UNIT- 12: EDUCATION AND BRAIN DRAIN

UNIT STRUCTURE

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12.1 LEARNING OBJECTIVES

After going through this unit, you will able to

- define the meaning of brain drain.
- explain the causes of brain drain.
- assess the impacts of brain drain in developing country like India.
- elaborate the trend and magnitude of brain drain from IITs and IIMs in India.

12.2 INTRODUCTION

The international migration or outflow of skilled and trained personnel from developing countries to developed countries is called brain drain. These developing countries are generally the poor nations especially from the coun-

tries of Asia and the destination countries are the rich nations especially countries of Europe and North America (USA and Canada). Thus, the phenomenon of brain drain is a one-sided transfer of human capital from the poor to the rich countries particularly in search of higher incomes and opportunities. These personnel are highly skilled and trained mostly in the fields of scientific and technical subjects and sometimes they also belong to humanities and managerial subjects. Similar definition of brain drain is also propounded by UNESCO. According to UNESCO, 'brain drain could be defined as an abnormal form of scientific exchange between countries, characterised by a one-way flow in favor of the most highly developed countries'.

12.3 BRAIN DRAIN AND REVERSE TRANSFER OF TECHNOLOGY

Brain drain is a form of 'reverse' transfer of technology because it is a one-way transfer of productive resources embodying technology in human skills from the developing to receiving developed countries, thus limiting the developing countries' capacity for development. It is a real transfer of productive resources from poor to rich countries. In as much as technology is a combination of knowledge and capital equipment, the migration of people with skills is clearly a transfer of technology. Since such transfer takes place from the developing to the developed countries or from the poor to the rich, the phenomenon has been termed a 'reverse' transfer of technology. Further, in so far as knowledge and skills are acquired as the combined result of investment in education, training and allied activities and nurture and maintenance of the persons concerned, they could be considered a form of productive resource embodied in human beings, or human capital.

12.4 CAUSES OF BRAIN DRAIN

There are many causes of brain drain. Some of the important causes of brain drain are as discussed below:

- **Higher salary in destination country**

  Higher salary in the destination country is the most important reason

of brain drain especially in the developing countries like India. Highly educated and skilled persons from India migrate to developed countries like USA, UK and other European countries only in search of highest paid job.

- **Availability of Research and Development (R&D)**

  The availability of numerous opportunities in the field of research and development (R&D) is another important factor of brain drain after high salary. Many academicians and scientists opt for job in American and European countries only for research and development.

- **Higher standard of living**

  The standard of living in most of developed countries is very high. Hence, the attraction towards high standard of living especially persons from poor countries fuels the process of brain drain.

- **Better working environment**

  The working conditions and environment is very hygienic and cozy in terms facilities available in the offices in the developed countries of America and Europe. Thus, migration to those countries for job is very widespread and obvious.

- **Lack of employment opportunities**

  Lack of employment opportunities in the underdeveloped countries is another reason of brain drain from underdeveloped countries (source countries) to the developed countries (destination countries). According to many economists, high rate of unemployment is the most important reason of brain drain in the underdeveloped countries which compelled the highly educated or skilled persons to search for job in the developed countries.

12.5 IMPACTS OF BRAIN DRAIN

There are many effects of brain drain. But all affects are not negative althose the impact of Brain drain vary from the developing to the developed countries. The following facts mentioned ought to indicate that brain drain is actually influencing the availability of highly qualified personnel in the devel-

oping countries. These highly developed personnel are, however, a vital development potential for the underdeveloped countries. In the 1970 report of the Secretary-General of the United Nations on brain drain, it is underlined that many of the factors motivating people to migrate from the developing countries to the developed countries are based on the problem of underdevelopment. On the other hand, if most of the educated people do migrate then the development of the underdeveloped countries is not possible. Besides, this in turn, causes more migration from the underdeveloped regions to the developed which again affect the potentiality to develop.Some of the important effects of brain drain are discussed below.

