CHAPTER II

PROCESS AND PATTERN OF ECONOMIC DEVELOPMENT

Economic development particularly in the underdeveloped countries has become a major problem since the last world war. In order to have a clear picture of this challenging problem, there is need to study the economic features of underdeveloped countries and compare them with those of the advanced countries so as to indicate the process and pattern of development suitable to underdeveloped countries. The analysis of their structural characteristics will also throw light on economically significant theoretical models for economic growth. This chapter will, therefore, delineate features of underdeveloped economies, indicate classical and post-classical approach into the nature and causes of economic growth and analyse their suitability to underdeveloped countries and finally, in the light of experiences of other countries, chart out a desirable and feasible pattern of development.

Features of underdeveloped countries:

It is difficult to divide the world in a clear-cut manner into developed and underdeveloped countries, by adopting a particular yard stick. There are vast differences in natural endowment, economic conditions, cultural heritage, social organisation and political traditions between one region and another. Some areas are over-populated, some others underpopulated. Some of the Latin American countries have relatively abundant natural resources whereas countries like Transjordan, Libya and Japan have meagre resource-endowments. Foreign trade forms an
important source of income for Venezuela, Chile and Colombia, but it is relatively insignificant for India, Ethiopia and a number of other low-income countries. There is also difference in the degree of industrialisation between different areas. New Zealand, Denmark and Australia have developed efficient and high-income economies; yet primary industries are the core of their economic activity. Israel and Japan, on the other hand, have a large proportion of their population employed in factories and in services; but their levels of living are much below the Danish or Australian standards. It is, therefore, not possible to use any single yard stick to determine what is a 'developed' and what is an 'underdeveloped' region (1).

There are however some common characteristics which are applicable to the majority of the underdeveloped areas. Professor Harvey Leibenstein has given a long list of these characteristics (2). In his comprehensive list, he has covered a wide area and has included economic, demographic and health, technological and cultural-political features. Only those characteristics which are economically important will be discussed here.

1. Low per capita income:

The most commonly used indicator to measure the degree of development of a country is its per capita income. In


analysing the meaning of 'underdeveloped', the group of experts appointed by the U.N.O., emphasised this feature. "We have had some difficulty in interpreting the term underdeveloped countries. We use it to mean countries in which per capita real income is low when compared with the per capita real incomes of the United States of America, Canada, Australia and Western Europe. In this sense, an adequate synonym would be 'poor countries' "(3).

There are difficulties in making international comparisons in respect of per capita real income. Firstly, there is difference in the degrees of monetisation between different countries. Since national income measures are primarily related to market-bound activities, income estimates of poor countries do not give a clear picture of their level of living. For example, when the value of domestic services of housewives and relations is excluded from national income estimates of underdeveloped countries, it leads to under-estimation of their real income. It would seem rather arbitrary to incorporate into national income the services of female labour for sowing the grain, cultivating the soil, gathering the harvest and grinding the corn, and then to exclude the services of family members in cooking meals, washing dishes and rearing children.

Variations in statistical reliability, differences in concepts used for computation of national income and conceptual difficulties related to the 'neatness' of national income figures contribute to the limitations of income statistics to be accurate indicators of levels of national economic performance (4).

(4) A. Pepelasis and others, op. cit. p.11.
Complication also arises when there is an attempt to express the per capita income figures in terms of a standard currency of comparable purchasing power. At what exchange rate and at what price are inter-country comparisons to be made? Comparisons on the basis of official exchange rates do not show real differences in per capita income. And to construct an index number to compare costs of living in different countries having wide differences is an uphill task.

But the most difficult problem is to bring about a perfect correspondence between the size of national product and the level of community well-being. Where there are differences in tastes and wants on the one hand and differences in institutions, in climate, in cultural values, in patterns of interpersonal relationships, etc., it is difficult to make any accurate comparison between different countries on levels of living. Prof. Frankel therefore points out that "To endeavour to assess and compare 'welfare' merely by comparing national income aggregates for societies with different laws, rules, conventions, hopes and ideas is as fallacious as to try to assess the pleasure which a pair of players derive from playing dominoes, and then compare it with that yielded to another pair engaged in playing chess, by comparing the points scored by the players in each game" (5).

These difficulties are significant. Yet, the rate of development between different countries is measured according to differences in per capita income for the sake of convenience. But it must be noted that such a comparison gives only an approximate indication of comparative levels of economic development.

The ranking of countries by their per capita income is given below in Table II - 1.

**TABLE II - 1.**

Classification of countries by the Level of Development according to per capita annual income 1959.

**Economic Class I** - 500 dollars and above.

**Economic Class II** - 350-500 dollars.
(1) Ireland, (2) Italy, (3) Chile, (4) Yugoslavia, (5) Union of South Africa and (6) Lebanon.

**Economic Class III** - 200-350 dollars.

**Economic Class IV.** - Below 200 dollars.

Broadly speaking the countries having per capita income of 500 dollars and above are developed whereas countries having
less than 200 dollars per capita income are underdeveloped. Others fall in between the two. There are wide differences among the countries in each category. For example, among the developed countries, while the per capita income of the U.S.A. comes to 2233 dollars, that of Australia is only 590 dollars. Similarly in respect of underdeveloped countries, while the per capita income of Philippines comes to 161 dollars, that of Burma is only 48 dollars. In case of India, it is about 60 to 70 dollars.

(2) Insufficient capital equipment.

The second general feature of underdevelopment is insufficiency of capital equipment. This feature is so significant a characteristic of underdevelopment that poor countries are simply called 'capital-poor' economies. The following table makes a comparison between capital employed per person in some of the industries of four countries.

**TABLE II-2.**

<table>
<thead>
<tr>
<th>Industry</th>
<th>U.S.</th>
<th>Mexico</th>
<th>Colombia</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flour and gristmill products.</td>
<td>39.1</td>
<td>10.4</td>
<td>19.9</td>
<td>5.6</td>
</tr>
<tr>
<td>Bread and Bakery products.</td>
<td>5.0</td>
<td>1.7</td>
<td>1.3</td>
<td>3.5</td>
</tr>
<tr>
<td>Sugar refining.</td>
<td>26.8</td>
<td>8.2</td>
<td>12.4</td>
<td>2.6</td>
</tr>
<tr>
<td>Starch</td>
<td>-</td>
<td>9.4</td>
<td>3.8</td>
<td>3.3</td>
</tr>
<tr>
<td>Alcoholic beverages</td>
<td>16.0</td>
<td>6.6</td>
<td>18.0</td>
<td>6.1</td>
</tr>
<tr>
<td>Tobacco manufactures</td>
<td>12.4</td>
<td>8.6</td>
<td>2.0</td>
<td>-</td>
</tr>
<tr>
<td>Iron &amp; Steel industries.</td>
<td>32.1</td>
<td>10.8</td>
<td>5.4</td>
<td>5.7</td>
</tr>
<tr>
<td>Wood pulp, paper and paper products.</td>
<td>10.2</td>
<td>8.9</td>
<td>4.8</td>
<td>6.6</td>
</tr>
<tr>
<td>Printing and publishing Industries.</td>
<td>5.1</td>
<td>3.5</td>
<td>5.1</td>
<td>-</td>
</tr>
<tr>
<td>Cotton yarn and cloth</td>
<td>8.7</td>
<td>2.1</td>
<td>6.2</td>
<td>1.8</td>
</tr>
<tr>
<td>Rubber products.</td>
<td>7.0</td>
<td>3.4</td>
<td>6.1</td>
<td>-</td>
</tr>
</tbody>
</table>
The table shows the wide difference with regard to the extent of capital employed per person in developed and underdeveloped countries in their industries. The underdeveloped countries are indeed capital poor.

Another index of capital equipment is capital formation. Each poor country seems to have a gross capital formation at a level of less than 15 per cent of its gross national product. Table II - 3 shows the relationship between per capita income and gross capital formation in different countries.

**TABLE II - 3**

Per Capital Income and Gross Domestic Capital Formation in 1959.

<table>
<thead>
<tr>
<th>Countries and class.</th>
<th>Per Capita Income</th>
<th>Gross Domestic Capital Formation as p.c. of G.N.P.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Class I.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. U. S. A.</td>
<td>2,232.59</td>
<td></td>
</tr>
<tr>
<td>2. Canada</td>
<td>1,602.10</td>
<td></td>
</tr>
<tr>
<td>3. Australia</td>
<td>589.97</td>
<td></td>
</tr>
<tr>
<td>4. Belgium</td>
<td>933.1</td>
<td></td>
</tr>
<tr>
<td>5. Denmark</td>
<td>1,007.86</td>
<td></td>
</tr>
<tr>
<td>6. France</td>
<td>873.74</td>
<td></td>
</tr>
<tr>
<td>7. Germany (Fed. Rep.)</td>
<td>1,957.06</td>
<td></td>
</tr>
<tr>
<td>8. Netherland.</td>
<td>741.48</td>
<td></td>
</tr>
<tr>
<td>9. New Zealand</td>
<td>1,238.00</td>
<td></td>
</tr>
<tr>
<td>10. Norway</td>
<td>916.50</td>
<td></td>
</tr>
<tr>
<td>11. Sweden</td>
<td>1,373.58</td>
<td></td>
</tr>
<tr>
<td>12. Switzerland.</td>
<td>1,297.42</td>
<td></td>
</tr>
<tr>
<td>13. United Kingdom.</td>
<td>1,032.00</td>
<td></td>
</tr>
<tr>
<td><strong>Class II.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Yugoslavia</td>
<td>410.60</td>
<td></td>
</tr>
<tr>
<td>2. Italy</td>
<td>471.00</td>
<td></td>
</tr>
<tr>
<td><strong>Class III.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Argentina.</td>
<td>286.89</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE II-3 Continued.

<table>
<thead>
<tr>
<th>Countries and class</th>
<th>Per capita income</th>
<th>Gross Domestic Capital Formation as p.c. of G.N.P.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. Greece</td>
<td>305.85</td>
<td></td>
</tr>
<tr>
<td>3. Portugal</td>
<td>210.04</td>
<td></td>
</tr>
</tbody>
</table>

**Class IV.**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. China (Taiwan)</td>
<td>94.82</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>2. Ceylon</td>
<td>117.52</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>3. Korea</td>
<td>131.27</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>4. Philippines</td>
<td>160.89</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>5. Ecuador</td>
<td>151.96</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>6. Burma</td>
<td>48.20</td>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>

The table shows that there is a high correlation between per capita income and capital formation. It follows from this that the primary cause of inadequacy in capital formation is the low-level of income which leaves little margin for saving and investment. The distribution of world income and population shows that the poor countries have more population in relation to income than those of the developed ones. The population of the U.S.A. accounts for 7 per cent of the world's population whereas its income comes to 40 per cent of the total income of the world. In fact, one tenth of the world's population is enjoying 60 per cent of the world income while 57 per cent of them have less than 10 per cent of the total income (6). The distribution of world income and population is presented in Table II - 4.

(6) These calculations are based on the data of 53 countries about which income estimates were available and which account for 85 p.c. of total world population.

