals through the knowledge and skills acquired from education.
3. Formal education is the major mechanism for the formation of human capital. That it is only through formal education that productive attributes are acquired which are important in the formation of human capital assets.
4. The theory also assumes that the labour market in which the educated workers must compete is perfect. This means that all who go through formal education will always get gainful employment.
5. Workers are paid according to their productivity. This also means that the more educated an individual is the more productive he becomes and the more he earns.
6. Finally the theory assumes that it is easy or possible to specify the relationship between educational inputs and outputs. So that one can easily measure the productivity of any given investment in education.

4.4 Critique of the human capital theory

Some critics have argued that the Human Capital Theory is a poor concept of capital in that it is unable to explain human activity other than as the exchange of commodities and the notion of capital employed is a purely quantitative one (cf. e.g. Block, 1990). It is also easy to deduce the weaknesses of the theory from its assumptions which include the following:

1. It is difficult to clearly distinguish between the investment and consumption elements of education. It is true that people demand education for purposes of attaining skills in order to earn a living which constitutes an investment component. However in the process of acquiring this education, the individual has some social benefits like meeting new people, learning social etiquette, and the general exposure which is consumption. In this context, it is hard to distinguish the gains which are basically investment and those that are of consumption in nature.

2. It has been argued that education doesn't improve productivity by imparting the necessary knowledge and skills but all it does is simply to serve a screening device by which employers identify individuals who possess certain characteristics and qualities that they value (the screening hypothesis). These qualities are in turn rewarded by employers by means of higher incomes.

3. The theory underestimates the contribution of non-formal educational approaches to the development of human capital. It emphasizes formal education as the only key mechanism for improving the quality of human resources. As human capital is found within the members of the labor force, the return on human capital is mixed up with the return on the quality of labor which is difficult to isolate. In other words. Both the educated and non educated are productive.

4. The labor market in which the educated workers compete for jobs is not a perfect one. Suitable jobs are not easily available and there is lack of perfect information on where and when the educated people's skills are required, the employers at times don't know where they can get individuals with appropriate skills. They rely on interviews which are not genuine measures of competence. Recruitment into jobs is not done on merit; the labor market is characterized by rigidities and imperfections such as corruption, nepotism, favoritism and trade union demands.

5. The theory underestimates the role of other factors besides human resources like land and physical capital as also contributing to national development. It also ignores the role played by external factors such as the nature of international relations, international trade, peace and security as factors in development. Fair trade between nations favors development as much as peace and security. For example in Uganda in the 1970s and early 1980s there was breakdown in peace and stability and international relations and trade. Much as there were educated individuals their contribution to the development process was less significant.

6. The theory makes a wrong assumption about the direct cause effect relationship between education on one hand and development on the other. It is important to recognize that much as there may be a correlation between education and development it does not necessarily mean that education causes development. For

example if a country doubled the volume of investment in education (human capital), that country would have not necessarily doubled the rate of development in that country.

Having noted the above shortcomings, the relatively simple model of human capital should not be dismissed entirely. This is because individuals and nations alike consider education as an investment that promises future returns. Some scholars have also suggested that alongside the human capital theory, social contacts also affect the productivity of individuals and groups and therefore, the social capital theory is also important (cf. Coleman, 1988; White 2002). These scholars have gone further to suggest that it is all about establishing relationships purposefully and employing them to generate intangible and tangible benefits in short term or long term and therefore, just as physical capital and human capital facilitate productive activity, so does social capital.

This view also seems logical because, much education enhances individuals' possibilities of getting employment and higher earnings, in some circumstances these may not be fulfilled when not backed by social networks. This applies much more in the developing countries where employment is not necessarily acquired on merit but on linkages that an individual has. Therefore, much as the human capital theory is critical in relating education to increased productivity and earnings, this works hand in hand with other attributes such as the social attributes.

Unit Five

Analysis of Educational Costs and Benefits

5.1 Educational Costs

Costs of Education refer to the amount of money spent either by the individual to acquire education or by the government to impart education. From the point of view of the individual, costs refer to the amount of money spent by the individual during a particular period to acquire education. From the point of view of the state or government it refers to the amount of money spent by the state on education during a year. Costs incurred by the state also called *social/public costs of education* include expenditures incurred on staff salaries, equipment and buildings, maintenance costs of apparatus, library books, and sports. Costs incurred by individuals or their households also called *private costs of education* include expenditure on books and stationery, school fees, travel cost and in case of students making use of hostels, it will also include rent of hostel accommodation, and mess charges.3

In economics, costs are used when reference is made to the production of goods and services. It implies the cost of resources utilised in the production of goods and services. It can be expressed in monetary terms. It has always to be with reference to an economic transactor such as a producer, or seller, or buyer/consumer. Literature in economics has distinguished between real costs and money costs. *Real costs* are said to correspond to the sacrifice of resources or inputs needed to produce goods and services. Therefore, real cost corresponds to opportunity cost; because opportunity cost refers to the foregone output that could have been produced had the input been utilised in the next best way. In education, real costs are the alternative foregone by governments and individual households when they invest in education.