12.5.1 Effect of Brain Drain on Developing Countries

(i) The developing countries had to cover, among others, high costs fort the raining of highly qualified personnel, notably for their higher education. In case of brain drain, those expenses are lost for the societies of the developing countries.

(ii) From many developing countries, highly qualified persons are migrating who were fully employed there. Often this results in a lack of personnel in these countries. Often the countries concerned are forced to call on the services of foreign experts, which cause enormous costs.

(iii) Brain drain also worsens the regional distribution of highly qualified personnel in the developing countries according to the social development requirements. As long as a medical doctor has at any time the possibility to migrate to a developed country he is not bound to practice in rural areas where he is urgently needed.

12.5.2 Effect of Brain Drain on Ceveloped Countries

(i) The economies of the countries with developed market economy are largely profiting from the immigration of highly qualified per-

sonnel from developing countries. In the field of public health, it was estimated that the US had to build and operate 15 to 20 medical schools in order to train the number of nationals commensurate to the number of physicians and nurses emigrated from other countries.

(ii) Through brain drain the receiving countries are able to save training costs for highly qualified personnel of their own.The training costs saved are often many times more than the costs the developing countries had to spend on the training of these personnel.

(iii) Besides financial profits, brain drain has also positive effects on the institution of the labour market in the receiving countries.The net effect of this is that the development of science and technology has been accelerated in the developed countries and has been slowed down in the drained countries. As those examples prove brain drain from developing countries to developed capitalist countries produces unequal effects for the societies involved. Lord Bowden put it that in the 1960s 'brain drain may well mean that fields in India will remain uncultivated in order that America may put a man on the moon'.



CHECK YOUR PROGRESS

Q 1. What is brain drain?

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Q 2. What are the causes of brain drain?

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Q3. What are the effects of brain drain on the developing countries?

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Q4. What are the effects of brain drain on developed countries?

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12.6 BRAIN DRAIN FROM IITs AND IIMs

IITs and IIMs are the premiere institutions of higher education in India. These educational institutions are renowned for producing huge number of highly skilled and trained graduates and postgraduates having competence of international level. But the Government of India is unable to employ most of these graduates (human capital) at home because of many reasons such as the prevailing low salary and lesser opportunitiesof research and development in the country. The magnitude of brain drain from India is the second largest after China. According to the UNESCO's Report-Global Education Digest 2009, every year more than 1 lakh students going abroad for higher education and in search of jobs in the developed countries are from India.

Initially in 1960s, medical doctors as part of brain drain were the largest emigrants from India to the USA and other developed countries. But, after the 1960s, the nature of brain drain had shifted from medical sciences to engineering and basic sciences. Nowadays, management graduates and post graduates have also started migrating for better opportunities in the developed countries. However, almost one-third of the total IIT engineers still migrate to the developed countries and they are mostly from the backgrounds of Electrical Engineering, Chemical Engineering, Aeronautical Engineering, Civil Engineering, Mechanical Engineering and Metallurgical Engineering. Moreover, the students of MBA from IIMs is another large source of brain drain in India.

