NCERT Solutions for Class 11 Economics
Indian Economic Development Chapter 5
Unit III- Human Capital Formation In India

Exercise : Solutions of Questions on Page Number : 96

Q1 : What are the two major sources of human capital in a country?

Answer :

Human capital is a stock of skill and expertise of a nation at a particular point of time. The contribution of human skills and expertise towards economic growth and development is invaluable. This is because a stock of quality enriched human capital raises individual efficiency and productivity thereby raising the aggregate production and economic well being of a country. Thus, the importance of investment in enriching human capital is immense and long lasting. The following are the two prime ways o to develop human capital qualitatively:

i. **Investment in Educational Sector**: Education not only raises the standard and quality of living but also encourages modern attitude of the people. Moreover, education increases the productive capacity and productivity of a nation's workforce by honing their skills. Further, education increases the acceptability of modern techniques and also facilitates a primitive economy to break the shackles of tradition and backwardness. An investment in educational sector has two fold benefits. It not only increases the income earning capacity but also reduces the skewed distribution of income thereby forming an egalitarian society. The investment in educational sector has long lasting returns. It not only enhances the present economic condition but also improves the future prospects of a country. The importance of education is not only limited to making people educated. but also in facilitating an underdeveloped economy to solve different but interrelated macro economic problems like, poverty, income inequality, population, investments, under utilisation of resources. Therefore, investment in education must be accorded high priority in an underdeveloped country as it leads to the enhancement of human capital qualitatively.

ii. **Investment in Health Sector**: There is a saying “The greatest wealth is health”. The wealth of a country can be increased with the efforts of healthy workforce. Investment in health sector increases efficiency, efficacy and productivity of a nation's workforce. In contrast to an unhealthy person, a healthy person can work better with more efficiency and, consequently, can contribute relatively more to the GDP of the country. Good health and medical facilities not only increase life expectancy but also improves quality and standard of life. Investment in health sector ensures the perennial supply of healthy workforce. Some of the common expenditures incurred in the health sector are on providing better medical facilities, easy availability of life saving drugs, common vaccination, spread of medical knowledge, provision of proper sanitation and clean drinking water, etc. Thus, the expenditure incurred on health is important in building and maintaining a productive work force that in turn leads to the development of quality human capital in a country.

Q2 : What are the indicators of educational achievement in a country?

Answer :

Education makes a person well equipped with skills. An educated person is more skillful and productive than an uneducated person. Consequently, the former enjoys higher income earning capacity than the latter. Therefore, the prime indicator of educational achievement is the income earning capacity of an individual. Besides this, there are other essential indicators whose scope is even wider. These are:

1. **Adult Literacy Rate**: This rate indicates the percentage of the literate adult population who are aged 15 years and above. The word literacy in this context is confined only to the ability to read and write. It provides a measure of the stock of literate persons
within the adult population. This rate is expressed in terms of percentage. Higher the percentage of adult literacy rate, higher the educational achievement in a country. This rate is the most important indicator for a country as it indicates the percentage of the population that can participate in the economic activity of the country.

2. **Youth Literacy Rate**: This rate indicates the percentage of literate people between the age of 15-24 who can read and write. It denotes the stock of literate population within the youth population. This is an important indicator of educational achievement in a country. This is because of the fact that majority of a country's population is not able to continue their education till this age. Therefore, higher the youth literacy rate, higher will be the achievement of a country in terms of education.

3. **Primary Education Completion Rate**: This rate indicates the percentage of students completing the last year of primary school. Primary education includes students of the class group 1 to 8 in the age group of 6-14 years. It includes basic education in reading, writing and mathematics along with an elementary understanding of other subjects such as history, geography, natural sciences, social sciences, art and music. Lower primary education completion rate leads to lower youth literacy rate and, hence, lower adult literacy rate.