TABLE II

Distribution of World Income and Population in 1959.

<table>
<thead>
<tr>
<th>Class</th>
<th>Per capita income range in U.S.A.</th>
<th>No. of countries</th>
<th>Average per capita income in U.S.</th>
<th>p.c. of total population</th>
<th>p.c. of total income</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>500 and above</td>
<td>19</td>
<td>1242.22</td>
<td>25.58</td>
<td>78.02</td>
</tr>
<tr>
<td>II</td>
<td>350 - 500</td>
<td>76</td>
<td>440.54</td>
<td>3.84</td>
<td>4.16</td>
</tr>
<tr>
<td>III</td>
<td>200 - 350</td>
<td>8</td>
<td>279.91</td>
<td>8.31</td>
<td>5.71</td>
</tr>
<tr>
<td>IV</td>
<td>Less than 200</td>
<td>20</td>
<td>78.67</td>
<td>62.27</td>
<td>12.19</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>53</td>
<td>406.97</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

The table shows that the richest countries (Class I) with a per capita income of about 1242 dollars have only one fourth of the total population but they enjoy more than three-fourths or 78.02 per cent of the total income. On the other hand, underdeveloped countries (Class IV) having 62 per cent of the total population receive only one-eighth of the total income.

This low income operates in a vicious circle. The low level of real income leaves a negligible surplus for capital accumulation and the low level of capital accumulation results in a low level of real income. Thus, deficiency of real resources and low productivity constitute the basis for saying that 'a poor country is poor because it is poor' (7).

(7) The effect of vicious circles has been ably analysed by Nurkse. See R. Nurkse, Problem of Capital Formation in Underdeveloped Countries, op. cit.
On the basis of community's stock of capital, Kurihara has classified three patterns of economic development (8). A country has a progressing economy if the community consumes less than its net production so as to permit a net addition to the existing stock of capital. On the other hand, if the community consumes as much as its net production, there is zero net investment and the economy is static. A retrogressing economy is one where the community consumes more than its net production as a result of which the existing stock of capital decreases without replacement. Most of the underdeveloped countries belong to the second category.

3. Large dependence on Agriculture.

Another important feature of underdeveloped countries is that a high proportion of their gainfully occupied population depends on agriculture. The following table illustrates the point.

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Agriculture</th>
<th>Mining &amp; quarrying</th>
<th>Manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1954</td>
<td>16</td>
<td>2</td>
<td>28</td>
</tr>
<tr>
<td>Brazil a</td>
<td>1950</td>
<td>66</td>
<td>-</td>
<td>13 c</td>
</tr>
<tr>
<td>Canada d</td>
<td>1951</td>
<td>23</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>Ceylon a</td>
<td>1946</td>
<td>51</td>
<td>-</td>
<td>10 c</td>
</tr>
<tr>
<td>Chile e</td>
<td>1952</td>
<td>37</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>Egypt f</td>
<td>1947</td>
<td>57</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Greece</td>
<td>1951</td>
<td>49</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>India</td>
<td>1951</td>
<td>69</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Japan g</td>
<td>1955</td>
<td>34</td>
<td>2</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Agriculture</th>
<th>Mining and quarrying</th>
<th>Manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>1951</td>
<td>22</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Pakistan</td>
<td>1951</td>
<td>76</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Sweden</td>
<td>1950</td>
<td>25</td>
<td>1</td>
<td>34</td>
</tr>
<tr>
<td>Thailand</td>
<td>1947</td>
<td>82</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Turkey</td>
<td>1955</td>
<td>64</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1951</td>
<td>6</td>
<td>5</td>
<td>36</td>
</tr>
<tr>
<td>United States</td>
<td>1950</td>
<td>15</td>
<td>2</td>
<td>28</td>
</tr>
<tr>
<td>Yugoslavia</td>
<td>1953</td>
<td>60</td>
<td>-</td>
<td>7</td>
</tr>
</tbody>
</table>

(a) Limited to population 10 years of age and older.
(b) Including mining and quarrying.
(c) Including construction, electricity and gas.
(d) Limited to population 14 years of age and older.
(e) Limited to population 12 years of age and older.
(f) Limited to population 5 years of age and older.
(g) Limited to population 15 years of age and older.
(h) De jure population.


The table shows that more developed countries appear to utilise less than a quarter of their active male population in agriculture and from a quarter to a third in manufacture. In contrast, underdeveloped countries like Thailand, Turkey, Pakistan and India employ almost three quarters of their active male population in agriculture and less than 10 per cent in manufacture.
The great disparities existing between the industrial and the underdeveloped countries in the levels of per capita income are thus related to the wide differences in their structures of production. If Table I - 1 is compared with Table I - 5, it can be seen that there is a high inverse correlation between per capita income and the proportion of population engaged in agriculture. Agricultural countries like Australia, Canada and New Zealand seem to be exceptions. But as a matter of fact, they are not agricultural in terms of employment, their occupational structures are much the same as those of the U.S.A.

The degree of development of a country can also be tested by the percentage contribution of agriculture and industry to the national income. This criterion also shows that the higher the level of development, the larger is the contribution of industry to total income. This is statistically demonstrated in the special study entitled 'Industrialisation and Economic Development' which forms a part of 'World Economic Survey 1961.'

According to the study, in the lowest income countries, primary production accounts, on the average, for about 47 per cent of total domestic output, while industry contributes only 19 per cent. By contrast in the high-income industrial countries, these proportions are quite the reverse: industrial production amounts, on the average, to about 49 per cent of total output, while agriculture and mining together add only 13 per cent. This great disparity between the underdeveloped countries and the industrially advanced countries is due primarily to the difference in the role which manufacturing production plays in total economic activity.
Another fact of this disparity is that, with the growth of factory production and the related trend towards urbanisation, the industries providing basic facilities, such as transport, power and water, also contribute a rising proportion to total domestic output. In the industrial countries, for instance, the share of basic facilities in total output is about 11 per cent, whereas in the lowest-income underdeveloped countries it is only about 5 per cent. The following table provides a broad picture of the disparity between the two groups of countries, as revealed by national income data for the period 1950-59.

**TABLE II - 6.**

Industrial Distribution of Gross Domestic Product Average for Countries Grouped according to Levels of Per Capita Income, 1950-59.

<table>
<thead>
<tr>
<th>Per capita income group. (In terms of dollars)</th>
<th>Industry</th>
<th>Primary production</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Manu-</td>
<td>Basic</td>
<td>Cons-</td>
</tr>
<tr>
<td>Underdeveloped countries.</td>
<td>fac-</td>
<td>turing</td>
<td>lities</td>
</tr>
<tr>
<td>I. Less than 125(b)</td>
<td>11</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>II. 125 to 249 (c)</td>
<td>14</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>III. 250 to 374 (d)</td>
<td>16</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>IV. 375 and more (e)</td>
<td>17</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>High income industrial countries(f).</td>
<td>32</td>
<td>11</td>
<td>6</td>
</tr>
</tbody>
</table>

(a) Transportation, storage and communications, electricity, gas and water.

(b) Ceylon, Tanganyika, Indonesia, South Korea, Kenya, U.A.R., Pakistan, Burma, Congo, Thailand, India, Peru, China(Taiwan).

(c) Rhodesia and Nyasaland, Honduras, Tunisia, Algeria, Turkey, El Salvador, Philippines, Ecuador, Morocco, Colombia, Brazil.
(d) Panama, Costa Rica, Jamaica, Cyprus, Lebanon, Greece, Mexico, South Africa.

(e) Venezuela, Trinidad and Tobago, Chile, Puerto Rico, Argentina, Israel, Ireland.

(f) Countries with per capita income of more than 800 dollars. This group includes Belgium, Canada, Denmark, France, West Germany, the Netherlands, Norway, the U.K. and the U.S. Sweden is excluded because of lack of data.

This structure of production in underdeveloped countries has several consequences.

(a) To begin with, the state of technology is backward as measured in terms of the average cost of production or the high ratio of labour or capital to output. This is mainly due to lack of industrialisation. As Gunnar Myrdal adds, 'Industrialisation creates technology which can then be applied to agriculture but not vice-versa'. It is due to this reason that an underdeveloped economy represents a high-cost area, despite low money wages entering the money cost of production.

(b) In spite of the fact that a large proportion of the people depends on agriculture, the share of income in agriculture is less than the share of employment in agriculture, reflecting the relatively low productivity per man-year in the agricultural sector. A purely agricultural country is unprogressive even in its agriculture. This backwardness is reflected in the preponderance of unskilled and untrained workers.

(c) Absolute dependence on agriculture also leads to structural underemployment. This type of underemployment arises due to chronic shortage of capital relative to the growing labour population. When the existing size and the rate of growth of population are high and other avenues of employment are meagre,
agriculture in underdeveloped countries will be found to have an excess of labour over what is required (9). The difference between them being a measure of structural underemployment. This is the same thing as disguised unemployment as defined in the UN Report (10).

These are some of the important features of underdeveloped countries. Other features like extreme income disparities, external indebtedness and deficient natural resources in relation to the size of population are also significant. There is an extremely high degree of income inequality in underdeveloped countries, as measured by the deviation from the perfect line of equality in the Lorenz-curve.

(9) Leibenstein credits the lack of employment opportunities outside agriculture with insuring the persistence of two characteristics of economic backwardness—surplus man-power and the predominance of agriculture, Economic Backwardness and Economic growth, op. cit, pp. 51-55.

(10) Measures for Economic Development of Underdeveloped Countries p.17. Chiang Hsich goes further and points out three varieties of underemployment: (a) Visible which is said to exist when the actual amount of time worked is less than that which the labour force is capable of supplying, (b) Disguised which is said to exist when workers who are using their full labour time on a task could be withdrawn (after simple changes in organisation or methods of production but without appreciable capital investment) without reducing output, and (c) Potential which is an extension of disguised in that here workers can be withdrawn from a given economic sector without reducing output but only after fundamental changes in methods of production that require substantial capital formation. See Chiang Hsich, 'Underemployment in Asia' Parts I and II, International Labour Review, LXVIII (June and July 1952), 763 and 30-39.

To these categories Horace Belshaw has suggested adding a fourth to include those unemployed as a result of disease; Population Growth and Levels of Consumption, London, Allen and Unwin 1956, p. 136.
The Lorenz curve for a typical underdeveloped country should be expected to be much farther away from the 45° line of equality than is the curve for a typically developed economy, indicating that the income of the 10 per cent of the population with the lowest incomes falls short of 10 per cent of total income by a much greater amount in the case of underdeveloped countries than in that of developed countries (11). This shows that the gap between wealth and poverty is exceedingly wide in most underdeveloped economies, with the virtual absence of a middle class.

The economies of underdeveloped countries also show that most of them are not in a position to develop their economies on their own initiative. Since economic development requires a fundamental change in the technique of production, they have to import large quantities of capital goods, large number of technical personnel and other necessary services for transforming their economies. While their import needs are strong, their export capacities are limited. This leads to external indebtedness.