12.7 PROBLEMS OF BRAIN DRAIN IN INDIA

Brain drain is a direct loss of trained experts in many fields to the underdeveloped and poor countries. On the other hand, it is a net gain to the advanced countries. According to a UNO report, every year thousands of experts are migrating from the backward countries to the advanced countries like USA, UK, Canada, Germany etc. The underdeveloped countries are spending millions of rupees on the training of these experts. But the advanced countries are utilising their services without spending any money on their training. Every year, thousands of highly talented doctors, engineers, scientists and other intellectuals leave India and migrate to foreign countries. They generally go to the USA, UK, Canada, West Germany, etc. for monetary gains and facilities for higher research. The USA is the biggest gainer from the loss of India due to brain drain. In 2010, India with an estimated stock of 11.4 million emigrants was the second emigration country in the world, behind Mexico (11.9 million). In absolute terms, India is among the countries which lose most highly-skilled workers to foreign markets. In 2000, India was, for example, the first sending country of physicians with 57,383 or 9.9% of the total number of physicians trained in the country going abroad. India and the Philippines supply the most foreign-trained doctors and nurses to the OECD, notably to the English-speaking countries. The emigration of health professionals has negative effects on India, especially in the rural areas where the density of doctors is lower than in the urban areas. Despite the increasing internal demand, India still has a very low density of doctors (0.6 per thousand people in 2004) compared with 3 in the US and 2 in Canada. Compared with other large countries, India records higher expatriation rate of doctors that is 8%; while the expatriation rate of say Chinese doctors is about 1%. This does not prevent, of course, India from having a large and powerful modern health sector; as in other countries, the migration of health professionals may coexist with a dynamic urban sector and the inequitable social distribution of medical resources at the country level.

Most of the students who go abroad for higher studies do not return to

India. After seeing, the affluent life of the foreign countries, they lose all interest in their own country. Many Indians are teaching at various US Universities and other Institutions of higher learning. Some of them are placed in quite lucrative and high posts. There is another attraction of leading a higher standard of living in foreign countries, because the technical experts and intellectuals are given special facilities there. In foreign countries, there is another advantage that over while learning, a person can also earn his own living. The stipends in foreign countries are sufficient enough. A frugal Indian Student living there can also save something to send home. There is no doubt that India is having vast natural and man power resources. If both these resources are put to the maximum utilisation, astounding advancement can be achieved in all fields. These technical and other talented reasons that we lose every year, can greatly help in the development of our natural resources and the government must take speedy steps to attract back home these talented sons of India who are living abroad. These experts can surely help in making India a great power in the world. In this connection, even the people should also come forward and cooperate with the Government in solving this problem. Parents of the students should not encourage them to go abroad and settle there even if they are paid high salaries. The doctors, engineers and scientists owe a duty to their motherland. Our nation is spending huge amounts of money on their training. These people should not betray their own nation by serving foreign nations. Nowadays, thousands of young Indian scientists and technicians are devoted to the cause of rebuilding our nation. The country has already achieved the nuclear status as well as become a space power. There are enough opportunities for all the Indian scientists and engineers settled abroad, if they come back to India. They should play an important role in future progress of our country and share the honour of participating in this sacred task.



12.8 LETS US SUM UP

- The international migration (outflow) of skilled and trained personnel from the developing countries to the developed countries is called brain drain.

- These developing countries are generally the poor nations especially from the countries of Asia and the destination countries are the rich nations especially countries of Europe and North America (USA and Canada).
- Brain drain is a form of 'reverse' transfer of technology because it is a one-way transfer of productive resources embodying technology in human skills from the developing to the receiving developed countries, thus limiting the developing countries' capacity for development.
- There are many causes of brain drain. Some of the important causes of brain drain are-Higher salary in the destination country, the availability of numerous opportunities in the field of research and development (R&D), high standard of living and better working environment and soon.
- There are many effects of brain drain. But all effect are not negative and the effects have different aspects both under the developing and developed countries.
- In the 1970 report of the Secretary-General of the United Nations on brain drain, it is underlined that many of the factors motivating people to migrate from the developing to developed countries are based on the problem of underdevelopment.
- However, reasons of brain drain in the developing countries are slightly different from developed countries.
- IITs and IIMs are the premiere institutions of higher education in India and are renowned for producing huge number of highly skilled and trained graduates having competence of international level.
- But the Government of India is unable to keep these graduates (human capital) at home because of many reasons particularly the prevailing low salary and lesser opportunities of research and development in the country.
- India is among the countries which lose the most highly-skilled workers to foreign markets. In 2000, India was the first sending country of physicians with 57,383 or 9.9% of the total number of physicians trained in the country going abroad.