---

**Q3:**

*Why do we observe regional differences in educational attainment in India?*

**Answer:**

India is a land of diverse culture, religions and communities. Every region has its own customs and tradition. Also, as we go from one state to another, we find many differences in terms of language, habit, culture, need, climate, etc. Due to these differences, there exist regional differences in the educational attainment in our country. There exists a difference in the pattern of education across India. Some regions lack educational facilities whereas some give undue importance to education. For example, states like Bihar, Rajasthan, U.P and Arunachal Pradesh are educationally backward whereas, states like Kerela, Tamil Nadu and Uttanchal have higher literacy rates. Generally, it can be observed that the states that lack employment opportunities and where the standard of living is close to the subsistence level, education is given lesser importance. People in such states are engaged either in agricultural sector or informal sector that has very less to do with education. The opportunity cost of sending children to school in such states is very high than employing them. The neglect of education in these regions is primarily because of the low standard of living and poverty. These people cannot afford to send their children to school and, in fact, employ them either in the farm lands or in informal sector. Further, it can also be observed that male children across India have lopsided access to education compared to female children. Besides the above factor, there are other factors like custom, climate, etc. that explains the regional differences in educational attainment in India.

---

**Q4:**

*Bring out the differences between human capital and human development.*

**Answer:**

Human capital and human development are interrelated concepts but they are not identical. While human capital refers to the stock of a nation's human skills and expertise at a particular point of time human development refers to holistic development and well being of a nation's human capital. On one hand, human capital considers education and health as a means (skills and expertises) to enhance productive capacity, on the other hand human development considers human beings as end in itself. The important difference between human capital and human development is associated with the difference in the motive of investment. While human capital focuses on investment in education and health sector to increase productivity and efficiency of workforce, on the other hand, human development focuses on investment in education and health sector to increase the general well being and standard and quality of living of human capital. If investment fails to increase the efficiency and income earning capacity, then human capital regards the investment to be unproductive. But, human development advocates in favour of such investments even though these had failed to bring out higher productivity and efficiency. Human development protects every individual's right to get education and lead a healthy life.
Q5: How is human development a broader term as compared to human capital?

Answer:

Human development is a broader term as compared to human capital because human capital is a means to an end whereas human development is an end in itself.

Human capital considers education and health as a means to make a human being a good productive person. Human capital is a means to an end, where means implies skills that are used in the process of production and end denotes the consequent increase in the productivity. The higher levels of output can be achieved through extensive application of human capital.

On the other hand, human development is an end in itself which refers to the holistic development of the individuals. The development can be possible only by acquiring good education and attaining good health. Therefore, education and health are the two main features of human development. Human development occurs when majority of people in the economy are educated and healthy. Thus, the end signifies the development of an individual via education and health. Therefore, we can conclude that human development is a broader term as compared to human capital.

Q6: What factors contribute to human capital formation?

Answer:

Human capital formation is an aggregate outcome of the investments in education, health, transport and communication sector, technical know-how and on-the-job training and migration. These factors are explained below.

i. Education

Education not only raises the standard and quality of living but also encourages modern attitudes of people. Moreover, education increases the productive capacity and productivity of a nation's workforce by honing their skills. Further, education increases the acceptability of the modern techniques and also facilitates a primitive economy to break the shackles of tradition and backwardness. An investment in educational sector has two fold benefits. It not only increases the income earning capacity but also reduces the skewed distribution of income, thereby, forming an egalitarian society. The investment in educational sector has long lasting returns. It not only enhances the present economic condition but also improves the future prospects of a country. The importance of education is not only limited to making people educated but also in facilitating an underdeveloped economy to solve different but interrelated macro economic problems like, poverty, income inequality, population, investments, under utilisation of resources. Therefore, investment in education must be accorded high priority in a country.

ii. Health

There is a saying “The greatest wealth is health”. The wealth of a country can be increased with the efforts of healthy workforce. Investment in health sector increases efficiency, efficacy and productivity of a nation’s workforce. In contrast to an unhealthy person, a healthy person can work better with more efficiency and, consequently, can contribute relatively more to the GDP of a country. Good health and medical facilities not only increase the life expectancy but also improve quality and standard of living. Investing in health sector ensures the perennial supply of healthy workforce. Some of the common expenditures incurred in the health sector are on providing better medical facilities, easy availability of life savings drugs, common vaccination, spread of medical knowledge, provision of proper sanitation and clean drinking water, etc. Thus, the expenditure incurred on health is important in the building and maintaining a productive work force.