Another operational indicator of an underdeveloped economy is the paucity of natural resources. With the exception of a few, Kurihara points out, most of the underdeveloped economies are confronted with the problem of 'over-population' precisely because the per capita amount of principal natural resources (e.g. arable land, coal deposits, oil deposits, iron deposits, and forest) is too small to aid substantial

industrialisation and so to overcome a 'superfluous population' (12). However, he admits that an economy with abundant natural resources but without the necessary technology or capital to develop them is almost as 'poor' as one without those resources.

Whether natural resources are deficient or not (13), the role of natural resources for development is now considered secondary. Economic progress may occur in spite of an overall meagreness of resources and a lack of specific raw materials that happen to be important elsewhere. With the fast changing technology, new discoveries and use of resources, it is very difficult to determine the potentialities of development of any country within a foreseeable future. Moreover, once factor substitutability is recognised and the true nature of capital as a man-made resource is accepted, no country can be said to be lacking in the necessary resources for development as the use of capital has minimised the importance of natural poverty. Yet the opulence of natural resources is merely a condition favourable to technological progress.

The above outline shows the main features of underdeveloped countries which distinguish them from developed ones. To arrive at a suitable theoretical framework that would be applicable to the conditions in underdeveloped countries, we may now analyse and examine the three major systems of economic thought i.e. Keynesian and Post-Keynesian, Neo-classical and Classical. The significance of Keynesian and Post-Keynesian


(13) A. Pepelasis and others point out that on the basis of estimates of both existing and potential resources, many underdeveloped countries do not appear to be particularly discriminated against. op. cit. p.19.
analyses in case of underdeveloped countries may first be discussed.

A. Keynesian and Post-Keynesian analyses and their applicability to underdeveloped countries.

The Keynesian economics has been presented in several alternative ways. An over-all summary may be stated in the form of following propositions (14).

(1) Employment (and income) depend on effective demand,
(2) Effective demand is determined by the propensity to consume and the volume of investment,
(3) The propensity to consume is relatively stable,
(4) Employment depends on the volume of investment if the propensity to consume is unchanged,
(5) Investment depends on the rate of interest and the marginal efficiency of capital,
(6) The rate of interest depends on the quantity of money and liquidity preference,
(7) The marginal efficiency of capital depends on the expectations of profit yields and the replacement cost of capital assets.

These propositions are related to the economic problems of developed countries and are designed to cure the deflationary tendencies in their economies. If the same prescriptions are applied to underdeveloped countries, they will have limited validity. For example, the strategic variable in Keynesian analysis is 'effective demand', the increase of which promotes employment and income. But the role of 'effective demand' is limited in underdeveloped countries either to increase income or to maintain a high level of employment. Increase in 'effective demand' may fully utilise the existing capital equipments, but it cannot cure the large volume of unemployment due to low level of excess capacity in existing industries nor can it generate a

process of development when there is an over-all shortage of capital equipments.

The Keynesian 'effective demand' is designed to cure 'involuntary unemployment' which is peculiar to developed countries. But in case of under-developed countries, the scope of 'involuntary unemployment' is limited. Even in the organised sector of the Indian economy, with its large-scale industries and a fairly well-developed banking system, the waste due to 'involuntary unemployment' is of 'the second order of smalls' when compared with the total working population of the country (15). In the other sectors of the economy where money does not play an important role or in some spheres of money economy where the organisation of industry is such that the worker works with his own tools, the common element is disguised unemployment.

It is thus clear that involuntary unemployment which is the result of deficiency in demand can be cured by stimulating aggregate effective demand only to a partial extent in underdeveloped systems. After involuntary unemployment is exhausted, effective demand will spend itself in raising the general price level, rather than the level of employment, and thereafter, inflation and unemployment would subsist side by side. The cure of such unemployment could not be achieved by stimulating private or public outlay, but by augmenting the total productive capacity, by investments in agriculture, manufacturing and other projects i.e., developing the capital base. In a mature economy, the capital structure, or more broadly, the productive capacity is well developed relatively to the working population. On the other hand, in a backward economy, the capital base, determining

the productive capacity is meagre and so there is large-scale disguised unemployment. In such a situation a general development of the economy is necessary by an increase in capital resources through an increase of saving (16).

Another important variable in Keynesian analysis is investment multiplier. It is felt that a small increment of public or private investment can generate an expansion of economic activity and raise the supply of real output if the marginal propensity to consume is inordinately high. But in case of underdeveloped countries, though multiplier is likely to have a high value due to an abnormal high rate of marginal propensity to consume, it cannot solve their problems since it has to work only with reference to money income and not with reference to real income or employment. The conditions necessary for the successful working of the multiplier are (a) involuntary unemployment, (b) an industrial economy where the supply curve of output slopes upwards towards the right but does not become vertical till after a substantial interval, (c) excess capacity in the consumption goods industries, and (d) comparatively elastic supply of the working capital required for increased output (17). All these conditions do not operate satisfactorily in underdeveloped countries.

It follows, therefore, that Keynesian investment multiplier cannot operate significantly to increase output or diminish unemployment in underdeveloped countries. There should be

(16) Cf V.V.Borkar: Public Finance and Full Employment, Ch.III, University of Bombay 1959 for a diagrammatic representation of two types of unemployment.

an attempt to bring about a structural change in their economies so as to bring about a general development on all sides.

Keynesian multiplier actually refers to an economy where development can be brought about within the given economic structure. Here the level of economic activity may move from a lower to a higher level without the economy as a whole moving. In case of underdeveloped countries it is essential to devise how the economy would move from a lower to a higher stage of economic organisation.

Though an attempt has been made above to analyse Keynesian economics in the context of development, Keynes did not present any theory of development, either short run or long run. His was an attempt to analyse, with insight and vigour, short run business fluctuations and present a revolutionary model to cure them. But post-Keynesians like Harrod and Domar have formulated a dynamic extension of the Keynesian system and have provided an outstanding contribution to the theory of development. Many economists have tried to apply Harrod-Domar models to the problems of underdeveloped countries with a view to finding out some reasonable solutions.

Harrod and Domar models are essentially similar in substance. Harrod and Domar are concerned with determining the conditions required for smooth and uninterrupted growth in real national income in mature economies. Both models show that to maintain full employment, desired savings out of a full employment level of income must be offset by an equal amount of desired investment. The main points of Harrod and Domar analyses may be summarised as follows (18):

See also Harrod: Towards a Dynamic Economics, Macmillan 1948
(1) Investment is at the centre of the problem of steady growth, because the investment process has a dual character; it generates income, and it also increases the productive capacity of the economy.

(2) The increased capacity can result in greater output or greater unemployment, depending on the behaviour of income.

(3) Conditions can be stated for the behaviour of income that will allow full employment to be maintained over time. These conditions specify a certain rate of growth of full employment income which is sufficient to absorb full employment savings and have full utilisation of the capital stock.

According to Domar, this equilibrium rate of growth depends on the size of the multiplier and the productivity of new investment. It is equal to the propensity-to-save times the inverse of the accelerator. Income must increase, therefore, at a compound interest rate if full employment is to be maintained.

(4) These conditions, however, designate only a steady line of advance for the economy. The actual rate of growth may differ from this warranted rate of growth. If the actual rate of growth is greater than the warranted rate of growth, the economy will tend towards chronic inflation. If the actual rate of growth is less than the warranted rate of growth, the economy will tend towards chronic deflation.

(5) The business cycle is viewed as a deviation from the path of steady advance. Deviations become self-aggravating and are limited in the upward direction by a full employment ceiling and in the downward direction by a floor of autonomous investment and consumption. Even if the actual rate of growth is greater than the warranted rate of growth, the economy may become
depressed if the natural rate of growth is less than the warranted rate of growth. For then output cannot actually expand sufficiently rapidly.

This brief outline clearly shows the use of Harrod-Domar analyses to mature economies. Though some of the assumptions of these models like constancy in propensity to save or fixity of capital-output ratio have been challenged both on theoretical and empirical grounds (19), it is generally admitted that Harrod-Domar models have great relevance for mature economies. It is really difficult to maintain full employment in capitalistic societies without inflation and that cumulative movements away from equilibrium are always around the corner. A stable and yet growing capitalistic economy is possible only if there are appropriate monetary and fiscal policies.

However, whatever may be the relevance of these models to mature economies, their applicability to underdeveloped countries is severely limited. To begin with, these models indicate counter-cyclical and counter-stagnation policies, and do not guide industrialisation programming (20). For example, Harrod's analysis of actual, warranted and natural growth rates indicates that mature economies are subject to economic instability and secular stagnation. That means, if the actual rate of growth (G) is greater than the warranted rate of growth that would give steady advance (Gw), then the value of actual capital accumulation (C) must be less than required capital accumulation for steady advance (Cr). There will then be a

(20) The Keynesian Theory of Economic Development op. cit. p.64.
deficiency of capital. This situation would lead to a chronic inflationary gap. On the other hand, if the actual rate of growth is lower than the warranted rate of growth, the actual capital accumulation will tend to exceed the required capital accumulation and chronic deflationary gap will appear. Harrod seems to assume that chronic deflation is a greater possibility in mature economies since in these economies propensity to save is likely to exceed the inducement to invest.

By introducing natural rate of growth (\( G_n \)), Harrod develops a theory of secular stagnation for advanced economies. If \( G_w \) exceeds \( G_n \) (as it well may when population growth tapers off, or the rate of improvement in technique or discovery of new resources tapers off), \( G \) will also tend to be below \( G_w \), \( C \) will be chronically above \( C_r \), and the economy will be chronically depressed.

The situation envisaged by Domar is essentially the same as that which is contemplated by Harrod, namely, one characterised by a high saving ratio as well as by a high productivity of investment. It is a situation where therefore effective demand tends to fall short of productive capacity (21). Underdeveloped countries, on the other hand, are faced with opposite problems—problems like low saving ratio as well as low productivity of investment.

Secondly, both Harrod's 'warranted' rate and Domar's 'required' rate of growth meet the problem of Keynesian unemployment due to insufficiency of effective demand or an under-utilisation of capital. Harrod starts with the assumption

(21) Ibid, p.69.
of 'involuntary unemployment' and then considers the possibility of reaching full employment equilibrium. Domar begins by assuming the condition of full employment and considers the possibility of maintaining that condition by expanding income and investment. But both the models cannot overcome the structural underemployment (non-Keynesian unemployed labour) of underdeveloped countries arising out of lack of capital equipment.

Again, "preclusion of autonomous investment renders Harrod's concept of 'warranted' rate analytically inadequate for the purpose of underdeveloped countries" (22). Harrod excludes autonomous investment as an explicit variable in his 'warranted' saving-investment equation partly because he apparently wants to give scope to the acceleration principle and partly because he has in view only that kind of autonomous investment which increases demand without at the same time increasing supply (i.e. armaments). Harrod also does not take into consideration public investments which Keynes considered increasingly necessary. But these autonomous investments, whether private or public are of vital importance to break through the economic stagnation of underdeveloped countries.

