

1. Details of module and its structure

Module Detail	
Subject Name	Economics
Course Name	Economics 01 (Class XI, Semester - 1)
Module Name/Title	Human Capital Formation – Part 1
Module Id	keec_10501
Pre-requisites	Knowledge about human and economic growth.
Objectives	After going through this lesson, the learners will be able to understand the following: <ul style="list-style-type: none">• Meaning of human capital, human resource development and economic growth.• Sources of human capital formation.• Significance of human capital formation.
Keywords	Human capital, physical capital, human development, economic growth.

2. Development team

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Introduction

In every economy, without exception, the foremost goal of planners is to achieve decent rates of economic growth. There are economies which have achieved a high rate of economic growth and there are others which have remained a laggard. The obvious question is - what causes this difference in the performance of these economies? There have been various explanations to this question in economic literature. One important explanation is in terms of Human Capital.

Education is sought not only as it confers higher earning capacity on people but also for the highly valued benefits that it generates. It gives a person better social standing and pride and enables one to make better choices in life. It also equips human beings with the knowledge to understand the changes taking place in a society, it also stimulates innovations.

Efficiency level, working capacity and skills of an educated and well-trained person are usually regarded as superior to that of an untrained or uneducated person. Thus, it is clear that education and training enhance people's working potential, both quantitatively and qualitatively. Therefore, education and training boost productive efficiency and increase individuals' income and subsequently her contribution to national income of the economy. Thus, expanding education opportunities in a Nation accelerates development process.

Concept of Human Capital

Just as a country can turn physical resources like land into physical capital like factories, farms, plants etc. similarly, the country can also turn human resources like students into human capital like engineers, teachers and doctors. Societies need sufficient human capital in the form of well-trained

and qualified people. Thus, human capital is the precondition of economic growth. What does human capital exactly mean? It may simply be looked at as a particular type of capital. Thus, “Human capital refers to the skills and knowledge intensity of the labor force in an economy, which are essentially acquired through schooling and training.”

Sources of Human Capital Formation

Human capital formation deals with capabilities which are developed through formal and informal education at school and at home, and through measures taken to training, improvement of health and nutrition levels and mobility in the labour market. There are a number of ways by which human capital can be developed. Investment in education is considered to be an important source of human capital. There are other sources such as investment on health, on-the-job training, rural development, expenditure on migration, information and communication etc. The different sources of human capital formation are discussed below:

- **Expenditure on Education:** Expenditure on education (one of the most important indicators) is the most important way of enhancing and enlarging any productive work force in the country. Investment in education promotes economic growth. It helps in creating a productive labour force by adding to their knowledge and skills. It helps in getting employment and income earning opportunities to teachers, workers, manufacturers etc. Education helps in providing basic skills and encourages modern attitudes in the people. It helps in achieving growth with equal opportunities for all. Economists have focused on the need for expanding educational opportunities in a nation as it accelerates the development process along with justice. Spending on education by individuals is similar to spending on capital goods by companies. Individuals invest in education to increase their future income and raise the living standard of masses. It widens the opportunities in order to make a better choice in life. It helps in stimulating innovations by adopting new technologies.
- **Expenditure on Health:** Health expenditure is a source of human capital formation as it directly increases the supply of healthy labour force and leads to qualitative improvement in human capital. Poor health and undernourishment adversely affect the quality of manpower. ‘A sound mind resides in a sound body’ is an old saying. Expenditure on health makes a person more efficient and productive. A large number of poor people living below subsistence levels in underdeveloped countries suffer from malnutrition. A sick labour, without access to medical facilities, is compelled to abstain from work and there is loss of productivity. Therefore, expenditure on health is important to build and maintain productive labour force and to

improve quality of life of people in the society. Adequate food and proper nourishment to people, along with adequate health and sanitation facilities lead to qualitative improvement in human capital. More and better organized health facilities and human power including hospitals and medical aid facilities are needed. It is required that free medical aid to the poor and down-trodden are provided.

- (i) **Preventive Medication** e.g. vaccination;
- (ii) **Healing Medication**, i.e., medical intervention during illness;
- (iii) **Social Medicine**, i.e., spread of health facilities, literacy and awareness;
- (iv) Provision of clean drinking water.
- (v) Good Sanitation facilities.