iii. On-the-Job Training

Training refers to the act of acquiring skills, knowledge and competency required to perform a particular job efficiently and effectively. On-the-job training is the most effective kind of training to a trainee, imparting him the technical skills and know-how at the actual work site. In this type of training, a trainee is assisted (or hands on) and trained by a trainer (usually by an experienced employee) when the trainee is actually doing the job. This helps the trainee not only to acquire the theoretical and practical skills simultaneously but also enables him to learn from the experiences of his trainer and, thereby, can increase his efficiency and productivity. This is the most common type of training programs because the returns in terms of increased productivity far exceed the cost of the training. Thus, the expenditures on such training improve the quality of human capital by enhancing its productivity, efficiency and income earning capacity.
iv. Migration

Migration refers to the movement of people from underdeveloped or developing countries to developed countries in search of better avenues. Migrations contribute to human capital formation as it facilitates the utilisation of inactive or underdeveloped skills of an individual. The cost of migration involves cost of transportation and cost of living at the migrated places. Usually, the cost of migration is very high due to the high cost of transportation and high cost of livelihood in the developed countries. But still, people migrate in search of better job opportunities and handsome salaries. Migration of human capital helps the underdeveloped countries to acquire technical skills, efforts reducing methods and efficient way of performing tasks. These skills and know-how are transmitted by the migrated people to their home country that not only add to the economic growth and development but also enhance the human capital of the home country.

v. Information

The degree of availability of jobs, salaries and admissions related information also play an im

---

**Q7:**
Mention two government organisations that regulate the health and education sectors.

**Answer:**
The Indian government regulates education and health sectors through the following organisations:

i. **NCERT (National Council of Education Research and Training):** The organisation is responsible for designing the textbooks up to standard 12th.

ii. **UGC (University Grants Commission):** This organisation is the prime funding authority for university education. It also enforces rules and regulation regarding higher education.

iii. **AICTE (All India Council for Technical Education):** It enforces rules and regulations regarding technical engineering education in the country.

iv. **ICMR (Indian Council for Medical Research):** This organisation formulates the rules and regulations relating to education and research in health sector.

v. **National Institute of Health and Family Welfare:** This organisation is responsible for promotion of health and family welfare programmes.

---

**Q8:**
Education is considered an important input for the development of a nation. How?

**Answer:**
Education is considered as an important input for the development of a nation because the development of a nation rests on the proportion of the educated people in the country. The significance of education in the economic development of a nation is explained through the following points:

i. **Imparts Quality Skills and Knowledge:** Education endows people with quality skills, thereby, enhancing their productivity. Consequently, it enhances the income earning capacities of and opportunities for the people. Moreover, it also enables human capital to utilise the available physical capital optimally.

ii. **Develops Mental Abilities:** Education develops mental abilities of people and helps them to make their choice rationally and intellectually. Education churns out good citizens by inculcating values in them.

iii. **Acceptability of Modernisation:** An educated public of a nation has greater acceptability of modernisation and modern techniques. This not only helps the economy to grow but also facilitates a primitive economy to break the shackles of tradition and backwardness.

iv. **Eradicates Skewed Income Distribution:** Education not only increases the income earning capacity but also reduces the skewed distribution of income, thereby, forming an egalitarian society.
v. **Raises Standard and Quality of Living:** Education enhances the income earning capacity of people and, thereby, raising the standard of living and improving the quality of living.

vi. **Increases the Participation Rate:** It fosters economic development by increasing the participation of people in the process of growth and development.

vii. **One Solution for Other Economic Problems:** The importance of education is not only limited to making people educated but also in facilitating an underdeveloped economy to solve different but interrelated macro economic problems like poverty, income inequality, population, investments, under utilisation of resources.

Q9: Discuss the following as a source of human capital formation

(i) Health infrastructure

(ii) Expenditure on migration.

**Answer:**

(i) Health infrastructure

There is a saying “The greatest wealth is health”. The wealth of a country can be increased with the efforts of healthy workforce. Investment in health sector increases efficiency, efficacy and productivity of a nation’s workforce. In contrast to an unhealthy person, a healthy person can work better with more efficiency and, consequently, can contribute relatively more to the GDP of the country. Good health and medical facilities not only extends life expectancy but also improves quality and standard of life. Investing in health sector ensures the perennial supply of healthy workforce. Some of the common expenditures incurred in the health sector are on providing better medical facilities, easy availability of life savings drugs, common vaccination, spread of medical knowledge, provision of proper sanitation and clean drinking water, etc. Thus, the expenditure incurred on health is important in building and maintaining a productive work force.