In view of this, the Post-Keynesian models do not seem to tackle the major problems of underdeveloped countries. The only relevance of Harrod and Domar analyses is that both of them make capital accumulation depend on the saving ratio and capital productivity. As such, their approach transcends all economic systems.

If Keynesian and Post-Keynesian analyses have limited applicability to underdeveloped countries, the neo-classical analysis does not seem to improve the situation very much.

(22) Ibid, p.65.
B. Imperfection of the market and improvement in allocation of resources.

The neo-classical economists were primarily interested in efficient allocation of existing resources in order to attain a high level of development. They were not interested in factor supply; their main concern was to achieve the maximum production frontier through the best combination of different factors of production. The optimum allocation of resources was represented analytically by the fulfilment of 'marginal conditions'. But the experience of poor countries suggests that the allocative approach does not have much significance there. We can, of course, increase national income to some extent by increasing the efficiency of allocation of resources. The imperfection of the market is a great impediment and this is probably the reason why 'the actual production frontier has been far within the maximum possible frontier which might have been achieved by an optimum allocation of resources' (23). If market imperfections like imperfect knowledge, imperfect mobility and imperfect divisibility of factors can be corrected, actual production frontier may extend to maximum possible frontier. To the extent that resources have remained undeveloped because of underutilisation or improper utilisation of resources due to market imperfections, it follows that fuller utilisation and more efficient allocation of resources by removal of market imperfections might allow a poor country to approach its productive potential more closely than it is today. In other words, a different combination of factors could increase real income to some extent in poor countries.

But the imperfections in the market are so numerous that they cannot be corrected by marginal adjustments. Total conditions have to be changed in order to attain the desired objective. In addition to it, there should be improvement in the capacity of the economy through an increase in capital stock of the country. Meier has rightly said, 'Before marginal refinements become relevant, there must first be many 'once-over' structural changes, plus a great deal of 'human investment' spread simultaneously over a broad front so that the utilisation of the investments will approach full capacity' (24). If we rely on marginal adjustments for improving the production frontier, we shall remain far behind and increase in real output may not even be sufficient to outstrip the growth of population in poor countries.

If it is accepted that development does not depend so much on finding optimal combinations for given resources and factors of production as on calling forth and enlisting for development purposes resources and abilities that are hidden, scattered, or badly utilised, there should be an attempt to develop the capital base of the economy, because capital is the dominant variable, the primum mobile, for economic growth; it is the only factor that possesses the unique property of indefinite expansibility. Moreover, without capital accumulation there cannot also be technological development, because, 'for the most part, the most efficient techniques require heavy investment for their introduction, even if they reduce capital costs per unit of output once they are installed and operating'.

Actually, lack of capital accumulation and slow technical progress are the two most important factors that impede development in underdeveloped countries. Kurihara rightly

points out, 'It is a bit ironical that an underdeveloped economy must but cannot readily improve the quality of capital because it cannot increase the quantity of capital fast enough, while an advanced economy need not but can greatly improve the quality of capital because it can increase the quantity of capital without difficulty' (25).

Therefore, the major problem for an underdeveloped economy is to increase capital accumulation and improve technological progress. In view of this, the analysis of classical economy seems more pertinent to underdeveloped countries.

C. Classical model and underdeveloped countries.

The classical economists gave primary attention to the problem of economic development and tried to discover the causes of long-run growth in national income and the process by which this growth could occur. And surprisingly enough, the fundamental principle which successfully unified the various classical doctrines from Adam Smith to John Stuart Mill embodied that economic welfare of the society, as measured by the measuring rod of labour, may be regarded as being roughly proportional to the volume of output and economic activity' (26).

Smith who symbolised the growth aspect of classical economics emphasised division of labour for economic expansion. 'But division of labour depends on the 'size of the subsistence fund with which to maintain labour i.e. on the amount of savings'.' So before division of labour could be applied, there must be capital accumulation. 'The accumulation of stock must, in the nature of things, be previous to the division of labour'.

Furthermore, 'Capitals are increased by parsimony and diminished by prodigality and misconduct'. Since 'division of labour is limited by market', Smith favoured widening of the market by greater freedom of exchange. Given adequate market facilities and sufficient capital accumulation, division of labour takes place and raises the level of productivity. The resultant increase in income permits a larger saving out of the increased income stream and improves further specialisation. Thus development becomes cumulative. It was this approach which dominated the classical mind. Ricardo who gave special attention to the distribution of national dividend into relative shares, did not neglect the absolute size of the 'Net Revenue'. According to Ricardo, the economic welfare of the society depended on the absolute size of net revenue and so he was concerned with increasing economic welfare by expanding economic activity. With J.S. Mill, technological considerations became predominant and the physical output approach was completely systematised. Even Malthus, with his emphasis on Demand, was not concerned primarily with the satisfaction of particular consumers' demand for individual commodities. He emphasised Demand in so far as it helped to synchronise the expanding volume of output with expanding volume of total consumption.

Hence the entire classical economic theory was primarily directed towards economic growth and it fits in very well with the condition of present day underdeveloped countries like India and others.

Classical policy not suitable.

Though classical theory of growth is appropriately applicable to underdeveloped countries, its policy implications do not suit their conditions. Harmony of interests, Laissez-faire
or the Free Trade doctrine has lost much of its significance in the present context of economic development. Both in advanced and backward countries, market economy has been distorted by the presence of different kinds of monopolies in economic organisation. Monopolists not only employ an inappropriately small amount of productive service by equalising marginal cost to marginal revenue (not price), they also retard technological advance in so far as innovations are likely to lead to a devaluation of the capital invested in their business. In a competitive regime, with the parametric function of prices and with the free entry of new firms into each industry, entrepreneurs and investors have to submit to the losses of devaluation of old investments resulting from innovations, for there is no possibility of counteracting these innovations. But when business units become so large as to make the parametric function of prices and the possibility of free entry of new firms (and investment) into the industry ineffective, there arises a tendency to resist a devaluation of the capital invested (27). This leads to a slowing up of the technical progress. Finally, monopolists charge higher prices and secure greater profits than those of competitors and increase economic inequality and distort consumers' preference by means of sales promotion. It is for all these reasons that capitalist states have assumed enormous powers to influence economic organisation and control undesirable monopolistic practices.

(27) See Oscar Lange - On the Economic Theory of Socialism pp.111-112. Pigou has also pointed out that whenever there is any improvement in technique of production, this new technique should be introduced irrespective of what happens to the value of capital already invested. The loss of value of the old capital invested is exactly compensated by the Public's gain in consequence of price reduction. See 'The Economics of Welfare 1932, 4th Edition, pp. 180-190.
The classical policy implications are based on perfect competition but the economies of developed and underdeveloped countries are now so organised that there is no possibility of restoring competition. The instability of demand, the loss of plasticity in wage rate and the growth of mass production have all contributed to the crisis of market economy (28). However, if competition is restored, there is no guarantee that efficiency in production can be attained. Firstly, restoring competition in many cases may work against efficient production by limiting size. Secondly, competitive price may not be comprehensive to include social costs and there might be a divergence of marginal private net product and marginal social net product in a competitive economy as enunciated by Pigou. This divergence is likely to be so great that government might intervene to bring about necessary adjustment. Finally, the establishment of competition may not also attain maximum social welfare. In an environment of inequality, demand price is not likely to reflect the relative urgency of different persons and the allocation of resources determined by the demand price offered for consumers' goods may distort the economy.

This means, both in monopoly and competition, there is need for government intervention to bring about a desired type of development.

Besides there are some special causes in underdeveloped countries which require a great dose of government intervention. It is widely felt that without government intervention and through a process of systematic planning, the obstacles that have limited the development of poor countries cannot be overcome. The government has to take steps to awaken an economy from conditions of stagnation.

In underdeveloped countries, we are confronted with three important problems, viz. (i) shortage of capital resources relative to its requirements, (ii) unemployment and under-employment of surplus labour force, and (iii) low per capita productivity of the working force. These obstacles in the process of development cannot be overcome unless government initiates and promotes economic change and takes positive measures to transform traditional economies into industrial ones.

The Schumpetarian innovation does not simply apply to underdeveloped countries. 'The entrepreneur is not the main driving force, innovation is not the most characteristic process, and private enrichment is not the dominant goal' in backward countries. The government has to play the role of the entrepreneur and break the vicious circle of poverty and economic stagnation.

Secondly, due to heterogeneous composition of output and maladjusted structure of industry in underdeveloped countries, the capacity to produce capital goods also falls short of supply of savings. Due to heterogeneous composition of output, it is not possible to produce more capital goods even though the national belt is tightened to make for more savings in terms of real income due to the specificity of labour, equipment and raw materials released from the consumer goods industries. The maladjusted structure of industry due to immobility of productive factors between different industries and occupations, use of obsolete and often primitive, plant and equipment, and heavy capital wastage due to rapid depreciation stand in the way of further capital accumulation. Government can only make heavy investment for improvement in plant and equipment and mobility of resources for increasing the total supply of savings so as to augment capital formation.
Thirdly, the backward countries are specially inconvenienced due to the fact that their economies are consumption oriented. The poverty of vast majority of the people increases marginal propensity to consume and creates a paucity of savings. If there is a comparison between the propensity to consume between developed and under-developed countries, it can be seen that in a developed country, there is an increase in consumption due to an increase in income but there is no change in propensity to consume; but in an underdeveloped country, there is an increase in consumption due to an increase in income plus an increase in the propensity to consume. For mobilising savings for increasing capital formation, this creates special difficulty and unless the state takes special measures, capital formation may be greatly hindered.

Over and above this, there is 'demonstration effect' on the international plane which causes anxiety in underdeveloped countries. The disparities in real income and consumption levels between the developed and underdeveloped countries and greater awareness of these disparities due to increased intensity of contact between different countries are putting extra pressure on countries with a relatively low income to spend a high proportion of it (29). To use a fine phrase of Wallich, the process of development in underdeveloped countries is based not on innovation but on the 'assimilation of existing innovations' elsewhere. It is this concept that suggests the general concept of derived development - derived from innovations made elsewhere and orient the economy predominantly towards consumption (30). Without government control, demonstration

(29) Nurkse, op. cit. Ch.III.
effect cannot be checked or unnecessary consumption curtailed for increasing capital formation.

It is sometimes said that developed countries of today did not depend very much on state assistance for their economic development and as such, the backward countries now should not rely on government support for accelerating their economic development. But this comparison seems fallacious. The condition for economic development was much more favourable for the developed countries when they started their onward journey for economic progress than what they are for poor countries today. Kuznets's estimate shows that the per capita income of the developed countries in their pre-industrial phase was much higher than that of the present backward countries. As the figures stand, the per-capita incomes in the underdeveloped countries today are from about one-sixth to one-third of the per-capita incomes of the developed countries a century ago (31). The population pressure was also not so great for them. The developed countries of today, in their pre-industrial phases, as Kuznets points out, 'represented small population groups'. And even for this, they had an opportunity for migration. No such opportunity, at least not in that relative dimension, is available for the heavily populated backward countries of Asia. These other countries had also the privilege to secure international capital at a rate of interest often around 3 per cent and sometimes lower. The lenders then were competing to provide them with capital. International capital market is now almost dry

and it is a headache for the developing countries to secure necessary foreign exchange. Finally, the late-comers do not have the opportunity, as the now developed countries had, to advance as industrial islands in a surrounding world of backward nations which they could exploit as markets for manufactured goods and as sources of raw materials. They have, therefore, to put in extra effort for making progress and coming to the level of the developed countries. It is another reason why state has to play a positive role for improving their economies and accelerating the pace which otherwise may remain far behind (32).

