Chapter I

INTRODUCTION
The present developing countries has since recently been growing at a relatively faster rate than at any time in the past. The per capita income also increases at a rate higher than those achieved by today's developed countries in their early years of development. This is particularly true for the developing countries like India since it is not necessary to go through all the stages of growth that the developed countries had undergone or experienced in their history of development. Economic growth and development in modern time is generally brought about by scientific and technological advancement which is generally associated with the replacement of labour intensive by capital intensive techniques of production. This brings about a systematic improvement in equipments, machines and tools. For proper utilization of these machines and other equipments, it is necessary to improve the skill and knowledge possessed by manpowers. However, scientific and technological improvement cannot be evolved without proper training and education of the labour force. A country may be rich in natural and physical resources such as machinery and other capital equipments, but unless there are men who can mobilise, organise and harness nature's bountiful resources for the production of goods and services, the country cannot make rapid progress towards economic and social advancement. It is, therefore, imperative for developing countries to build up and formulate systematic manpower requirement projection to generate the ever increasing requirements of scientific knowledge and technological improvement. Thus, "the fundamental problem in developing countries is, therefore, not so much the creation of wealth but rather the creation of the capacity to create wealth".
There is a growing realisation that human capital acts as an active agent to increase production and productivity. Natural resources and physical capital alone are not sufficient in developing a highly productive economy. Human skills and expertise are essential in fueling the dynamics of development. Anderson and Bowman traced the linkage between early industrialisation in the west and literacy and they showed that the development and transmission of practical knowledge and intellectual skills are at the heart of economic development. They made a conclusion of their studies that:

"... a dynamic economy can be launched and sustained only through the efforts of men at all social levels who embody both conventional learning and technical manipulative skills - including specifically skills in the decoding of instructions and the 'debugging' of new processes. A complex economy rests on widely diffused tools for communication, storage, and retrieval of knowledge."

Another study undertaken by an American economist, Edward F. Denison identified the contribution of different factors of production to the increase in the national income or gross national product (GNP) of the United States between 1910 and 1960 by using the concept of production function. His preliminary analysis showed that increases in the quantity of labour and physical capital did not explain the increase in GNP. There was a large 'residual factor'. He suggested that improvements in the quality of the labour force, including increased education, were important, together with other factors such as technological progress and economies of scale. He concluded his analysis that increases
in the level of education of the labour force accounted for as much as 23 percent of the annual rate of growth of GNP in the United States between 1930 and 1960. Another studies have also been taken up by economists like R. Solow, B. Massal and O. Auckrust and the broad conclusion which emerges from these studies is that major part of growth in production in the developed countries, over the last half a century, cannot be accounted for by the inputs of physical capital, man-hours and natural resources. The major part of the growth in production must be ascribed to technical progress and the investment in education, training and research.

Economic growth and development may be the result of many factors. But the contribution of human capital rather than physical capital, has gained ground in recent years. However, most of the human capital formation takes place through the process of training and education of the labour force. The contribution of education to growth and development in turn occurs through the increase in the productivity of labour force in various ways. A fast growing economy requires more people who can read and write in order to keep financial records, read plans and blueprints, and carry out similar functions related to the production and distribution of goods and services. Higher levels of per capita income are also based on a higher level of scientific and technological attainment, requiring a larger number of scientists, technicians, engineers, and doctors to conduct research and oversee the technological adaptation of research. Moreover, in general, countries that have higher levels of income also have higher levels of educational attainment. However, education and
training of manpowers for the development of the economy is a long-term process. It is, therefore, necessary to plan education and training of labour-force well in advance so as to ensure availability of skilled manpowers of right types in right numbers and to avoid the using of scarce resources in educating more people than required or to prevent shortage of manpower of requisite types acting as bottlenecks constraining development.

Thus, changes in economic structure necessitate changes in the structure of manpower as well which can be manipulated more efficiently through planned rather than market forces. For self-sustaining economic growth, it is, therefore, necessary to integrate manpower projections and educational planning as a part of national economic planning. The success of development planning depends on whether planning for educational development is consistent with manpower requirement, on the one hand, and whether manpower requirements and educational planning go hand in hand with planning for economic development. It is, therefore, obvious that manpower planning based on realistic estimates for the present and perspective manpower requirement is now-a-days the core of development planning. However, manpower projections are an integral part of national economic planning in general and educational planning in particular. The need for manpower projection arises because: first, economic development is very often the direct result of improvement in the techniques of production that are generally brought about by the substitution of capital for labour and the systematic improvement in the existing equipments. The new techniques of production call for the employment of labour force
having the relevant specialized skill and knowledge. Therefore, the training and education of manpower should be planned in advance so that shortages and surpluses of these specialized manpower would not hinder the economic development of a country. Secondly, projection of future manpower requirement would help individual student and their parents in shaping their future careers and courses of studies. Prospect of employment and rate of return from investment will be the most important deciding factors in this regard; and lastly, there have been efforts to place medium term plans into long-run perspective planning so that the structures of the economy and the labour force can be influenced.