(ii) Expenditure on migration

Migration refers to the movement of people from underdeveloped or developing countries to developed countries in search for better avenues. Migrations contribute to human capital formation as it facilitates the utilisation of inactive or underdeveloped skills of an individual. The cost of migration involves cost of transportation, and cost of living at the migrated places. Usually, the cost of migration is very high due to the high cost of transportation and high cost of livelihood in the developed countries. But still, people migrate in search of better job opportunities and handsome salaries. Migration of human capital helps the underdeveloped countries to acquire technical skills, efforts reducing methods and efficient ways of performing tasks. These skills and know-how are transmitted by the migrated people to their home country that not only add to the economic growth and development but also enhance the human capital of the home country. If the gains from migration outweigh the migration costs then it can be inferred that migration leads to better utilisation of human capital skills.

Q10: Establish the need for acquiring information relating to health and education expenditure for the effective utilisation of human resources.

**Answer:**

The degree of availability of jobs, salaries and admissions related information plays an important role in the determination of human capital. The availability of jobs and admissions related information not only help the students to opt for the best choice according to their interest areas but also leads to the effective utilisation of human skills and knowledge. Some of the important medium of catering different information related to jobs, eligibility criteria, posts and salaries are Employment News (Rozgar Samachar), Employment Exchanges, various TV programs and government and non-government websites. While on the one hand, expenditures on education enhance human skills and their utilisations, on the other hand, the expenditure on health improves health, efficiency, quality of living and life expectancy of people. The expenditure incurred on the availability of medical information and health awareness determines the health of the people. The acceptability and the use of medical information and family welfare programmes are often obstructed by lack of its publicity and promotion. Often people are reluctant to opt for various health services.
measures due to the lack of complete knowledge and information. For example, few years back, people knew very little about polio and about its vaccination. But due to the constant efforts by various government and non-government organisations under the Pulse Polio Immunisation Program, people are now well aware of polio. Therefore, it is due to the continuous publicity and various awareness campaigns, this program have gained public consciousness. Thus, the expenditure on the spread of information (of education and health) determines the effectiveness and efficacy of human capital.

Q11:
How does investment in human capital contribute to growth?

Answer:
Human capital and economic growth goes hand in hand. Human capital formation accelerates the economic growth whereas economic growth in turn facilitates human capital formation. The interrelationship between economic growth and human capital formation can be explained with the help of the below mentioned points.

1. **Increase in the Productivity of Physical Capital:** Physical capital refers to the stock of produced means of production. It consists of machines, production plants, tools and equipments. The skilled workers handle the productive assets in such a manner that these not only enhance their productivity and but also lead to an efficient utilisation of the physical capital. When the productivity increases, the pace of growth is automatically accelerated.

2. **Innovation of Skills:** An educated person is more productive and skillful. He has the potential to develop new skills and innovate new techniques that can be more efficient and productive. Greater the number of skilled and trained personnel, greater will be probabilities of innovations.

3. **High Participation Rate and Equality:** Human capital endowed with higher technical skills and innovating power is more productive and efficient. This increases the participation of more people in the process of economic growth and development. Higher the participation rate, higher is the degree of social and economic equality across the country.

Thus, we can conclude that human capital and economic growth goes hand in hand. Human capital formation accelerates the economic growth whereas economic growth also facilitates human capital formation.

Q12:
There is a downward trend in inequality world-wide with a rise in the average education levels. Comment.

Answer:
Theoretically, there is a negative relationship between education level and degree of inequality. This relationship has been practically established across the world in recent decades. Education not only imparts technical skills but also at the same time enhances productivity of a person. An educated person, endowed with higher productivity and efficiency enjoys relatively higher income earning capacity. The higher income earning capacity and greater acceptability of modern techniques raise the standard and quality of living. Distribution of income has become less skewed and gap between the rich and the poor has been narrowing slowly. Gradually, the importance of education is being realised world-wide and, consequently, governments of different countries have been investing heavily in the education sector. With the rise in average education levels, not only inequality but also other problems like, poverty, underutilisation of resources and inferior standards and quality of life have been minimised.

Q13:
Examine the role of education in the economic development of a nation.