It is true that the machinery of the state in backward countries does not possess the necessary ability to bring about the warranted rate of growth. But that does not mean that the state action should be limited. On the other hand attempts should be made to increase the efficiency of the government so that government can play its natural role to attain the desired goal. Moreover, intervention in case of 'derived development' is perhaps more suited to the abilities of government than intervention in originating development (33). In underdeveloped countries, governments are not called upon to originate development. Innovation is a difficult task for any government; it requires imagination, ability to take risk, capacity to correct mistakes and so on. But since techniques are well known through examples from abroad and the primary task of the government is to organise their application, it won't be difficult for them to take the necessary initiative.

(32) The government has also played an important part in initiating economic development in Japan after 1870, in Imperial Germany and the U.S.S.R. since World War I. Even in U.S.A., government had to provide settlers and railroads with land, developed roads and harbours and fostered some industries through protective tariff and subsidies.

(33) Henery C. Wallich - op. cit. p.201.
Government intervention and Planning.

When we say that the government should intervene to increase the pace of economic development, we do not thereby mean that there should be haphazard intervention in some sectors of the economy. Smith who was the embodiment of Laissez-faire did not neglect state and assigned to state three duties:

1. Protection against foreign states,
2. The administration of law and justice,
3. The establishment and maintenance of certain public works and institutions.

Since then, powers and functions of the state have increased in the hands of orthodox laissez-faire economists and today it is recognised that the state should have duties in respect of:

(a) Things which only the state can enforce (e.g., justice, defence),
(b) Things which diffuse benefits for which the beneficiaries cannot be charged (e.g., light-houses),
(c) Things in which the judgment of the state is superior to that of citizens (e.g., education, sanitation).

The last one is gradually growing. Yet when the role of the state is emphasised in backward countries, there is need to go much beyond this. This actually means a system of planning for the guidance of economic activities. All planning is government control, but all government control is not planning. Economic planning is the making of major economic decisions—what and how much is to be produced, and to whom it is to be allocated by the conscious decision of a determinate authority on the basis of a comprehensive survey of the economic system as a whole (34). This means that there should be a central authority

(34) Dickinson: 'Economics of Socialism' London 1939. There are many definitions of planning. However, this definition brings about the central core of planning.
with a clear conception of social goals, ability to arrange them in a definite order of priority, knowledge of resources and capabilities of the economy and finally having effective control (direct or indirect) over the individual units of the economy in order to execute check and enforce fulfilment of the plan. This is a comprehensive plan of expected economic processes and cannot be easily attained by mere intervention. According to Higgins, a comprehensive development plan should have at least four main components: first, specific production targets representing the quantitative production of desired commodities; second, a capital budget, comprising public investment projects, third, a human investment budget covering government expenditures that represent investment in the people—education, man power training, health; and fourth, regulatory measures governing the activities of private individuals, enterprises and institutions intended to redirect and guide these activities in a manner contributing to the achievement of the objectives included in the Plan (35).

Planning through market.

The implication of all this is that planning gives tremendous power to the state. It is an activity of collective character and interferes with the sovereignty of the consumer, tyranny of the price system and the quest for profits—the trinity of capitalism. It involves direct controls like price control, rationing, licensing of industries, fixation of minimum wage, improvement of economic mobility and so on. The government has to operate rapidly and extensively throughout the economy,

(35) Higgin s—'Development Planning and Economic Calculus'—Social Research XXIII, No.1, 36, 47 (Spring 1956).
remove bottlenecks in different sectors, distribute scarce commodities in an even manner and help and assist groups that face particular difficulties in the process of development. For all these and more, direct controls are necessary for the effective and economic utilisation of the resources under planning.

But it must be borne in mind that direct controls are not desirable from the point of view of human freedom. They contain a threat to personal freedom and multiplicity of controls develops a totalitarian attitude in society. The direction of labour is the worst part of the whole thing. It is according to Meade the 'hall-mark of the servile state' (36). Controls have also a tendency to increase 'slavery and corruption' and carry an, 'insidious threat to public morality'. The inconveniences of permits, licences or long queues become so embarrassing that even normally honest people feel tempted to break the law or the recognised conventions of society. Direct controls also require huge amount of man power and economic resources merely in working the controls. That is why they have been rejected by Meade as 'clumsy, inefficient and wasteful'.

On the other side, planning by direction is difficult. Economic system is so complex that no planning authority can be able to cope with the entire economic organisation and set it right by giving direction and orders. The planning authority cannot properly decide the preferences of consumers, the inclinations of workers and its direct planning may result in a shortage of some and surplus of others. It is, therefore, better

to utilise the market as far as possible. Planning by inducement can handle all these much better. For example, if it is desired to limit the 'fads and fancies' of the consumer with a view to increasing general welfare, it is wise to curb the individual desire for variety, as Dobb argues, for the sake of the greater abundance for all which standardisation of goods might make possible (37). The individualistic consumers' market has a bias in favour of both greater variation and greater variety than the collective interest. So long as adequate quantities of such staple products as meat, vegetables, cereals, housing, furniture and recreation are provided, consumers will not, Dobb believes, suffer a major hurt even if the varieties inside these general categories are not supplied in precisely the quantities the consumers would prefer (38).

It may be that the consumer will not feel a 'major hurt' if his basic necessities are satisfied. Yet there is a better method by which consumers will be allowed to spend their income in any way they like but their incomes will be limited in such a manner that consumers' preferences will not show much divergence from collective interest. Demand is a function of income and the divergence in demand structures is a result of income differences (39). Once income differences are reduced,

(37) Maurice Dobb - Political Economy and Capitalism, Routledge, 1953, pp. 311 ff.

(38) Barbara Wootton also feels in the same way. According to her, 'Full consumers' sovereignty ... is ..... definitely not compatible with economic planning ... Planned decisions and unplanned market reactions are in fact alternative ways of determining economic priorities. Freedom Under Planning, George Allen, 1946, p. 43.

(39) We do not rule out the difference in taste and aptitudes. But we assume that the major influence on demand is income.
differences in demand structures are likely to narrow down.

Of particular significance in the planning by direction is the choice of occupations. The planning authority may desire to increase the number of engineers and doctors and limit the number of traders, speculators or gamblers. The easiest way is to compel people to become doctors or engineers and prohibit other kinds of activities which are considered undesirable or less desirable from the social point of view. There are certain kinds of activities like gambling, traffic in women which must be prohibited and they have been done in most of the countries of the world. But restriction of freedom of choice in all decent occupations makes people unhappy, creates widespread resentment and leads to a development of hostile environment. It might be difficult and expensive for the government to enforce their decisions. The more desirable and decent way is to induce the people to accept the occupation which is necessary for social interest. If the government opens more schools and colleges for engineering and medicine and improves the pay, promotion and prestige of these officers, people would be attracted towards this line. Even in a socialist state, allocation of resources would respect freedom of choice in consumption and freedom of choice in occupation (40).

As a matter of fact, price system cannot be eliminated either in a socialist state or in a planned economy. Apart from the question of freedom which is important and should be maintained at all costs, price system is necessary in a world.

of scarcity. If economic goods were abundant and they could be supplied gratis, price system to allocate resources to different purposes might be unnecessary. But a state of boundless abundance is unattainable. Secondly, in a complex economy which rests in the heterogeneity of goods, price system is necessary to make a precise quantitative calculation of the relative importance of different goods (41). Even in Soviet Russia, where there was an attempt to wreck the monetary system and get along without money prices, there was a 'return of the native' and money pricing was introduced in place of physical rationing. Rationing and price control are necessary - necessary only to remove temporary shortages and spread supplies equitably. But the important thing is to augment supply and 'the efficiency of planning is to be judged not by the excellence of the system of rationing and price controls, but by the speed with which shortages are eliminated and price controls and rationing rendered unnecessary' (42). Happily, most of the collectivists now recognise that some kind of money price system is necessary to allocate resources according to consumers' preferences.

It follows, therefore, that the planning authority should rely more on price system, but correct the deficiencies of price system by removing differences in income. There may be some differences in earned income arising out of genuine differences in productivity, but differences of income arising out of differences in property should be eliminated as far as

(41) See R.T.Bye-Social Economy and the Price system, Macmillan N.Y. 1950, Ch.1, 'Pricing in Collectivism' for a detailed discussion of the topic.
possible. Secondly, the government should provide more communal goods without any price or at a very nominal price. Free medical and hospital care, free education, probably rent free housing for the poorer members of the community should be provided to improve the social life of the community. In these cases, the judgment of the planners, not the consumers' demand, should guide production. The government may also discriminate between different sets of consumers in its price policy in order to achieve maximum social interest. Thirdly, in the field of private occupation, trade or industry, government may show favour to some and disfavour to others, some industries may be taxed and some industries may be subsidised to improve the economic base of the country. These are all planning by inducement. Planning by direction may be necessary and as such, should be introduced, but their undesirable effect should be borne in mind and they should not be a permanent feature of the planned economy.

Pattern of economic development.

Once the necessity of planning is admitted, it is desirable to think of the pattern or the type of development which should be followed in underdeveloped countries with abundant supply of labour and a vast mass of disguised unemployment. It is more or less agreed that these underdeveloped countries should follow a deliberate policy of industrialisation. As the U.N. Report points out, "In a country where there is no surplus labour, industrialisation waits upon agricultural improvement, because industry should receive only those persons whose labour is no longer required in the production of food ... The reverse is the case in the country where population is so large in relation to cultivable land, that the land is carrying more people than can be fully employed in agriculture..."(43).

In fact extension of industrial activity is one of the most important targets of development. The reason for higher productivity in developed economies like U.S.A., U.K. or Germany is, as has already been pointed out, largely due to huge amount of capital investment in industries. India and other Asian countries are poor because they do not have sufficient industries. Singer rightly says, 'An underdeveloped country is poor because it has no industry and an underdeveloped country has no industry because it is poor' ......... This is a 'system not only of vicious circles, but of vicious circles within vicious circles and of interlocking vicious circles' (44).

As a matter of fact, the development of agriculture in these countries can come only as a result of industrial development. Here land is carrying more people than can be fully employed in agriculture. And so substantial improvement in agriculture is not possible without reducing the numbers engaged in it. Growth of industrial production could attract agricultural labour and absorb them in productive employment. Moreover, when improvement in industry will increase the demand for labour, this will pave the way for an increase of agricultural wages and provide the necessary stimulus for the modernisation of agricultural economy. Industrialisation has always improved technology and other sectors of the economy have imbibed it. Agriculture could also imbibe it and improve its productivity through the help of machinery, fertilisers, electric power, etc. Finally, development of industries will increase the demand for agricultural goods and set in motion a process

of cumulative development which has characterised the economic history of the countries which enjoy the highest per-capita income.