- Compared with other large origin countries, India records higher expatriation rate of doctors that is 8%; while the expatriation rate of, say, Chinese doctors is about 1%.
- Nowadays, thousands of young Indian scientists and technicians are devoted to the cause of rebuilding our nation. The country has already achieved the nuclear status as well as become a space power. There are enough opportunities for all the Indian scientists and engineers settled abroad, if they come back to India. They should play an important role in future progress of our country and share the honor of participating in this sacred task.



12.9 FURTHER READING

1. Adams, W. (ed.) (1968). *The Brain Drain.* Macmillan, New York
2. Bhagwati, J.N. (ed.) (1976). *The Brain Drain and Taxation.* Vols. 1 and 2, North Holland, New York
3. Psacharopoulos, George. (ed.) (1987). *Economics of Education: Research and Studies.* Pergamon Press, Oxford
4. Varghese, N.V. & Tilak, J.B.G. (1991). *The Financing of Education in India.* International Institute for Educational Planning, Paris



12.10 ANSWERS TO CHECK YOUR PROGRESS

Answer to Q No.1:

The international migration or outflow of skilled and trained personnel from the developing to the developed countries is called brain drain. These developing countries are generally the poor nations especially from the countries of Asia and the destination countries are the rich nations especially the countries of Europe and North America (USA and Canada). Thus, the phenomenon of brain drain is a one-sided

transfer of human capital from the poor to the rich countries particularly in search of higher incomes and opportunities. These personnel are highly skilled and trained mostly in the fields of scientific and technical subjects and sometimes they also belong to humanities and managerial subjects.

Answer to Q No.2:

There are many causes of brain drain. Some of the important causes of brain drain are higher salary in the destination country, the availability of numerous opportunities in the field of research and development (R&D), high standard of living and better working environment.

Answer to Q No.3:

The developing countries had to cover, among others, high costs for training of highly qualified personnel, notably for their higher education. In case of brain drain, those expenses are lost for the societies of the developing countries.

From many developing countries, highly qualified persons are migrating. This often results in a lack of personnel in these countries. Often the countries concerned are forced to call on the services of foreign experts, which cause enormous costs.

Brain drain also worsens the regional distribution of highly qualified personnel in the developing countries according to the social development requirements. As long as a medical doctor has at any time the possibility to migrate to a developed country, he is not bound to practise in the rural areas where he is urgently needed.

Answer to Q No.4:

The economies of the countries with developed market economy are largely profiting from the immigration of highly qualified personnel from the developing countries. In the field of public health, it was estimated that the US had to build and operate 15 to 20 medical schools in order to train the number of nationals commensurate to the number of physicians and nurses emigrated from other countries.

Through brain drain, the receiving countries are able to save training costs for highly qualified personnel of their own. The training costs saved are often many times more than the costs the developing countries had to spend on the training of these personnel.

Besides financial profits, brain drain also has positive effects on the institution of the labour market in the receiving countries. The net effect of this is that the development of science and technology has been accelerated in the developed countries and has been slowed down in the drained countries. As these examples prove, brain drain from the developing to developed capitalist countries produces unequal effects for the societies involved. Lord Bowden put it that in the 1960s 'brain drain may well mean that fields in India will remain uncultivated in order that America may put a man on the moon'.



12.11 MODEL QUESTIONS

Q 1. What is brain drain?

Q 2. What is 'reverse' transfer of technology?

Q 3. Explain the important causes of brain drain.

Q 4. What are the negative impacts of brain drain on developing countries?

Q 5. What are the effects of brain drain on developed countries?

Q 6. Explain brain drain as 'reverse' transfer of technology.

Q 7. Explain the negative and positive effects of brain drain on developing countries.

Q 8. Explain the impact of brain drain on the developing countries.

Q 9. Explain the impact of brain drain on the developed countries.

Q 10. Write a note on brain drains from IITs and IIMs.

Q 11. Illustrate the problems of brain drain in India.

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