Answer:
An increase in the level of production of goods and services of a country along with improvement in the quality of life is referred to as economic development. The role of education in the economic development of a nation is explained through the following points:
Q14: Explain how investment in education stimulates economic growth.

Answer:
An increase in the level of production of goods and services (national income) of a country over a certain period of time is referred to as economic growth. Higher level of investment in education sector would lead to higher proportion of educated people working with higher participation in economic activities and, therefore, would lead to higher economic growth. The following are the various ways in which investment in education stimulates economic growth:

i. **Imparts Quality Skills and Knowledge**: Education endows people with quality skills and, thereby, enhances their productivity. Consequently, it enhances the income earning capacities of and opportunities for people. Moreover, it also enables human capital to utilise the available physical capital optimally.

ii. **Develops Mental Abilities**: Education develops mental abilities of people and helps them to make their choice rationally and intellectually. Education churns out good citizens by inculcating values in them.

iii. **Acceptability of Modernisation**: An educated public of a nation has greater acceptability of modernisation and modern techniques. This not only helps the economy to grow but also facilitates a primitive economy to break the shackles of traditions and backwardness.

iv. **Eradicates Skewed Income Distribution**: Education not only increases the income earning capacity but also reduces the skewed distribution of income and thereby forms an egalitarian society.

v. **Raises Standard and Quality of Living**: Education enhances the income earning capacity of people and, thereby, it raises the standard of living and also improves the quality of living.

vi. **Increases the Participation Rate**: It fosters economic development by increasing the participation of people in the process of growth and development.

vii. **One Solution for Other Economic Problems**: The importance of education is not only limited to making people educated but also in facilitating an underdeveloped economy to solve different but interrelated macro economic problems like poverty, income inequality, population, investments, under utilisation of resources.

Q15: Bring out the need for on-the-job-training for a person.
Answer:

Training refers to the act of acquiring skills, knowledge and competency required to perform a particular job efficiently and effectively. On-the-job training is the most effective kind of training to a trainee, imparting him the technical skills and know-how at the actual work site. In this type of training, a trainee is assisted (or hands on) and trained by a trainer (usually by an experienced employee), when the trainee is actually doing the job. This helps the trainee not only to acquire the theoretical and practical skills simultaneously but also enables him to learn from the experiences of his trainer, thereby, can increase his efficiency and productivity. This is the most common type of training programs because the returns in terms of increased productivity far exceed the cost of the training. Thus, the expenditures on such training improve the quality of human capital by enhancing its productivity, efficiency and income earning capacity.

The need for on the job training has been highlighted in the following points:

i. On-the-job training is the most common method to train freshers or new employees.

ii. This type of training helps the trainee to acquire the theoretical and practical skills simultaneously.

iii. It enables the person to absorb values, norms and standards of an organisation within the organisation because the employee sees them in everyday action.

iv. As it is done under the supervision of a skilled or experienced worker, the trainee can learn from the experiences of the supervisor.

v. It is a cost efficient method as the benefits accruing in terms of higher productivity outweigh the expenditure incurred on such training.

Q16:

Trace the relationship between human capital and economic growth.

Answer:

Human capital and economic growth goes hand in hand. Human capital formation accelerates the economic growth whereas economic growth in turn facilitates human capital formation. The interrelationship between the economic growth and the human capital formation can be explained with the help of the below mentioned points.

1. **Increase in the Productivity of Physical Capital**:
   Physical capital refers to the stock of produced means of production. It consists of machines, production plants, tools and equipments. The skilled workers handle the productive assets in such a manner that these not only enhances their productivity but also leads to an efficient utilisation of the physical capital. When the productivity increases, the pace of growth is automatically accelerated.

2. **Innovation of Skills**:
   An educated person is more productive and skillful. He has the potential to develop new skills and innovate new techniques that can be more efficient and productive. Greater the number of skilled and trained personnel, greater will be probabilities of innovations.

3. **High Participation Rate and Equality**:
   Human capital endowed with higher technical skills and innovating power is more productive and efficient. This increases the participation of more people in the process of economic growth and development. Higher the participation rate, higher is the degree of social and economic equality across the country.

Thus, we can conclude that human capital and economic growth goes hand in hand. Human capital formation accelerates the economic growth whereas economic growth also facilitates human capital formation.

Q17:

Discuss the need for promoting women’s education in India.