Industrial development creates those kinds of external economies which are essential prerequisites for an acceleration of the rate of economic development. It is a known fact that Diminishing Returns are especially true for that part of the economy which makes significant use of natural resources that are inelastic in supply. Economic development, therefore, implies a shifting of emphasis from primary production to industrial production. What is needed, therefore, is a structural change in the economy. The proportion of population depending on agriculture has to fall, and the non-agricultural sector will have to expand in order to attain a high level of development (45).

The efficiency of agricultural labour in India and other Asian countries is scandalously low and this is one important reason why the productivity in India is so low. The fact that the Soviet Union has made such great improvement is due to the fact that she has been able to develop this human factor to a very great extent. Even a small country like Sweden, which in numbers has only 2 per cent of the population of India, has a national income about half as large as India's and on that basis is able to save considerably more than is saved and invested in India. This is primarily due to the fact that an individual Swede 'works more hours a year, works harder when he works,

(45) According to Singer, a 70:30 ratio of agriculture to industry is typical of underdeveloped countries, something like a 20:80 or 15:80 ratio is typical of countries at a high state of economic development. The speed or rate of economic development is described by the rate at which the 70:30 ratio in economic structure is approximated to the 20:80 ratio which represents ultimate equilibrium at a high level of development. See H.W. Singer - The Mechanics of Economic Development - The Indian Economic Review, August 1952.
and works more efficiently*. One of the main differences between a developed country and an underdeveloped one is that in a developed country 'people work more, work harder and work more efficiently'. The success of Indian planning will depend, according to Myrdal, on this human factor. If India can get its population 'to work more and better and to produce more' than what it is doing today, it can achieve its success (46).

Industrialisation is probably the only way to provide such opportunity: increasing employment, relieving the pressure of population on agriculture and the most important of all, to increase the efficiency of labour. Industrialisation has a dynamic quality: it makes people active, energetic and invigorating.

However, this does not rule out the improvement of agriculture. The rate of industrial development is largely dependent on parallel agricultural development. Instead of being competitive, the developments in agriculture and industries are complementary and one supports the other in various ways. It is not a question of agriculture versus industry: it is indeed a question of agriculture and industry. In the underdeveloped countries both are poor and both have to develop simultaneously. Agriculture, for example, has to perform three important tasks in the process of economic growth and industrialisation. Firstly, in a growing economy, with occupational shifts from pure farming to other activities, there would be increasing demand for food, as the income elasticity of demand for food is high in the initial stages of development. Agriculture must provide this food and also fibres and raw materials to feed the expanding industries.

(46) G. Myrdal: Indian Economic Planning in its broader setting - an address to the members of Indian Parliament, pp. 14-27.
Rapid industrialisation is only possible if there is assured supply of food and raw materials. Secondly, the agricultural sector must also serve as an outlet for the products of those expanding industries. In other words, the agricultural sector constitutes the domestic market for the bulk of the manufactured goods. Thirdly, agriculture has to provide the basis for the import of capital goods and skill for the industrialisation of the country. Actually agricultural exports have paved the way for the economic development of many countries. Japanese silk, the U.S., Canadian and the Soviet Union grain, Cuban sugar, Swedish timber and pulp and Malayan rubber were all used to finance the import of capital equipment. In China, agriculture is being squeezed to augment exports to the advanced communist block countries for the same purpose (47).

This means that the degree of industrialisation will depend upon the ability of agriculture to increase its marketable surplus. It is no accident that all countries which succeeded in developing manufacturing industry on a large scale possessed a highly efficient and largely commercialised agriculture with both high yields per acre and high productivity per man. It is the recognition of this fact which led to the forced conversion, at enormous sacrifices of individual farming, into collective farming in Soviet Russia in the 1930's. Collectivisation was meant, on the one hand, to increase agricultural production and, on the other, to give to the state effective control over the disposal of the farm produce. Due to the collectivization drive, the output per worker increased by nearly 40 per cent between 1928-39. Dobb estimates that the

marketable surplus of agriculture expanded nearly 2½ times during the same period (48). Thus collective farming with the system of compulsory collection of food grains enforced through the Machine Tractor system was utilised to squeeze the farm population to supply the food and fibres to carry out industrial development programme. Other underdeveloped countries may not like to follow the Russian system, but they must diversify agriculture and increase its efficiency so as to increase marketable surplus for industrial development.

Again, the pace of industrialisation would depend upon how quickly agriculture can release the labour force needed for industrialisation. This is particularly pressing in underdeveloped countries having less population. In these countries, surplus labour has to be created in the rural areas through large scale investment in agriculture to work in factories. A stagnant agriculture cannot be able to supply the labour needed for industrialisation.

Another factor which requires emphasis is that, in a predominantly agricultural country, unless the rural economy is enabled to make its full contribution, the overall rate of economic growth will be necessarily small and inadequate. How strong this phenomenon of correlation between agricultural production and the growth of national income can be seen from Table II - 7 prepared from Basic Statistics relating to Indian Economy issued by the Planning Commission in December 1961.

(48) Maurice Dobb: Some Aspects of Economic Development, Three Lectures, Delhi School of Economics.
### TABLE II - 7
Indices of growth in national income and agricultural production (1950 - 51 = 100)

<table>
<thead>
<tr>
<th>First Plan Period</th>
<th>Second Plan Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>National income at constant prices</td>
</tr>
<tr>
<td></td>
<td>National income at constant prices</td>
</tr>
<tr>
<td>1951-52</td>
<td>102.8</td>
</tr>
<tr>
<td>1952-53</td>
<td>106.9</td>
</tr>
<tr>
<td>1953-54</td>
<td>112.2</td>
</tr>
<tr>
<td>1954-55</td>
<td>116.1</td>
</tr>
<tr>
<td>1955-56</td>
<td>118.4</td>
</tr>
</tbody>
</table>

The table shows that but for two years i.e. 1955-56 and 1959-60, when a decrease in the index of agricultural production was accompanied by an increase, though marginal, in the index of national income, there seemed to be some sort of correlation between the trends of agricultural production and national income.

Thus there is a considerable complementarity between agriculture and industry and the growth of one is dependent upon the growth of the other. But the point which needs emphasis is that development of agriculture should not be a precondition for industrial development. Both should go side by side but greater emphasis should be given to industries as improvement in agriculture can come only as a result of industrial development in an overpopulated country.

**Investment criteria.**

With respect to degree of industrialisation it is desirable that there should be massive investments to break the
economy out of its state of poverty, particularly in view of the rapid growth of population in underdeveloped countries. Small efforts to raise incomes will only induce population growth, which in turn swamp any improvement of per capita income. But increase in investment is one aspect of the problem of capital formation: another is allocation of these funds between competing outlets. What is the yardstick by which the decisions shall be made?

The traditional criterion for resource allocation is the marginal principle which calls for the equalisation of the marginal productivity of investments in all lines. If this system is adopted the marginal productivity of alternative projects is computed and those with the highest productivity yields are selected. But a straightforward application of this principle is limited in a backward economy on three grounds:

(a) it is based upon the productivity of capital when the goal of economic development must be to maximise per capita output at some future time; (b) the criterion emphasises rate of output, not the rate of investment which is the determinant of future output; (c) no account is taken of changes other than the increase in the amount of capital i.e., such vital factors as population growth are ignored (49). In an underdeveloped economy, one has to work in terms of large structural readjustments to achieve the maximum per capita output at some determinate future. In such a case, it is difficult to measure cost and productivity and so optimal investment pattern should be considered, from the point of view of 'balanced' and 'unbalanced' growth.

'Balanced growth' has assumed immense popularity in recent years for resource allocation in underdeveloped countries (50). It emphasises that an economy will have more chance to grow if a proper balance between its various sectors is maintained. The essence of the balanced growth thesis is that through the adoption of a single individual investment project is unprofitable, the installation of a group of projects would be profitable collectively because of the resultant creation of a wider market and external economies. These two aspects, balance in demand and balance in supply have different implications. The first view emphasises the complementarities in consumer goods industries and horizontal sectors. It is based primarily on the idea that the market in underdeveloped countries can be enlarged only by an all round increase in the level of productivity. If many new enterprisers are started simultaneously, then complementary markets will be created for the products of one industry or sector by the other industries and horizontal sectors; that is, a multiple and mutual demand support among industries will be assured. On the other hand, the second approach stresses complementarities and external economies among industries and vertical sectors. The desirability of vertical balance stems from the external economies that one sector provides for another. One great advantage in balanced development among vertical sectors is that it minimises supply bottlenecks that otherwise may frustrate development plans. The two approaches are not mutually exclusive.

The concept of balanced growth has become so popular that the U.N. Committee of experts make frequent references in its favour and plead for simultaneous progress 'on all fronts in underdeveloped countries' (51). The popularity can be gauged from the statement of Lewis when he says, "... in development programmes, all sectors of the economy should grow simultaneously, so as to keep a proper balance between industry and agriculture, between production for home consumption and production for exports - the logic of this proposition is as unassailable as its simplicity" (52).

However, from the point of view of rapid economic growth, balanced development does not seem to be the right answer for determining the pattern of sectoral allocation of resources. To begin with, all industries are not equally endowed with external economies. If economies of scale are to be exploited, unbalanced growth is more desirable than balanced growth (53). Secondly, balanced growth assumes that the supply of factors of production are elastic and, therefore, relationship between different industries for the most part is complementary. But actually when the factor supplies are limited, the relationship between different industries is for the most part competitive (54). Hirschman points out, 'Its (balanced growth theory) application requires huge amounts of precisely those abilities which we have identified as likely to be in very limited supply in

(51) Measures for Economic Development of underdeveloped countries, op. cit., p.49.
underdeveloped countries. It is altogether inconceivable that a one-floor economy could set up such a 'second floor' with its own forces or even with limited help from abroad......'(55). Therefore, the implicit assumption of stable structure of relative cost in the balanced growth doctrine does not seem to be valid. If the pattern of relative costs in industries is distorted by input limitations as expansion occurs, production should be concentrated along lines of falling or less steeply rising costs in order to maximise the rate of the growth of the economy (56). Thirdly, balanced development could be possible only if there could be perfect divisibility of factors. But since that is not possible, an unbalanced growth may very well induce growth quite rapidly rather than obstruct it.

That is why Streeten has made a powerful case in favour of unbalanced growth (57). According to him, in some instances where the optimum size of equipment required is relatively large and the economies of scale considerable, simultaneous investments in a number of industries, given the limited market size, will sacrifice optimum requirements and the scale advantages. The choice is then between a degree of distortion of current demand combined with underutilisation, for the sake of cost reductions in future, and current full utilisation but higher costs later (58). If economies of scale

(58) Ibid, p. 177.
a-re to be exploited, unbalanced growth is inevitable. Moreover, by means of unbalanced growth, costs of expansion can be minimised by building capacity ahead of demand. Unbalanced growth creates higher incomes than investments aiming at preserving internal consistency in production. Unbalance is therefore a condition of growth. In addition, it is also a stimulus to growth, which leads to new unbalances and further stimuli. Because bottlenecks and scarcities accompanying lopsided growth provide a strong agent for technological progress or the application of existing better techniques. Innovations have often been stimulated by bottlenecks and shortages (59).

