

## CHAPTER - I

### INTRODUCTION AND METHODOLOGY

## 1.1 INTRODUCTION :-

Economists have long been aware of the importance of human capital and human resource development. Adam Smith pointed out the significance of investment in education and human capital. In this opinion " a man educated at the expense of much labour and time to any of those employments which require extraordinary dexterity and skill, may be compared to one of those most expensive machines." <sup>1</sup> Alfred Marshall emphasised the importance of education " as a national investment" and in his opinion, " the most valuable of all capital is that invested in human capital." <sup>2</sup> Before Marshall, Ricardo and Malthus too supported investment in education, since, in their opinion too, education inculcates the habits of prudence, economy and self improvement. <sup>3</sup> Mill had also expressed a similar line of thinking when he wrote, "For the purpose, therefore of altering the habit of the labouring people . . . and effective national education of the labouring class is the first thing needful." <sup>4</sup>

Modern economists have however, not paid any explicit attention to human resources in economic growth. <sup>5</sup>

In the second half of the twentieth century, some economists started again to attach more and more importance to this human capital formation. Theodore W. Schultz, in

his presidential address to the American Economic Association in 1960, said " The failure to create human resources explicitly as a form of capital, as a produced means of production, as the product of investment, has fostered the retention of the classical notion of labour as a capacity to do manual work requiring little knowledge and skill and a capacity with which, according to this notion labourers are endowed about equally. This notion of labour was wrong in the classical period and it is particularly wrong now. Counting individuals who can and want to work and treating such count as a measure of the quantity of an economic factor is no more meaningful than it would be to count the number of all kinds of machines to determine their economic importance either as a stock of capital or a flow of productive services"<sup>6</sup>

In the opinion of Simon Kuznets, the measures of capital formation based on fixed capital are deficient as they omit expenditure for education, non profit research, recreation etc. which, " contribute to economic growth by increasing the efficiency of a complex productive system"<sup>7</sup>

The foregoing paragraphs suggest that the concept of human capital and that of human resource development and their contribution to economic growth have received attention, explicit or implicit, of almost all economists, the classicals as well as modern.

The underdeveloped countries are or may be deficient in Physical capital but they are not so in respect of human capital. The human capital with the underdeveloped countries, therefore, tends to migrate to the developed countries. Such manpower generally follows the golden rule of research given by E.S. Phelps,<sup>8</sup> according to which the more technologically progressive the economy is, the more educated manpower it requires. Obviously the human capital gets attracted to the countries where the rate of economic growth is comparatively high.

In the post second world war years, most of the countries have become development minded. The less developed countries which have been poor and stagnant for centuries together, are in a state of revolt against poverty, ignorance and dominance by stronger nations and "they are no longer disposed to entrust their future exclusively to the forces of the market the whim of nature or the judgement of colonial rule!"<sup>9</sup> Such less developed countries have already started going for mass education and making huge investments, particularly in technical and medical-higher education. The most unfortunate thing is, however, that this highly qualified manpower gets attracted to the developed countries.

The flow of scientists, engineers and doctors. . . the skilled manpower. . . from the less developed countries to

the developed ones is referred to as international flow of human capital or brain-drain.

## 1.2 OBJECTIVES OF STUDY :-

The present study on the problem of brain drain from India has been undertaken with a view to achieving the following objectives :

- a) Giving a theoretical review of the international flow of human capital or brain-drain.
- b) Attempting formulate a new approach for guaging benefits and losses from brain-drain to the less developed countries.
- c) Providing empirical evidences and formulating them into the new theoretical framework.
- d) Giving recommendations and suggestions on the possibility of having a brain-drain tax.

## 1.3 METHODOLOGY OF STUDY :-

Considering the fact that the study aims at basically providing a theoretical model for guaging the benefits and losses from brain-drain to the developing countires, it is mainly a library work which implies deductive method of analysis, but it is not purely a deductive method, that has been followed



since it also takes into account the factual data relating to the problem.

While collecting the data together, the secondary sources giving the requisite data, have been tapped. Since the data relating to the actual brain-drain from India to United states of America, have been available on a more reasonably comparable basis, only the same have been used.

The data regarding brain migration from developing countries to the United states were available for 1963 to 1973 and the same have been used to project the extent of migration for the subsequent period.

The other data required for computing the per migrant benefits and losses to the sending country consisting of potential incomes, cost on education, tax revenue, and remittances have all been calculated for the year 1980-81 to make them relevant to the projected figures of actual brain-drain to the United states.

The variables mentioned above however, could not be calculated by following any single method, since all these variables demand independent calculations.

The actual methods of calculating the above variables have been described, with their assumptions, at their appropriate

places in this study report, and hence they are not elaborated here.

Thus various types of data have been obtained from the secondary sources and then have been properly arranged and organised for the purpose of analysis and interpretation,

#### 1.4 SIGNIFICANCE OF STUDY :-

The present study is important since, there are hardly any such attempts made to actually quantify and build model for guaging the benefits and losses from brain-drain.