Mizoram, being a late starter in development planning, is lagging behind the other states of India. Prior to the attainment of Union Territory status in 1972, there was practically no development programmes and schemes sponsored by the central or the state government. It was one of the remostest districts of Assam and had been neglected for a long time. After the district became Union Territory, some planning programmes and schemes were started in different departments. But this was not enough. Moreover, lack of the resources and expertise in planning had been felt in many fields, especially in manpower planning. Although, Mizoram has one of the highest literacy percentage in India, it is also one of the most backward states in the country. This may, perhaps, be due to the lack of education planning in general and technical manpower in particular. The educational system has been dominated by general education rather than scientific and technical education. This is
clearly seen from the fact that there are more than one thousand institutions for general education as against only two for technical education, i.e. Polytechnic Institute at Lunglei and Industrial Training Institute at Aizawl. The number of matriculate and above who registered themselves as on 1.4.1987, with the employment exchange at Aizawl alone were 8652 as recorded in the Statistical Handbook of Mizoram. Unfortunately, none of these people has a degree or even diploma in technical education.

The important role that technical manpowers play in the economic development of a backward state like Mizoram can hardly be over-emphasised. Shortage of supply of specialised manpowers like doctors and engineers no doubt, hinders the economic development of the state. However, since Mizoram became Union Territory, the government has taken up some measures by sending students to study medicine and engineer in different institutions of the country. The supply of these highly specialised technical manpower has been increasing. After Mizoram attained statehood in the year 1986, the number of seat reserved also increased and the number of students enrolled in technical education also become larger. This means that there is an increase in the supply of skilled manpower, but it is still far short of the rapidly increasing demand.

Moreover, in a new state like Mizoram where developmental planning is still at an early stage, it is very necessary to start in a right direction. For a steady and self-sustaining economic growth, proper planning programmes and schemes have to be implemented. Economic growth and development of the state can go along smoothly if there is a proper manpower planning. This
has, therefore, prompted us to take up this problem for an indepth study. Moreover, to the best of our knowledge, no empirical attempts have ever been made to study manpower planning in general and the planning of technical manpower requirements like doctors and engineers in particular with respect to a particular state like Mizoram. This will, therefore, be the first ever attempt, albeit a modest one, in the study of the demand-supply interrelations with respect to doctors and engineers in Mizoram. The study attempts to investigate the nature and conditions of the labour market in a fast growing but still backward economy of Mizoram.

The major objective of the study are:

i) to investigate the nature of the demand for and the supply of two highly specialized types of manpowers viz., doctors and engineers and to establish the interrelation between the demand for and the supply of these two technical manpowers in Mizoram,

ii) to examine the interrelations between education and occupation, education and earning, and earning differentials between industries and firm,

iii) to estimate the extent of unemployment or under employment among doctors and engineers in Mizoram,

iv) to investigate the substitution possibility between formal education and informal training such as diplomas, certificate, in-service or on-the-job training and experiences, and

v) attempts have also been made to look into the existence of migration of these specialised technical manpowers to and from Mizoram and to highlight the implications thereof while analysing the problems.
Sources of Data

Data, both the demand and supply side, are collected from government departments. Departments under study have been approached personally and through questionnaires and information regarding the educational qualification, experience, salary, grade, etc. with respect to doctors and engineers are collected from the employers. Besides, information relating to the future prospects of the technical manpowers are drawn from various publications by the department concerned in the form of books, booklets, journals, magazines, etc. Personal interviews and questionnaires, to get more detailed information, are also made.

Methodology

From the informations collected, matrices are prepared in the form of table which serve as the major tools of our analysis. In these matrices, we indicate interrelations between occupation, education, earning, industries/firms etc. Firstly, we prepare the table representing Occupation-Education-Industry-Earning matrix from the raw data which form the master table of our analysis. Various occupations are grouped into occupational code according to the International Standard Classification of occupation adopted by the International Labour Organization (ILO). For further detailed analysis of the demand side the following matrices are prepared:

1) Occupation-Education Matrix,
2) Education-Occupation Matrix,
3) Earning-Education Matrix, and
4) Earning-Occupation Matrix.

The supply side informations are supplied by the candidates who have finished different levels and types of technical education. These job seekers are mostly government sponsored students in different technical institutions of the country.

Chapterization

The study have been divided into the following chapters:

The first chapter deals with the nature and importance of manpower planning for economic development and growth of a country. It forms the general introduction of the subject highlighting the role of manpower in the economic development of the developed countries of the west. Chapter two contains the general background of the economy of Mizoram. In chapter three, a short review of literature relevant with the subject is given and chapter four contains the empirical analysis of the subject and lastly chapter five presents the major findings and conclusion of the study.

All the statistical tables are contained in the Statistical Supplements. Important abbreviations are appended in the Appendix.
References