Answer:

The access to education has always been lopsided towards India’s male population. Women have always been neglected in the field of education. The weaker and lower status of women in India can be attributed to the negligence of their education. Women
have always been considered as a liability for a family. The roots of such thoughts are deep rooted in the traditional beliefs and customs. The role of women in the economic and social spheres cannot be neglected in order to achieve overall economic development and growth. With the rise in the educational levels and modernisation, people have realised the importance of female education. The need for female education should be highlighted in India in order to empower women. The following are the important points that advocate in favour of promoting women education:

i. Women education is essential for improving their economic independence and economic feasibility.
ii. Women education is important in order to raise the social and moral status of women.
iii. It plays a significant role in maintaining favorable fertility rate.
iv. Health care of women and children can be enhanced with education imparted to women.
v. An educated women can infuse good moral values and can impart quality education to her children.

Q18 :
Argue in favour of the need for different forms of government intervention in education and health sectors.

Answer :
India being a federal country, expenditures on both education and health are carried out by all the three tiers of the government. In India, the education and health sectors services are provided both by the public as well as by the private institutions. While, the private institutions are guided by the market and profit motive, on the other hand, the public institutions are guided by the main motive of rendering services and to enhance human capital. As the cost of education and health facilities provided by private institutions is higher, so it is difficult for the majority of population to avail these services because of their economic inability. Thus, it is very important for the government to provide quality education and health facilities to this section of the population. Moreover, private institutions are unable to reach remote and rural areas where people lack initiative for education and health. In this context, the role of government to encourage them and to make them aware of advantages of education and health cannot be substituted. Also, there are some underprivileged sections of population like, ST, SC, OBC, the interests of whose can only be protected by the interference of government. Moreover, people as individual consumers do not have complete information about the quality of services and the related costs. This often leads to exploitation of people. Hence, government intervention in health and education sector is must in order to enhance the quality of human capital.

Q19 :
What are the main problems of human capital formation in India?

Answer :
India is faced with many problems of human capital formation. These are as follows:

i. Rising Population: The rising population exerts pressure on the available limited resources. In other words, it reduces the per head availability of facilities like housing, sanitation, education, power supply, etc. So, the pressure on these facilities retards the quality of life and lowers the capacity to acquire specialised skills and knowledge.

ii. Brain Drain: People migrate from one place to another in search of better job opportunities and handsome salaries. This puts a serious threat to the process of human capital formation. It leads to the loss of quality people like doctors, engineers, etc. who have high caliber and are rare in a developing country. The cost of such loss of quality human capital is very high.

iii. Improper Man Power Planning: India lacks in proper man power planning. No major efforts have been taken to maintain the demand-supply balance of the rising labour force. So, it leads to the wastage and misallocation of human skills.

iv. Low Academic Standards: In order to spread education, various educational institutions are opening up regardless of deficiency in their standards. These institutions impart inferior quality of education and skills and that in turn causes deficiency in the productivity and efficiency. This is one of the important hindrances for the development of quality human capital formation.
Q20:
In your view, is it essential for the government to regulate the fee structure in education and health care institutions? If so, why?

Answer:
Education and health sectors are the two key sectors responsible for the formation of good quality human capital. The development of these two sectors are emphasised by almost all the less developed countries. In India, expenditures on both education and health sectors are carried out by all the three tiers of the government and also by private institutions. While, private institutions are guided by market and profit motive, the public institutions are guided by the main motive of rendering services and to enhance human capital. As the cost of education and health facilities provided by the private institutions is higher, so it is difficult for the majority of the population to avail these services because of their economic inability. Thus, it is very important for the government to provide quality education and health facilities to this section of the population. Further, as the Indian constitution counts right to free education and medical facilities as the fundamental right of citizens, so it is the responsibility of the government to provide education and health services to all. Moreover, the private institutions are unable to reach the remote and rural areas where people lack initiative for education and health. In this context, the role of government is to encourage them and to make them aware of the advantages of education and health. Also, there are some underprivileged sections of population like ST, SC, OBC, the interests of whose can only be protected by the interference of the government. Moreover, the people as individual consumers do not have complete information about the quality of services and the related costs. This often leads to exploitation of people. Hence, government intervention in health and education sector to regulate the fees structure is must in order to enhance the quality of human capital.