While Streeten and others plead for unbalanced growth on theoretical analysis, Rostow's historical approach lays a foundation for unbalanced growth. According to Rostow, overall growth in different countries has been based on the direct and indirect consequences of rapid growth in certain key sectors (60). If investment is now concentrated in a few such leading sectors which generated growth in multiple ways, it can also be a powerful engine of economic transformation and progress in underdeveloped countries.

The foregoing discussion shows that there is need for heavy investment in strategic sectors which are likely to contribute most to economic progress. But which are these sectors in underdeveloped countries? There is of course no unanimity in the choice. However, it is argued by many that since most of the underdeveloped countries are faced with acute shortage of capital

(59) Ibid, p.181. Kindleberger and Hirschman also advocate a skewed pattern of development for the sake of rapid economic growth.

(60) The Take-off into Self-sustained Economic Growth, op.cit. p.46.
and abundant supply of labour and the major problem is maximum employment per unit of capital, labour-intensive industries should be emphasised as key sectors of economic development. But if the function of key sectors should be such that they should provide maximum rate of growth of output and employment, capital-intensive industries should be leading sectors. Actually, the arguments in favour of capital-intensive industries as leading sectors in underdeveloped countries are numerous.

To begin with, when there is a shortage of capital, spreading capital 'widely and thinly' on all fronts simultaneously might lead to an uneconomic use of the scarce factor which might be considered as a waste of serious nature. Moreover, if underdeveloped countries spread their capital widely and thinly in order to equalise marginal rate of returns of capital in each of its different uses, new investment will not make sufficient impact in any one sector of the economy to bring about any radical transformation in the economic structure or to achieve a 'take-off into self-sustained growth' (61). It is, therefore, desirable to concentrate on a few important capital-intensive industries or to develop intensively certain regions or sectors of the economy, 'even at the cost of leaving the rest of the economy starved of capital, 'in the hope that these industries or industrial areas' will constitute strategic growing points from which the impulse towards growth will spread to the rest of the economy'. This is the only road to economic development. There is

(61) Cf. Some aspects of Investment Policy in Underdeveloped Countries - International Labour Review, Vol.LXXVII, No.3, May, 1958. In this article the arguments in favour of capital intensive and labour intensive industries have been summarised and an attempt has been made to reconcile the conflict.
a critical 'minimum effort' hurdle that must be overcome early in the development process if development is to be self-sustaining, otherwise rapid population growth later will retard economic growth. Secondly, labour-intensive industries are not likely to bring about a rapid rate of investment because in this process more labourers have to be engaged (labourers who were previously underemployed are now drawn to industries) and they have to be supported with wages. The full amounts of wages paid to labourers are likely to be consumed and very little will be left over for additional investment. Vakil and Brahmananda point out that the use of redundant farm labour in view of accompanying rise in earnings, leads to a greater subsidy than that implicit in disguised unemployment on the farms, and the result is, therefore, a reduction in the resources that might have channelled into investment(62). Capital-intensive industries will not give rise to this trouble. Moreover, labour-intensive industries do not cure disguised unemployment. If the manual workers drawn from disguised unemployment in agriculture enjoy tariff protection from the competition of low-cost factory goods, through higher prices, they will receive a subsidy from the rest of the community just as they were subsidised on the farms where their marginal productivity fell short of their consumption. 'This means that the locus of disguised unemployment is shifted: one make work scheme replaces another' (63).

(62) Vakil and Brahmananda: Planning For An Expanding Economy, pp. 150, 282.

The most important argument in favour of labour-intensive industries is that they will provide large volume of employment. There is no doubt that they will increase immediate employment, but it is doubtful whether labour intensive industries can increase employment in the long-run. The table presented by W. Galenson and H. Leibenstein shows different results (64). It shows, on certain assumptions, the amount of employment provided over a period of time by an initial investment of 1200 rupees in various types of cotton textile machinery. If this sum is invested in handlooms, it will initially provide employment for 35 people, but there will be no margin for reinvestment and after 25 years the number of jobs provided will still be 35. If on the other hand the same sum is invested in a large-scale modern mill, it will initially provide employment for five workers, but, thanks to reinvestment of a large proportion of the income generated, the additional employment will exceed 12,000 after 25 years (65). This is a long run effect.

Actually, unemployment in underdeveloped countries is a long-run problem and can be solved by means of rapid economic development and systematic population control. If population growth is checked the main problem should be to increase the productivity of labour through efficient means of production. Because, if productivity of labour increases, it would itself, via increasing the surplus to be employed in production, look after the problem of unemployment.

(64) 'Investment criteria, Productivity and Economic Development', op. cit. p. 343.
(65) This calculation is based on the assumption that payments made to labourers are all consumed and payments which are made to others are re-invested. No allowance is made for capital depreciation. In spite of the limitations of the assumptions, there is some truth in the problem stated.
Even in short run, employment might also increase due to the development of a large number of subsidiary occupations. The result of a study of industrialisation of backward areas made by Mandelbaum on employment, output and demand shows that employment could also increase in the short run as a result of industrialisation (66). The following table is an illustration.

| TABLE II - 8 |
| Distribution of Occupied Population (Round figures) |
| S.E. Europe | Total million | In agriculture million | % of total. |
| Before Five Year Plan | 42 | 29.0 | 70 |
| After Five Year Plan | 44 | 27.6 | 63 |


The table shows that the volume of employment which was 29 million in agriculture before the Five Year Plan came down to 27.6 million after the Five Year Plan whereas employment in non-agricultural fields increased from 13 million to 16.4 million within the same period. On the whole total employment increased from 42 million to 44 million within a period of five years. This shows that employment can increase even in short period due to development of industries. The reason why it is assumed that employment cannot increase with improved methods of technique of production is that demand is assumed to be constant. If due to technological progress, productivity increases faster than demand,

unemployment will be created; but if demand increases faster than productivity, there will be increased employment (or inflation). There is a probability that along with increase in technological progress, output and saving will increase more than demand, but gradually there will be a leakage from the saving stream by increasing income on all fronts and percolating to the wage-earners and other consumers, thus increasing demand. So in the long run, technological progress leads not only to an increase in output, but also an increase in employment. The problem of employment creation is, therefore, essentially a problem of capital accumulation. Labour-intensive industries may provide more employment in the short run but with less wages per unit of labour. Capital intensive industries will provide probably less employment in the short run but with higher wages for those who are employed; but in the long run employment and wages are likely to increase to a substantial extent from capital-intensive industries.

Another argument which has been used in support of small-scale industries is that small scale industry will use productive resources which correspond closely to the relative availabilities of productive factors in underdeveloped countries (much labour and little capital). But this is irrelevant in view of the fact that what is needed in underdeveloped countries is how to save capital and other scarce resources, not how to use abundant resources unless the use of abundant resources helps to save the scarce resources. But some of the recent studies show that small scale industries use more capital per unit of output than large-scale industries. Bhatt's figures show that the productivity of capital as well as labour is higher in large scale undertakings, at least in a wide range of industries (67). If the

The figures in Table No. II — 9 are assumed to be correct, the ratio of net value of plant and equipment to the gross value of annual output seems to be considerably higher in small-scale firms than in large-scale ones. This suggests that the small-scale firms are more capital intensive. Again, wage-cost per unit of gross value of output is higher in the case of small-scale firms, indicating the lower productivity of labour in this sector. Finally, the ratio of the net value of plant and equipment to wage cost is also substantially higher in the small-scale than in the large-scale firms. That means a small scale firm would require more capital to create a given unit of labour-income than would a large-scale firm.

The result of the study made by Sri P.N.Dhar and H.F.Lydall on the role of small enterprises in Indian Economic Development also shows that small factories use more capital and more labour per unit of output than larger factories. The difference in the output-capital ratio is particularly marked when account is taken of the fact that large factories can more easily be organised on a multi-shift basis than small factories. From the point of view of saving capital, medium or large multi-shift factories give the best results, and small factories usually the worst. There is, therefore, no general case for promoting small modern factories on these grounds. Therefore, the authors conclude:

"The main lesson of our study of this problem is that there is need for more firms of a medium size, because the capital intensive techniques which characterise modern small enterprises can, in many cases, be fully productive only if they work on a larger scale than at present. Any positive measures that can be taken to promote the growth of small firms into efficient medium
### TABLE II-9
Selected data on small-scale, medium-scale and large-scale groups of different industries in India, 1949.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Small-scale groups</th>
<th>Medium-scale groups</th>
<th>Large-scale groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of workers</td>
<td>% of total output</td>
<td>Plant &amp; equip. cost ratio to wage cost</td>
</tr>
<tr>
<td>Wheat flour</td>
<td>1-100</td>
<td>38</td>
<td>0.074</td>
</tr>
<tr>
<td>Fruit &amp; vegetable processing</td>
<td>1-50</td>
<td>18</td>
<td>0.347</td>
</tr>
<tr>
<td>Sugar</td>
<td>1-500</td>
<td>31</td>
<td>0.223</td>
</tr>
<tr>
<td>Soap</td>
<td>1-50</td>
<td>5</td>
<td>0.137</td>
</tr>
<tr>
<td>Cement</td>
<td>1-500</td>
<td>18</td>
<td>0.505</td>
</tr>
<tr>
<td>Glass &amp; glassware.</td>
<td>1-200</td>
<td>26</td>
<td>0.471</td>
</tr>
<tr>
<td>Ceramics</td>
<td>1-250</td>
<td>18</td>
<td>0.568</td>
</tr>
<tr>
<td>Plywood &amp; tea chests.</td>
<td>1-100</td>
<td>17</td>
<td>0.617</td>
</tr>
<tr>
<td>Paper &amp; paper board</td>
<td>1-300</td>
<td>5</td>
<td>0.737</td>
</tr>
<tr>
<td>Matches</td>
<td>1-200</td>
<td>3</td>
<td>0.524</td>
</tr>
<tr>
<td>Wheat flour</td>
<td>201-520</td>
<td>32</td>
<td>0.027</td>
</tr>
<tr>
<td>Fruit &amp; vegetable processing</td>
<td>101-201</td>
<td>80</td>
<td>0.185</td>
</tr>
<tr>
<td>Sugar</td>
<td>1001-2679</td>
<td>25</td>
<td>0.129</td>
</tr>
<tr>
<td>Soap</td>
<td>101-959</td>
<td>91</td>
<td>0.061</td>
</tr>
<tr>
<td>Cement</td>
<td>1001-2515</td>
<td>39</td>
<td>0.349</td>
</tr>
<tr>
<td>Glass and glassware.</td>
<td>401-1246</td>
<td>32</td>
<td>0.244</td>
</tr>
<tr>
<td>Ceramics</td>
<td>501-1246</td>
<td>69</td>
<td>0.168</td>
</tr>
<tr>
<td>Plywood and tea chests.</td>
<td>201-559</td>
<td>49</td>
<td>0.177</td>
</tr>
<tr>
<td>Paper &amp; paper board.</td>
<td>601-3910</td>
<td>88</td>
<td>0.245</td>
</tr>
<tr>
<td>Matches</td>
<td>401-1768</td>
<td>96</td>
<td>0.044</td>
</tr>
</tbody>
</table>
sized firms will, therefore, be of great advantage to the economy* (68).