5.1.1 The Direct Private Costs of Education

Households with children in both private and public schools incur direct and indirect costs to keep these children in school. These are also called private costs of education. Direct costs include fares for uniforms, school supplies, books, and transportation, contribution to parent groups, and even tuition or school fees and building fund. In the era of the liberalization of the education sector in the developing world where the private sector is

becoming dominant in education, the direct private costs of education have increased. Even in situations where there is government intervention, for example, where there is universal primary education where government meets the biggest proportion of expenditure, households still have to incur direct costs such as buying books, uniform and catering for the feeding of children. It is also important to note that in the developing world the private costs are low at lower levels of education because of government policies of spending more at this level. Private costs are high at higher levels of education because of the low government subsidies and the privatisation of the higher education sector. It should also be noted that resources spent by the government on education could be used in other sectors like health, roads, or industry and therefore that alternative investment foregone by the government is an indirect cost.

5.1.2 The Indirect Private Costs of Education

The indirect private costs of education are costs not directly paid for by the individual but they are incurred as tradeoffs for investing in education. The Indirect costs of education for the individual for example may include the foregone income of the child's work in the labour market, the foregone contribution of the child to home or farm production, and the value of parents' time contributed to school activities. In developing countries, the opportunity cost of basic education seems to be higher compared to alternatives like contributing family labour in the gardens, farms and as such school dropout rates have been increasing at the lower levels. The opportunity cost of higher education is also high because high school and university students are of working age. Parents also sacrifice income and time to the education of their children which income could have had alternative uses.

5.1.3 The direct Social Costs of Education

Social costs are incurred by the government from the tax payer to facilitate the running of education programmes. For most governments education takes the biggest proportion of the national budget and this covers the private costs of education. From society's perspective, the direct costs of education include the value of the time of teachers measured in terms of salaries paid to them and the value of the physical resources such as books, scholastic materials, rental value of buildings and any other equipment used in the education process. There are other costs incurred in designing educational programs and curricula and paying educational staff at different levels in the education sector.

5.1.4 The Indirect Social costs of Education

From both the social and private perspectives, indirect costs are the value of the student's time, typically measured as earnings foregone which would benefit both the students and the nation. Student's time is a cost because a student could be earning an income or performing other activities if he or she were not spending time studying. In economic terms, the value of the student's time is called an opportunity cost since it is not a direct out-of-pocket expense. Some scholars (see e.g. Ray, 1984; Psacharopoulos, 1981; Murphy, 1993) suggest that even though indirect, the opportunity cost of time is a very important cost to consider in evaluating investments in education. If, for example, a student studying full-time in a university course could have been earning a salary of $5,000 per year, then the $5,000 must be counted as part of the total cost of the student's investment.

5.2 Educational Benefits

Education yields direct and indirect benefits both to individuals and to society. The private educational benefits are the expected direct and indirect returns that accrue to the educated and their families as a result of attaining a given level of education. Economists measure the **direct private benefits** as the incremental life time earnings attributed to the extra-education received. If a graduate teacher earns 50% more than a grade five teacher, then the 50% increment measured in shillings per year constitutes the private direct benefits of attending school up to university. Other direct benefits include increased opportunity for employment, work related benefits like good offices, housing and health insurance. The knowledge and improved productivity are advantages that directly go to the individual who acquires education.

5.2.1 Indirect private benefits:

Education also creates indirect benefits to individuals. Such benefits for the educated include the following:

- Early childhood education benefits the child and family in that the child receives both education and child care services. This happens in circumstances where the parents especially the mother is free to earn some income.
- Intergenerational benefits arising from the link between education of parents and the education attainment of their off springs.

- The utility derived from the improved social status and prestige is an indirect benefit that goes to the individual who acquires education.
- Improved health status and hygiene. Educated individuals live in more hygienic environment.

5.2.2 Social Educational Benefits

These are direct and indirect benefits to society as a result of its members acquiring a given level of education. The direct social benefits include the higher productivity of educated workers and their additional contribution to national income over their entire working life span. The higher life time earnings of educated man power may be used to measure the direct benefits of education to society under the assumption that the relative earnings of workers reflect their productivity. Therefore, additional earnings are a proxy measure of the high output of the educated. Education also yields indirect benefits to society (externalities or spill over benefits). This means that benefits of education spill over to those who neighbor with them. Examples of these include: crime reduction; social cohesion and learning new ways of life; democratic governance (mass education for example is thought to be a threat to dictatorship); reduction of fertility rate and affordable families.

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