The general health standard in India is very low. This is reflected in the high incidence of morbidity in the country. This is related to poverty of people, who do not get even a square meal a day.

Hospitals are located at far places and medical care is unattainable to them.

- **On-the-Job-Training:** As stated earlier, productivity of physical capital is substantially enhanced with the improvement in human capital. Due to this reason, many firms provide on-the-job training to their workers. Such training has the advantage that it can be provided fast and without much cost. It increases the skill and efficiency of the workers and leads to an increase in production and productivity. On-the-job-training may take different forms.

Workers may be trained in the firm itself under the supervision of a skilled worker; and/or workers may be sent for off campus training. Such training has an advantage that it can be provided fast and without much cost. On-the-job training can be tailored to the learning capabilities and needs of the individuals working on particular machines. Such trainings increase the skill and efficiency of the workers and lead to an increase in production and productivity.

After on-the-job-training of employees, a firm may insist that the workers should work for a specific period of time, so that it can cover the benefits of the enhanced productivity owing to the training. It is a source of human capital formation, as return of expenditure on such training, in the form of enhanced labour productivity, is more than the cost of it.

- **Expenditure on Rural Development:** Education can contribute significantly to rural development in a variety of ways. It can widen their horizon and help to overcome their superstitions. Adoption of new agricultural techniques and new methods are rendered easier, if farmers are educated. In a labour surplus economy like India, education can help rural people in

acquiring skills to set up cottage industries on their own and get employed fruitfully, which can also help in solving the problem of seasonal unemployment.

- **Expenditure on Migration:** People migrate from one place to another in search of jobs that fetch them higher salaries. Unemployed people from rural areas migrate to urban areas in search of jobs. Technically qualified persons (like engineers, doctors, etc.) migrate to other countries because of higher salaries that they may get in such countries. Migration in both these cases involves cost of transportation from one place to another and higher cost of living in the migrated places. Expenditure on migration is a source of human capital formation as increase in earnings in the migrated place is more than the increase in costs due to migration. The enhanced earnings in the new place outweigh the cost of migration, hence expenditure on migration is also a source of human capital formation.
- **Expenditure on Information and Communication:** Expenditure is incurred to acquire information and communication relating to labour market and other markets. It involves amount spent on enhancing the information and communication technology and making the technology resources available in remote areas at an affordable cost. For example, people want to know the salary levels and other entitlements associated with various types of jobs. Similarly, they may want to know whether the educational institutions provide the right type of employable skills and at what cost? Information is necessary to make rational decisions regarding investments in human capital as well as for efficient utilization of the acquired human capital stock.

Physical Capital and Human Capital

Physical Capital means that part of production which is used for further production. Physical capital has a life-span, which means that after certain years its value would depreciate with passage of time. Its requirement depends upon the desired rate of economic growth. It is a tangible input. Physical capital is completely mobile between countries except for some artificial trade restrictions. The entrepreneur possesses knowledge to calculate the expected rates of return over a range of investments in physical capital and rationally decides which investment decision should be made. On the other hand, Human Capital refers to the stock of skill, ability, expertise, education and knowledge embodied in the person. Human Capital is needed to make effective use of physical capital. There is a need for investment in human capital to produce more human capital. Societies have sufficient human capital in the form of competent people who have themselves been educated

and trained as professors and other professionals. In other words, we need good human capital to produce other human capital in future (say, architectures, doctors, engineers, etc.)

Nature of benefits from both capitals are different. Human capital benefits not only the owner but also the society in general. It creates both private and social benefits. This is called external benefit. For example, an educated person can effectively contribute to socio-economic development of the country. On the other hand, physical capital creates only private benefit. For example, the benefit from a capital goods flow to those who pay the price for the product and services produced by it.

Human Capital and Human Development

Human capital is dependent on education and health as a means to increase labour productivity. Human development is based on the idea that education and health are integral to human well-being because only when people have the ability to read and write and the ability to lead a long and healthy life, they will be able to make other choices which they value. Human capital treats human beings as a means to an end; the end being the increase in productivity. In this view, any investment in education and health is unproductive if it does not enhance output of goods and services.