Another analysis presented by International Labour Office based on Report of the Textile Inquiry Committee (Delhi 1954) and a report submitted by the International Labour Office to the fifth Session of the I.L.O. Textiles Committee (Geneva, 1955) on alternative methods of production in cotton weaving show that throw-suttle hand loom made of bamboo fulfills perfectly the criteria of maximum employment and maximum output per unit of capital. But it produces at the highest cost (69).

All these factual data, however imperfect they might be, make it quite clear that small-scale industries are not efficient in economising capital resources which are scarce in underdeveloped countries. In some cases, capital output ratio is actually high. There is substantial truth in the argument made by Vakil and Brahmananda that the aggregate capital co-efficient may tend to be higher in an economy with the most labour intensive methods of production than in the case of an economy with the most capital-intensive methods of production (70). There is also another point to be taken note of. The idea that capital-intensive methods of production involve higher capital-output ratio is based

(68) P.N.Dhar & H.F.Lydall : The Role of Small Enterprises in Indian Economic Development, Allahabad, 1961. The study shows that traditional cottage industries using traditional techniques are essentially labour-using and capital-saving and so they have favourable output capital ratios. But small industries with modern techniques which are generally favoured from the point of view of economic development of underdeveloped countries are unfavourable from the point of view of output-capital ratio compared with medium and large factories.


(70) Their argument runs as follows :- Since labour intensive methods of production require a larger volume of employment to produce a given amount of output, the output of other commodities has to be correspondingly increased in order to maintain these additional labour. The aggregate capital-coefficient may, therefore, be higher. Cf. Planning for an Expanding Economy, op. cit. pp. 148, 149.
on the assumption that the productivity of labour is constant. But since capital-intensive method of production may increase the productivity of labour, we cannot assume that in each and every case, capital intensive methods of production would automatically increase the value of aggregate capital co-efficient (71).

Finally, capital-intensive industries have a further advantage in the sense that they would give lowest cost and highest profit rate. It is the profit income which usually provides the main source of savings for capital formation. If we have small-scale industries, not only would profits be less, but the income created in the small sector would be distributed over a larger number of recipients and as such the volume of savings generated by it might still be small. This is a crucial fact on the basis of which small-scale industries might be rejected. Once we introduce labour-intensive methods of production, we may have great difficulty in changing the technique in future due to resistance of vested interests. This will be a serious impediment to development.

Integrated approach:

Yet, when all this is said and done, it may be necessary to use small-scale industries for the sake of expediency. Economic practice is not always based on abstract analysis. Capital-intensive industries might increase employment in the long run; but in the short-run the pressure of the unemployed might be so great that the government may have to open a large number of small industrial estates to distribute the economic gain over wider areas.

The development of a few important industries or a few regions is based on the assumption that people of other areas will tolerate 'hunger, disease and squalor' so long they are unemployed or under-employed. But this is not always possible. Government need support from all regions and government may, therefore, have to develop 'all fronts simultaneously'.

Moreover, though capital formation is an important factor for economic development, it is not the only factor. The problem of economic development is one aspect of the general problem of social change. The formulation of an economic policy may, therefore, have to satisfy the needs of a definite social and political philosophy accepted by the community and the economic base may have to be reoriented on the basis of these social and political compulsions. If, for example, a community is interested to maintain its agro-economic setting with its compact social life, no body can thrust on it a highly industrialised society with all its tensions and transitional difficulties. Each country has to determine its own economic change on a line which would be socially acceptable, politically expedient and economically convenient. There is always a choice between means to achieve the same end. Russia's example of speed cannot be followed by all countries to accelerate the process of development. Russia's case is exceptional because the 'frenzied pace' and ruthless execution of planning and the forced capital accumulation it involved will not be possible elsewhere (72).

In underdeveloped countries, due to peculiar circumstances in which they are placed, a harmonious blending of both large-scale and small-scale industries might be inevitable.

(72) B. Datta : The Economics of Industrialisation, World Press 1959, p. 164.
If there is a clean slate, capital intensive industries may be started to increase the pace of development. But things as they are, small scale industries occupy an important place in the economies of underdeveloped countries. In case of India for example, from the point of view of income generated, the small enterprises come next to agriculture and trade and from that of employment it is second only to agriculture (73). As such, they cannot be scrapped off to maintain a desirable type of development. The policy may not be directed towards the creation of more small units for their own sake, but arrangements should be made for a 'general improvement in the efficiency of existing enterprises and the creation of opportunities for enterprising new firms to be successful and to grow'. That is, "the emphasis of small industry policy should be switched away from the giving of preferences, subsidies and special measures of protection to small firms, towards measures which remove disabilities of small firms and give them a fair chance to compete in the market" (74).

The improvement of these industries may provide immediate large scale employment and offer a method of ensuring a more equitable distribution of income by way of decentralisation (75). Decentralisation will not only distribute the gain of industrialisation over wide areas, but also reduce the present large disparities in income between rural and urban areas, avoid the social disadvantages of heavy concentration in a few urban areas.

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(74) P.N.Dhar and H.F.Lydall, op. cit. p.86.

(75) The study of Dhar and Lydall shows that small modern enterprises far from being decentralised are almost entirely located in towns and for the most part in the large cities in India. op.cit. pp. 20-24. This, however, does not mean that if the government follows a deliberate policy of dispersion, small scale industries cannot be distributed in wide areas.
centres and save considerable sums of capital which would otherwise be diverted to investment in social overheads like workers' housing, public utilities and so on.

Secondly, most of the underdeveloped countries have a limited capacity of capital absorption. The reason why poor countries cannot easily and quickly absorb capital is 'lack of technology, the shortage of skilled personnel, and the low geographic mobility of labour' (76). The marginal productivity of capital in poor countries may be larger than in rich countries, but when there is increased capital accumulation, marginal productivity may decline rapidly due to various bottlenecks. It is not easy to remove these bottlenecks quickly. Selection of investments should, therefore, take these factors into consideration. For example, when immobility of labour is widely prevalent, small-scale industries may have widespread locational advantage; 'the wastes of small size may be smaller than the wastes of underemployed but immobile labour' (77). Similarly when availability of entrepreneurs and skilled persons are scarce, small-scale investments may provide wider training in entrepreneurship and management and pave the way for an industrial environment throughout the country. We should not forget that if capital accumulation exceeds the country's absorptive capacity, it may cause inflation or balance of payment difficulties and thus retard economic progress to a substantial extent. There is also a possibility that when capital is shy in rural areas, a dispersed system of rural industries may create investment incentives by its very existence.

(77) B. Datta, op. cit. p.177.
Thirdly, historical evidence does not support the fact that heavy capital-intensive industries have taken the leading role in the 'take-off' stage of economic growth in each and every country to achieve a process of 'self-sustained growth'. In some countries, a necessary condition for take-off has been the existence of one or more rapidly growing sectors whose entrepreneurs (private or public) ploughed back into new capacity a very high proportion of profits. In some other countries, rapid expansion in exports has been used to finance the import of capital equipment and to service the foreign debt during the take-off. United States, Russian and Canadian grain, Swedish timber and pulp and Japanese silk fulfilled this function. In some countries, the forward momentum has been maintained as a result of rapid expansion in a limited number of primary sectors, whose expansion has significant external economy and other secondary effects. 'Historically, they have ranged from cotton textiles, through heavy-industry complexes based on rail-roads and military end products, to timber, pulp, dairy products and finally a wide variety of consumers' goods. There is, clearly, no one sectoral sequence for take-off, no single sector which constitutes the magic key'. Therefore, there is no need for underdeveloped countries to follow the structural sequence and pattern of developed countries. Adler feels that in the process of development, poor countries should emphasise the creation of social overhead capital i.e. high ways, power installations, water works, hospitals, technical training facilities, etc. for creating external economies and accelerating the economic growth (78). Due to lack of external economies, the

ratio of net additional output to capital investment is small in underdeveloped countries. Creation of social overheads will not only develop external economies, but also provide facility to widen the range of profitable investment opportunities for the private enterprise inspite of a large socialised sector dependent upon a progressive tax system. Lewis remarks that 'a cheap and extensive net work of communications is the greatest blessing which any country can have from the economic point of view'(79).

Kindleberger thinks that transportation, communication and education are the most significant sectors because besides generating simple external economies, they also facilitate the development of marketing and distribution structure and the spreading of skills and attitudes which are most conducive to economic progress. Singer would regard all or most manufacturing industries as growing points because of their effect on the general level of education, skills, way of life, creation of demand, etc.

Lockwood has pointed out that "if Japan's experience teaches any single lesson regarding the process of economic development in Asia, it is the cumulative importance of myriads of relatively simple improvements in technology which do not depart radically from tradition or require large units of new investment. - For any poor country beginning to industrialise, one of the crucial problems is to introduce and spread such innovations as widely as possible' (80).

(79) The Theory of Economic Growth, op. cit. p.73.

The conclusion is that investment criteria has to vary from country to country and from time to time. It has to depend not only on economic conditions i.e. improvement in productive efficiency; but also on social and political conditions. There may be concentration on heavy industries using a relatively capital intensive technology as has been done recently in the U.S.S.R.; but this does not deny the role of slow changes of economic growth. Rapid growth of one or more capital intensive industries may be a powerful engine of economic transformation; but small scale industries with improved techniques may imply deep changes in the rural economic organisation and create necessary preconditions for a self sustained growth. The various sectors of the economy are interrelated. It is not enough to direct attention only to 'growing points' in the economy, because investment in one part of the economy will have effects on other parts. The economy should be viewed as a unit made up of interrelated parts and investment should be on a broad front so that the various parts of the economy may move forward in balance. The concept of 'growing points' then merges into the broader requirement of balanced growth (81). Investment criteria lead, therefore, to the development of all kinds of industries besides the development of agriculture: capital intensive heavy industries for the sake of rapid economic transformation, export industries for the sake of earning foreign exchanges, small scale industries to revitalise the rural economy and prepare it for an industrial society and agriculture to provide necessary marketable surplus for industrial transformation and improved social structure. There is need for compromise for the purpose of harmonious economic growth in the country. An integrated

(81) Mein and Baldwin, op. cit., p.347.
approach is, therefore, more desirable than a lop-sided development in one or a few sectors.

On the basis of this pattern of development, we may now proceed to sketch the basic determinants of growth and analyse the investible sources that would be available for generating necessary forces of growth in underdeveloped countries with special reference to India. In the following chapter, there will be an attempt to indicate the need for capital and the role of foreign aid in development of underdeveloped countries.