It is also significant since it provides a new theoretical approach to the problem of brain-drain.

The study is particularly significant as it attempts at exploring the possibility of taxing the brain-drain, which in itself provides a solution to the problem of brain-drain.

#### 1.5 REVIEW OF LITERATURE :-

Beginning from 1966, a lot of studies have been conducted on the problem of brain-drain. Although all the books and the published reports or various studies were not available, an attempt has been made to get as many as possible of them and to study the cross-referred contents of the rest.

It was in 1966, when Grubel and Scott<sup>10</sup> published their

theoretical analysis of the international flow of human capital. In their theory, they established that the brain-drain from less developed countries to more developed ones entails only frictional losses, that too in the form of the externalities of the migrants.

The theory was supported by some other economists by providing either empirical evidences or the analytical explanations of some other aspects of the problem. The writings of Harry Johnson<sup>11</sup>, Needleman<sup>12</sup> and E.J. Mishan<sup>13</sup> are some of such attempts.

The views expressed by Grubel and Scott were criticised particularly by N.D. Aitken<sup>14</sup>, Brinlay Thomas<sup>15</sup> and Don Patinkin.<sup>16</sup> The main contention of this criticism was that, the brain-drain involves grave losses to the less developed countries in the form of unrewarded capital investment in education, the research and technical innovations, that would have been possible because of the emigrants, potential tax revenue from them and so on. V.M. Dandekar pointed out that the normal international trade theory is not applicable in case of trade of the brains as it is only a one-way trade.<sup>17</sup>

Walter Adams published his edited collection of essays and case studies of brain-drain in 1968.<sup>18</sup> He has given a critical description of both the approaches to the problem i.e. the approach of global interest and that of national interest.



K.N. Kabra pointed out that brain-drain is not confined only to the emigration of doctors, scientists and engineers but it is also in the form of the highly qualified manpower working on the projects financed by the less developed countries.<sup>20</sup>

Dr. A.K.N. Reddy in his work, has mainly explained the causes of brain-drain from India.<sup>21</sup> The study of Mansingh Das is also of the similar nature.<sup>22</sup>

The United Nations conference on Trade and development (UNCTAD) study on the reverse transfer of technology or brain-drain has also been published which highlighted the ways in which the intergovernmental cooperation could be evoked for providing solutions to the problem of brain-drain.<sup>23</sup> This study is particularly significant as it has compiled some useful data pertaining to brain-drain from the developing countries that can be used for further study.

The United Nations Institute for Training and Research has also published a report of its study on brain-drain.<sup>24</sup> It was published in 1978 and it provides very useful analysis of causes and implications of brain-migration particularly of student population by providing details about those who continue to reside in the country of immigration and those

who prefer to come back to their home country after the completion of the study.

A number of research articles have been published in the periodicals and journals.

Sampat Mukhopadhyaya has distinguished between internal and external brain-drain.<sup>25</sup> However, this distinction is of a limited use for the studies of this kind.

B.K. Banerjee has suggested some remedial measures to overcome the problems of brain-drain by explaining some deeper dimensions of the phenomenon. He has tried to elaborate the correlation between the socio-economic conditions of less developed countries and brain-drain, in addition to providing a clearer meaning of some of the related and inter-changeably used terms such as brain-migration, brain-overflow etc.<sup>26</sup>

The articles written by Vandana Pednekar,<sup>27</sup> G. Chandra<sup>28</sup> and S.Nagarajan<sup>29</sup> describe the adverse effects of brain-drain on a country like India.

Some other articles including those written by L.M.Dixit<sup>30</sup> Manas<sup>31</sup> and B.K. Khadria<sup>32</sup> have also contributed in not so small a measure to a clearer perspective of the phenomenon.

Besides these articles and the studies mentioned earlier there are a number of other publications which could not be made available for study.

To recapitulate it has to be stated that there is no paucity of literature on the subject and the study of this literature certainly provided a reasonable understanding of the problem.

#### 1.6 THE CHAPTER SCHEME :-

The present study is mainly of an explorative nature and as such it has a limited objective of bringing together the relevant information as also of attempting a new theoretical model for gauging the benefits and losses stemming from brain-drain. Following is the outline of the chapter scheme adopted for this study.

This first chapter reviews the relevant literature and is designed to provide an introductory prelude to the study undertaken.

The second chapter discusses the theoretical foundations of brain-drain.

The third chapter deals with some basic concepts and then with the extent of migration from India to the United states, followed by the description of causal factors and some other implications of brain-drain.

The forth chapter provides the results of empirical verification of the suggested model.

The fifth, chapter discusses the possibility of levying a brain-drain tax and it also suggests the system of collecting the tax.

The sixth i.e. the last chapter provides the summary and conclusions of the study.

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