On the other hand, in the human development perspective, human beings are wants in themselves. Human welfare should be increased through investments in education and health sectors even if such investments do not result in higher labour productivity. They need to be educated and healthy to live a meaningful life and make rational choices. Therefore, basic education and basic health are important in themselves for the well being of people, irrespective of their contribution to labour productivity.

Human Capital and Economic Growth

We know that the labour skill of an educated person is more than that of an uneducated person and that the former i.e. skilled labourer generates more income than the latter i.e. unskilled one. Economic growth means the sustained increase in real national income of a country. Knowing that a healthy person can provide uninterrupted labour supply for a longer period of time, health is also an important factor of economic growth. Thus, both education and health, along with many other factors like on-the-job training, job market information and migration, increase an individual's income generating capacity. Many of the countries remained underdeveloped as the masses in the countries are either illiterate or their level of education is low. Most of them are unskilled or untrained and their general health is very poor.

The enhanced productivity of human beings or human capital contributes substantially not only towards increasing labour productivity but also stimulates innovations and creates ability to absorb new technologies. Education provides knowledge to understand changes in society and scientific advancements and thus, facilitates inventions and innovations. Similarly, the availability of educated labour force facilitates adaptation to new technologies. There are reasons to believe that the causality between human capital and economic growth flows in either directions. That is, higher income leads to high level of human capital and vice versa. Thus high level of human capital causes growth of income, and higher income levels lead to higher investments in human capital formation. India recognised the importance of human capital in economic growth long ago. The Seventh Five Year Plan says, “Human resources development has necessarily to be assigned a key role in any development strategy, particularly in a country with a large population. Trained and educated on sound lines, a large population can itself become an asset in accelerating economic growth and in ensuring social change in desired directions.”

Thus, human capital plays an important role in economic development. In fact, effective use of physical capital itself is dependent upon human resources. Large scale investment in human resources are needed if physical capital is to be exploited in an efficient way.

Importance of Human Capital Formation

The importance/role of human capital formation will be clear from the following points:

- 1. Effective use of Physical Capital:** The growth and productivity of physical capital depends mainly on the human capital formation. Effective use of physical capital depends upon human resources. The physical capital can be created only by means of hard and intelligent work of human beings in the economy since it requires technical, professional and administrative people. Hence, human skill and their efforts help in effective utilization of physical capital.
- 2. Increased productivity and GDP:** Human capital formation raises the productivity and production as a knowledgeable and skilled worker makes better use of the resources. Increase in productivity and quality production depends on technical skill of the people, which can be acquired only by means of education, training and maintaining the health of the people. Investment in human capital helps increase knowledge relating to management of resources, technology and production and helps in acquiring new skills.
- 3. Inventions, innovations and technological improvement:** The human capital formation stimulates innovations and creates ability to absorb new technologies. Education provides knowledge to understand changes in society and scientific advancements, which facilitates

inventions and innovations. Similarly, the availability of educated and well-trained labour force facilitates adaptation to new technologies.

- 4. Modernization of attitudes:** The knowledgeable, skilled and physically fit people are powerful instrument of change in the society. Economic development of a country depends on the minds of the people and their changing attitudes towards creating a desire for development. Investment in human capital helps in changing mental outlook and promotes development of the economy.
- 5. Increases life expectancy:** Formation of human capital raises life expectancy of the people. Health facilities and availability of nutritive food enable people to lead a healthy and long life. This in turn, adds to the quality of life.
- 6. Improves Quality of Life:** The quality of life depends upon the level of education, health of a person and skill formation acquired by the people. Human capital formation not only makes people productive and creative, but also transforms the lives of the people. People start living and enjoying higher incomes and a more satisfying life.
- 7. Control of population growth:** Education helps in modernizing the way of thinking of people. It enlightens them to the need to improve their standard of living by restricting the size of their families. As more and more women get education and seek employment, they prefer small families. It has been observed that educated people have smaller families as compared to illiterate families. So, spread of education is necessary to control the population growth rate.

Summary

Human capital refers to the skills, knowledge and expertise which an individual acquires in order to widen the opportunities, add to their earning capacity and make a valuable contribution to the society and country. Physical capital means that component of production which is used for further production, utilised properly by human capital. Human capital uses physical capital for further production. Human capital formation refers to the addition made to the available human capital over a period of time. The economic and social benefits of human capital formation and human development are well established.